SANYO

INSTRUCTION MANUAL

DWM-3000

DVD & Hi-Fi VCR Home Theater

DVD VIDEO **COMPACT disc** DIGITAL AUDIO **DOLBY DIGITAL** **DOLBY SURROUND** PRO·LOGIC **MP3** DIGITAL AUDIO **TVG** TECHNOLOGY **VHS** **Hi-Fi**
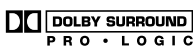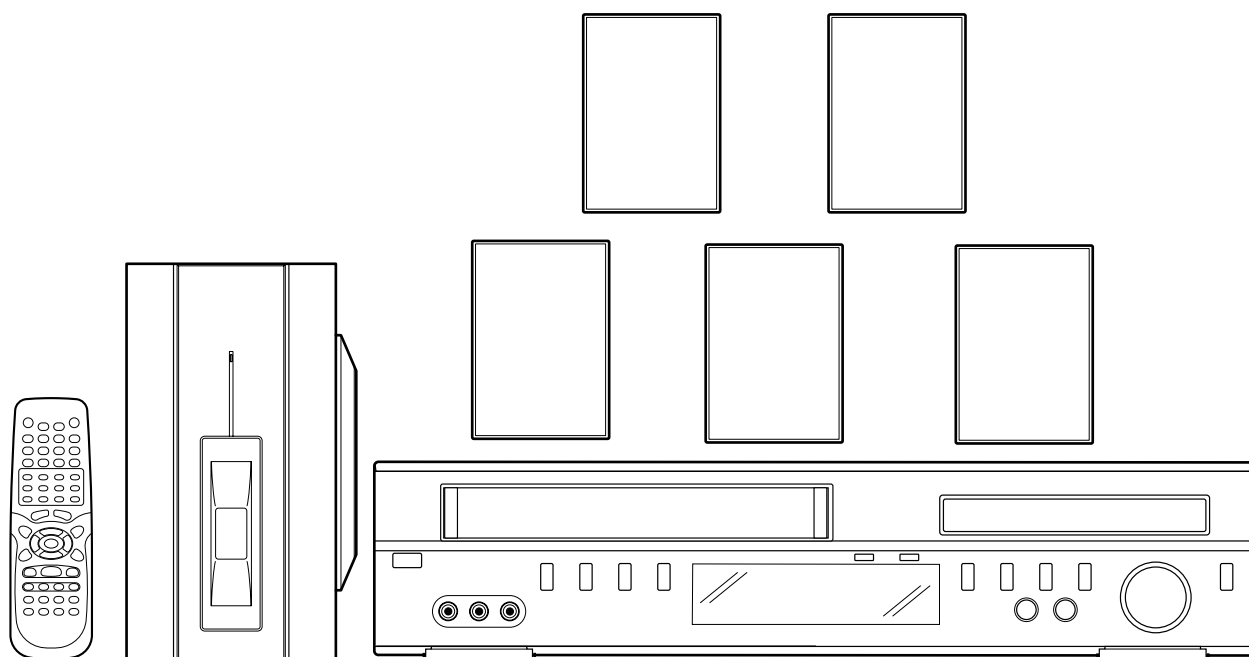
Only cassettes marked **VHS** can be used with this video cassette recorder.

SANYO'S HELP-LINE
Call the toll-free number below if you have any difficulties operating this product.
1-800-813-3435 (Weekdays: 7:30 AM - 4:00 PM Central Time)

Before operating the unit, please read this manual thoroughly.

English

SAFETY PRECAUTIONS

WARNING
RISK OF ELECTRIC SHOCK
DO NOT OPEN

WARNING: TO REDUCE THE RISK
OF ELECTRIC SHOCK
DO NOT REMOVE COVER (OR BACK)
NO USER-SERVICEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED SERVICE
PERSONNEL.

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

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

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

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.
ATTENTION: POUR ÉVITER LES CHOC ÉLECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

WARNING: Do not install this equipment in a confined space such as a book case or similar unit.

NOTE TO CABLE/TV INSTALLER: This reminder is provided to call the cable TV system installer's attention to Article 820-40 of the National Electric Code (U.S.A.). The code 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 the cable entry as practical.

CAUTION:
This DVD/VCR employs a Laser System.

To ensure proper use of this product, please read this owner's manual carefully and retain for future reference should the unit require maintenance, contact an authorized service location.

Use of controls, adjustments, or the performance of procedures other than those specified herein may result in hazardous radiation exposure.

To prevent direct exposure to laser beam, do not try to open the enclosure. Visible laser radiation when open. DO NOT STARE INTO BEAM.

CAUTION: The apparatus should not be exposed to water (dripping or splashing)and no objects filled with liquids, such as vases, should be placed on the apparatus.

FCC WARNING: This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

REGULATORY INFORMATION: FCC Part 15
This product has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the product is operated in a residential installation. This product generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this product does cause harmful interference to radio or television reception, which can be determined by turning the product off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the product and receiver.
- Connect the product into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

NOTES ON COPYRIGHTS:
It is forbidden by law to copy, broadcast, show, broadcast via cable, play in public, or rent copyrighted material without permission.
This product features the copy protection function developed by Macrovision. Copy protection signals are recorded on some discs. When recording and playing the pictures of these discs on a VCR, picture noise will appear.
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.

SERIAL NUMBER: The serial number is found on the back of this unit. This number is unique to this unit and not available to others. You should record requested information here and retain this guide as a permanent record of your purchase.

Model No._____

Serial No._____

Please Read This Manual.

Because DVD is a new technology, we recommend that you read this manual carefully before connecting your DVD & VCR Home Theater System and operating it for the first time.
Keep the manual in a safe place for future reference.

To operate the built-in TVGuardian®
This unit has the built-in TVGuardian® Foul Language Filter (TVG®).
When a disc supporting closed caption is played, it will mute the audio during the entire phrase containing offensive language. For more details, see page E52.

IMPORTANT SAFETY INSTRUCTIONS

CAUTION: PLEASE READ AND OBSERVE ALL WARNINGS AND INSTRUCTIONS IN THIS OWNER'S MANUAL AND THOSE MARKED ON THE UNIT. RETAIN THIS BOOKLET FOR FUTURE REFERENCE.
This set has been designed and manufactured to assure personal safety. Improper use can result in electric shock or fire hazard. The safeguards incorporated in this unit will protect you if you observe the following procedures for installation, use, and servicing.
This unit does not contain any parts that can be repaired by the user.
DO NOT REMOVE THE CABINET COVER, OR YOU MAY BE EXPOSED TO DANGEROUS VOLTAGE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL ONLY.

1. **Read These Instructions**
   All the safety and operating instructions should be read before the product is operated.

2. **Follow All Instructions**
   All operating and use instructions should be followed.

3. **Keep These Instructions**
   The safety and operating instructions should be retained for future reference.

4. **Heed All Warnings**
   All warnings on the product and in the operating instructions should be adhered to.

5. **Power Sources**
   This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.

6. **Grounding or Polarization**
   Do not defeat the safety purpose of the polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

7. **Ventilation**
   Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

8. **Heat**
   The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

9. **Water and Moisture**
   Do not use this product near water – for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool.

10. **Cleaning**
    Unplug this product from the wall outlet before cleaning.
    Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

11. **Power-Cord Protection**
    Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.
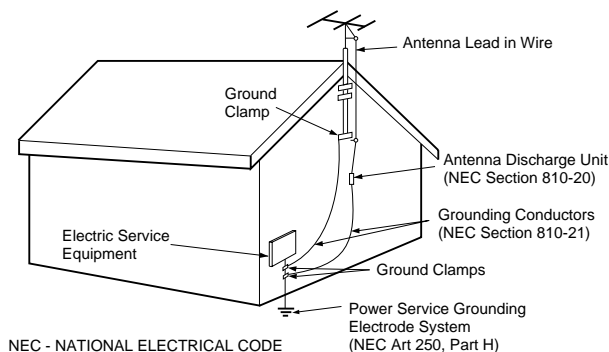
12. **Overloading**
    Do not overload wall outlets, extension cords, or integral convenience receptacles, this can result in a risk of fire or electric shock.

13. **Outdoor Antenna Grounding**
    If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code (U.S.A.), ANSI/NFPA 70 provides information with regard 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.

    EXAMPLE OF GROUNDING ACCORDING TO NATIONAL ELECTRICAL CODE INSTRUCTIONS

Antenna Lead in Wire
Ground Clamp
Antenna Discharge Unit (NEC Section 810-20)
Grounding Conductors (NEC Section 810-21)
Electric Service Equipment
Ground Clamps
Power Service Grounding Electrode System (NEC Art 250, Part H)
NEC - NATIONAL ELECTRICAL CODE

14. **Lightning**
    Unplug this apparatus during lightning storms or when unused for long periods of time. This will prevent damage to the product due to lightning and power-line surges.

15. Power Lines

An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

16. Object and Liquid Entry

Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

17. Attachments

Do not use attachments not recommended by the product manufacturer as they may cause hazards.

18. Accessories

Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

19. Damage Requiring Service

Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
a. If the power-supply cord or plug is damaged.
b. If liquid has been spilled, or objects have fallen into the product.
c. If the product has been exposed to rain or water.
d. If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
e. If the product has been dropped or the cabinet has been damaged.
f. If the product exhibits a distinct change in performance.

20. Servicing

Do not attempt to service this product yourself as opening or removing the cover may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

21. Replacement parts

When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

22. Safety Check

Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

23. Disc Tray

Keep your fingers well clear of the disc tray as it is closing. It can cause personal injury.

24. Burden

Do not place a heavy object on or step on the product. The object may fall, causing serious personal injury and serious damage to the product.

25. Connecting

When you connect the product to other equipment, turn off the power and unplug all of the equipment from the wall outlet. Failure to do so may cause an electric shock and serious personal injury. Read the owner's manual of the other equipment carefully and follow the instructions when making any connections.

26. Sound Volume

Reduce the volume to the minimum level before you turn on the product. Otherwise, sudden high volume sound may cause hearing or speaker damage.

27. Sound Distortion

Do not allow the product to output distorted sound for a longtime. It may cause speaker overheating and fire.

28. Earphone

When you use the earphone, keep the volume at a moderate level. If you use the earphone continuously with high volume sound, it may cause hearing damage.

29. Laser Beam

Do not look into the opening of the disc tray or ventilation opening of the product to see the source of the laser beam. It may cause sight damage.

30. Disc

Do not use a cracked, deformed, or repaired disc. These discs are easily broken and may cause serious personal injury and product malfunction.

CONDENSATION

Moisture will form in the operating section of the DVD/VCR if the player is brought from cool surroundings into a warm room or if the temperature of the room rises suddenly. When this happens, the DVD/VCR's performance will be impaired.

To prevent this, let the DVD/VCR stand in its new surroundings for about an hour before switching it on, or make sure that the room temperature rises gradually.

Condensation may also form during the summer if the DVD/VCR is exposed to the breeze from an air conditioner. In such cases, change the location of the DVD/VCR.
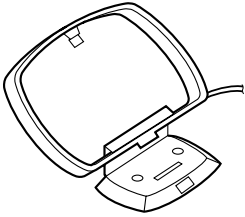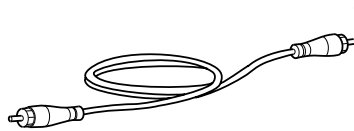
CONTENTS

ACCESSORIES

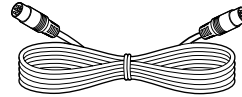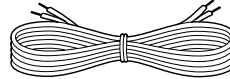Remote control

AM loop antenna

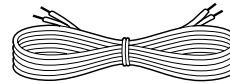FM indoor antenna lead wire

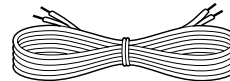Video cable

75 ohm coaxial cable

Subwoofer cable
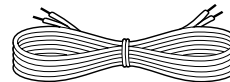Length: Approx. 23 feet (7 meters)
(Black)

Front right speaker cable
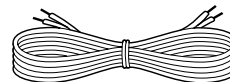Length: Approx. 23 feet (7 meters)
(Black and Red)

Front left speaker cable
Length: Approx. 23 feet (7 meters)
(Black and Blue)

Front center speaker cable
Length: Approx. 23 feet (7 meters)
(Black and Green)

Surround right speaker cable
Length: Approx. 23 feet (7 meters)
(Black and Orange)

Surround left speaker cable
Length: Approx. 23 feet (7 meters)
(Black and Gray)

PRECAUTIONS

Handling the unit
When shipping the unit
The original shipping carton and packing materials come in handy. For maximum protection, re-pack the unit as it was originally packaged at the factory.

When setting up the unit
The picture and sound of a nearby TV, VCR, or radio may be distorted during playback. In this case, position the unit away from the TV, VCR, or radio, or turn off the unit after removing the disc.

To keep the surface clean
Do not use volatile liquids, such as insecticide spray, near the unit. Do not leave rubber or plastic products in contact with the unit for a long period of time. They will leave marks on the surface.

Cleaning the unit
To clean the cabinet
Use a soft, dry cloth. If the surfaces are extremely dirty, use a soft cloth lightly moistened with a mild detergent solution. Do not use strong solvents such as alcohol,
benzine, or thinner, as these might damage the surface
of the unit.

To obtain a clear picture
The DVD/VCR is a high-tech, precision device. If the optical pick-up lens and disc drive parts are dirty or worn, the picture quality will be poor.
Regular inspection and maintenance are recommended after every 1,000 hours of use. (This depends on the operating environment.)
For details, please contact your nearest dealer.

CAUTION:
Placing the unit in a well ventilated area is strongly recommended.
Do not place any object on the top of the unit.
Do not block ventilation holes.
The cabinet of the unit warms up when it is used for a long time, but it is not a malfunction.
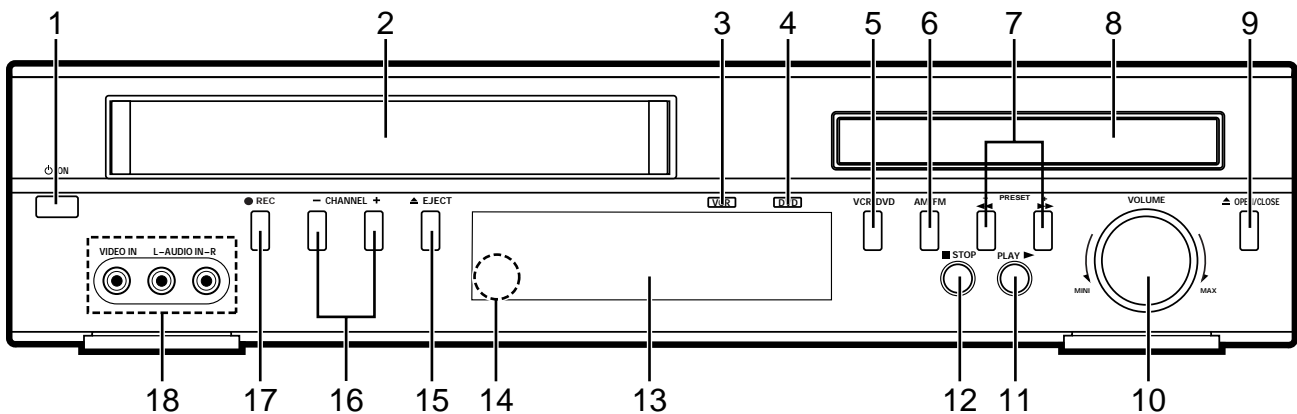

WHAT TO DO IF...
If the operation of the unit or display is not normal, even though the appropriate buttons have been pressed.

Note:
If the unit still does not operate correctly, please contact your nearest Sanyo Authorized Service Facility.
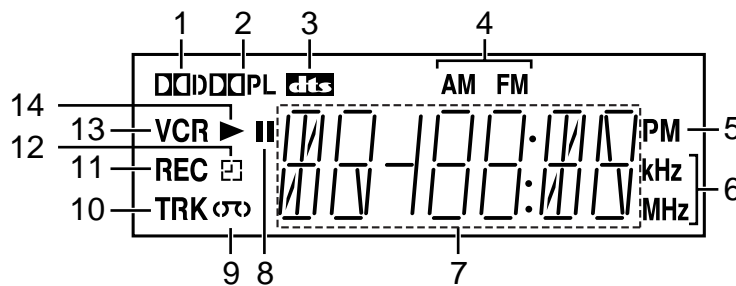
CONTROLS

Front Panel

1. Power button (⏻/ON)
2. Cassette Loading Slot
3. VCR indicator
4. DVD indicator
5. VCR/DVD mode selector button
6. AM/FM button
7. ◄◄/►► (PRESET +/–) buttons
8. Disc tray
9. OPEN/CLOSE button (▲)
10. Volume control (VOLUME)
11. Play button (►)
12. Stop button (■)
13. FL display
14. Remote sensor (IR)
15. EJECT button (▲)
16. CHANNEL +/– buttons
17. REC button (●)
18. AUDIO (L/R)/VIDEO IN jacks

FL Display

1. Dolby Digital indicator
2. Dolby Pro Logic indicator
3. DTS indicator
4. AM/FM indicators
5. AM/PM indicator (AM is not displayed)
6. Kilohertz/Megahertz indicators
7. Message or number indicators
   (Title, chapter, track, playing time or other information)
8. Pause indicator
9. Video tape indicator (VCR)
10. Track indicator (CD)
11. REC indicator (VCR)
12. Timer recording indicator (VCR)
13. VCR indicator (VCR)
14. Play indicator

"DTS" and "DTS Digital Out" are trademarks of Digital Theater Systems, Inc.

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

Rear Panel
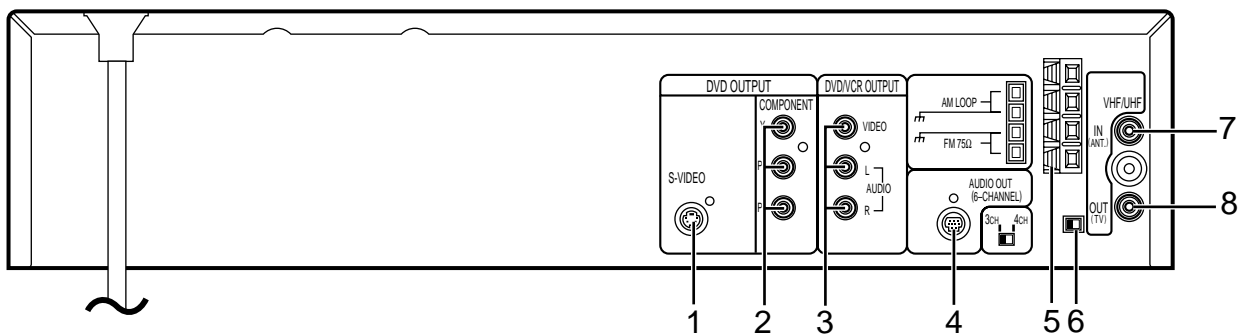
1. DVD S-Video output jack (S-VIDEO)
2. DVD Component video output jacks (COMPONENT)
3. Video/Audio output jacks (VIDEO/AUDIO)
4. Powered subwoofer output jack
5. AM/FM antenna terminals
6. Channel selector switch (3CH/4CH)
7. RF IN jack
8. RF OUT jack

REMOTE CONTROL

Controls

1. POWER button
2. VCR button
3. DVD button
4. OPEN/CLOSE button
5. Number and other function buttons
   These buttons are used as number buttons and as function buttons of each name.
   - When using as a number button, press the appropriate button directly.
   - When using as a function button of each name, press the appropriate button while holding the [SHIFT] button down.
     Number buttons (1–9, 0)
     ANGLE button
     ZOOM button
     JUMP button
     TOP MENU button
     AUDIO button
     PLAY MODE button
     A-B REPEAT button
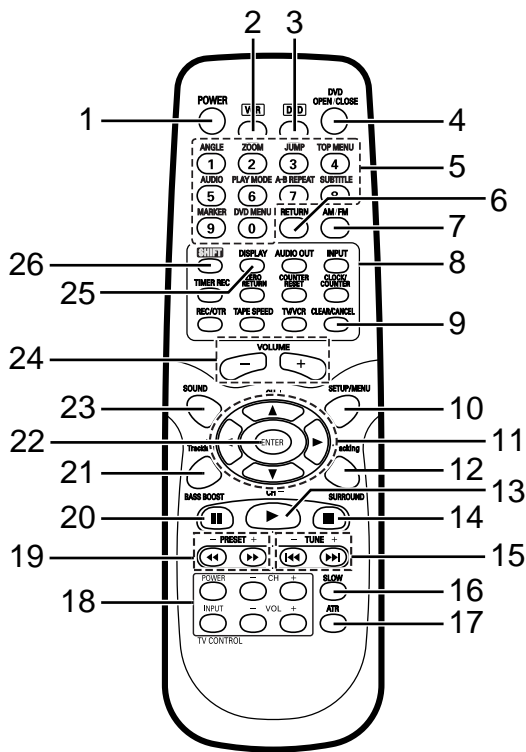   SUBTITLE button
     MARKER button
     DVD MENU button
6. RETURN button
7. AM/FM button
8. VCR control buttons
     AUDIO OUT button
     INPUT button
     TIMER REC button
     ZERO RETURN button
     COUNTER RESET button
     CLOCK/COUNTER button
     REC/OTR button
     TAPE SPEED button
     TV/VCR button
9. CLEAR/CANCEL button
10. SETUP/MENU button
11. Directional arrow buttons (▲, ►, ▼, ◄)
12. SURROUND button
13. ► button (PLAY)
14. ■ button (STOP)
15. |◄◄/►►| buttons
    Tuning buttons (– TUNE +)
16. SLOW button
17. ATR button
18. TV control buttons
    POWER button (TV POWER)
    INPUT select button (TV/VIDEO)
    Channel scanning buttons (– TV CH +)
    Volume buttons (– TV VOLUME +)
19. ◄◄/►► buttons
    Preset tuning buttons (– PRESET +)
20. ❚❚ button (PAUSE)
21. BASS BOOST button
22. ENTER button
23. SOUND button
24. VOLUME buttons (– VOLUME +)
25. DISPLAY button
26. SHIFT button

Inserting Batteries

Two "AA" batteries
(not supplied)
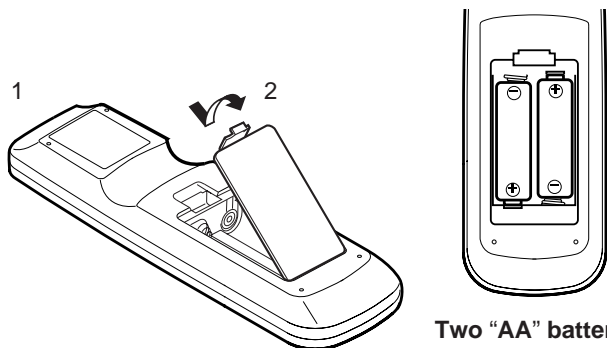
Note:
Remove the batteries if the remote control is not to be used for a month or more. Batteries left in the unit may leak and cause damage.

IMPORTANT NOTE:

SPENT OR DISCHARGED BATTERIES MUST BE RECYCLED OR DISPOSED OF PROPERLY IN COMPLIANCE WITH ALL APPLICABLE LAWS.
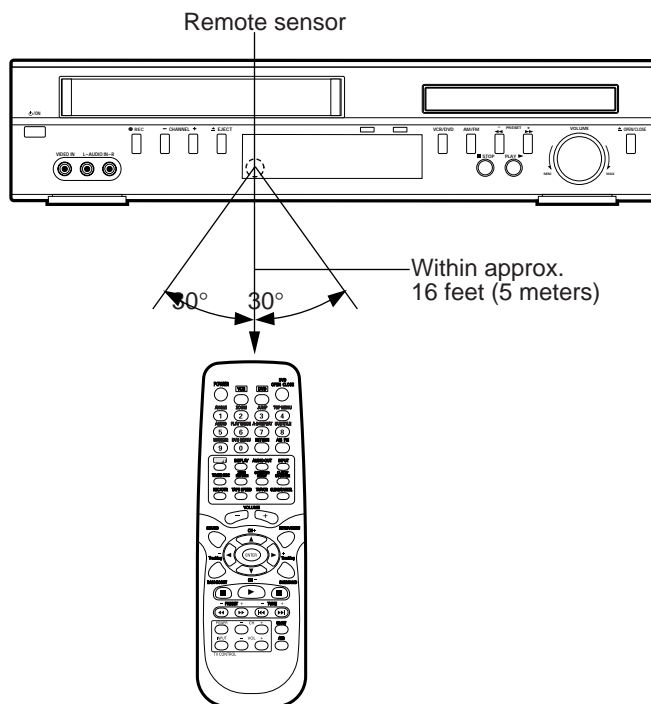**FOR DETAILED INFORMATION, CONTACT YOUR LOCAL COUNTY SOLID WASTE AUTHORITY.**

Remote Control Range

Remote sensor

Within approx.
16 feet (5 meters)

30° 30°

To Set the Remote Control Code for TV

This remote control can operate the basic functions of TVs made by the manufacturers listed below.
To enter the remote control code for your brand of TV, follow the steps below.

1. In the chart below, find the code corresponding to your brand of TV .
2. While holding down [(TV CONTROL) POWER], enter the 2-digit code using the number buttons [0–9], then release [(TV CONTROL) POWER].
   • The remote control is now set to operate your TV.

TV brands	Code
ADMIRAL	05, 10, 13
EMERSON	17
FISHER	03
GE	07
GOLD STAR	01
HITACHI	02
JVC	15
MAGNAVOX	08
MATSUSHITA	12, 18
MITSUBISHI	14
PANASONIC	12, 18
QUASAR	12, 18
RCA	06
SAMSUNG	16
SANYO	03
SHARP	00, 13
SONY	11
TECHNOL ACE	05
TOSHIBA	04
ZENITH	09, 10
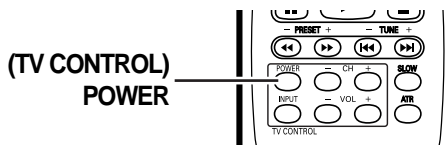
(TV CONTROL) POWER

Notes:
• Only remote-controlled TVs can be operated using this remote control. (Refer to your TV instruction manual for more details.)
• There may be some older TV models that cannot be operated with this remote control. If this is the case, use the original remote control supplied with the TV.

IMPORTANT NOTE:
If the batteries in the remote control are changed, the code settings for the TV must be re-entered.

Write your code number below for future reference.

TV:_____

Need help? Call
1-800-813-3435

BASIC CONNECTIONS

Note:
**Do not connect the power cord to a 120 V AC 60 Hz outlet until all connections have been made.**
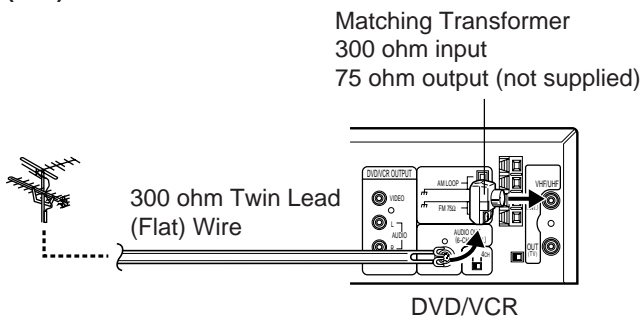
TV Antenna Connections

If you are using an antenna system, follow these instructions. If you are a cable (CATV) subscriber, skip ahead to page E12 for the proper connections.

The DVD/VCR must be connected "between" the antenna and the TV. First, disconnect the antenna from the TV and connect it to the DVD/VCR. Then connect the DVD/VCR to the TV. Below are 3 common methods of connecting an antenna system to a DVD/VCR. Find the type of antenna system you are using and follow the connection diagram.

1. Combination VHF/UHF Antenna with 75 ohm Coaxial Cable

75 ohm Coaxial Cable

DVD/VCR
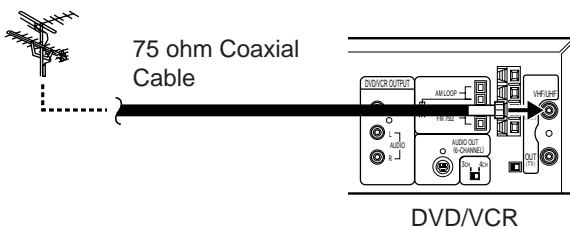
2. Combination VHF/UHF Antenna with 300 ohm Twin Lead (Flat) Wire

Matching Transformer
300 ohm input
75 ohm output (not supplied)

300 ohm Twin Lead (Flat) Wire

DVD/VCR

3. Separate VHF and UHF Antennas

Combiner
75/300 ohm inputs
75 ohm output (not supplied)

VHF   UHF

300 ohm Twin Lead (Flat) Wire

75 ohm Coaxial Cable
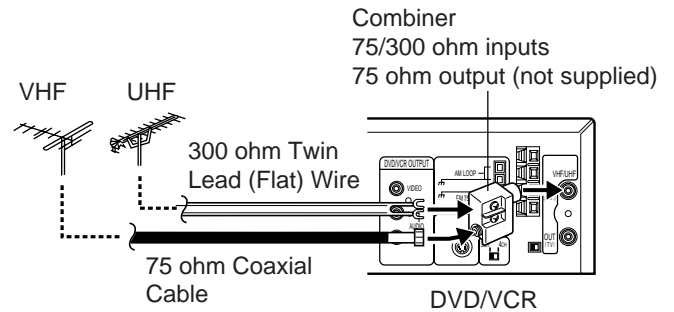
DVD/VCR

Note:
If both VHF and UHF antennas have 300 ohm twin lead (flat) wires, use a combiner having two 300 ohm inputs and one 75 ohm output.

Notes:
• A clear picture will not be obtained by the DVD/VCR unless the antenna signal is good. Connect the antenna to the DVD/VCR properly.
• For better quality recording, an indoor antenna or a telescopic antenna is not recommended. The use of an outdoor type antenna is required.
• If you are not sure about the connection, please refer to qualified service personnel.

Basic TV Connections

After you have connected the antenna to the DVD/VCR, you must connect the DVD/VCR to the TV.

Below are 3 common methods of connecting your DVD/VCR to a TV. Find the type of TV you are using and follow the connection diagram.
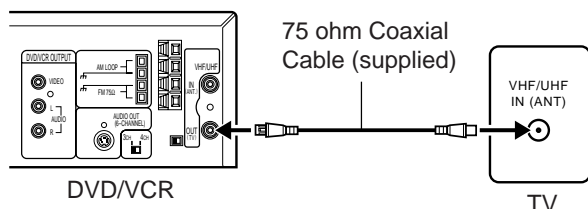
This DVD/VCR has a single 75 ohm output for connection to a TV. If your TV has separate VHF and UHF antenna inputs (numbers 2 and 3 below), use a splitter to connect the DVD/VCR to the TV for VHF and UHF reception.

1. TV with single 75 ohm VHF/UHF antenna input

Note:
If a VHF or UHF antenna is used, set the TV/CATV menu option to the "TV" mode.

2. TV with 300 ohm UHF and 75 ohm VHF antenna inputs
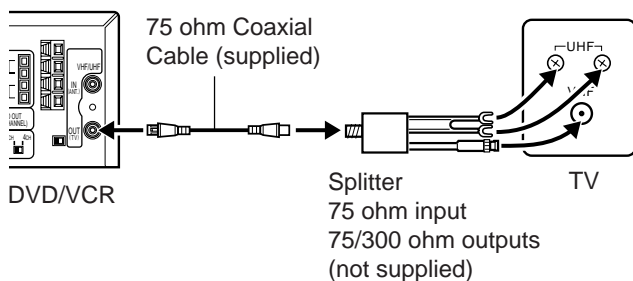
Note:
If a VHF or UHF antenna is used, set the TV/CATV menu option to the "TV" mode.

3. TV with 300 ohm UHF and 300 ohm VHF antenna inputs
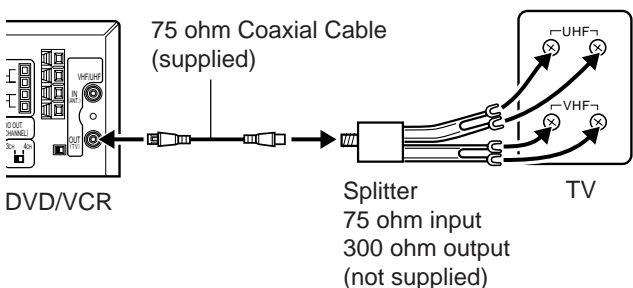
Note:
If a VHF or UHF antenna is used, set the TV/CATV menu option to the "TV" mode.

Audio/Video Connection

1. Connect the DVD/VCR VIDEO OUT jack on the DVD/VCR to the video in jack on the TV using the video cable supplied.

2. Connect the Left and Right DVD/VCR AUDIO OUT jacks on the DVD/VCR to the audio left/right in jacks on the TV using an optional audio cables.
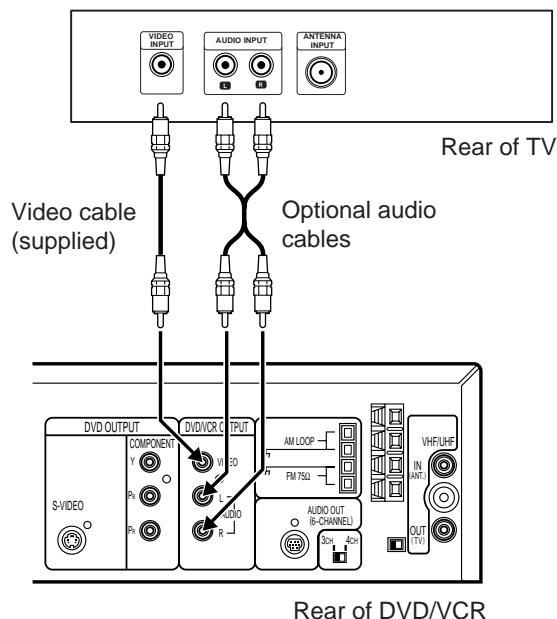
Note
If you use this connection, set the TV's source selector to VIDEO.

Need help? Call
1-800-813-3435

Optional, Preferred TV Connections

Note
You can ONLY watch and listen to DVD playback through the connections shown below.

Audio/Video connection
1. Connect the VIDEO OUT jack on the DVD/VCR to the video in jack on the TV using the video cable supplied.

2. Connect the Left and Right AUDIO OUT jacks of the DVD/VCR to the audio left/right in jacks on the TV using an optional audio cables.

Rear of TV

Video cable (supplied)

Optional audio cables

Rear of DVD/VCR
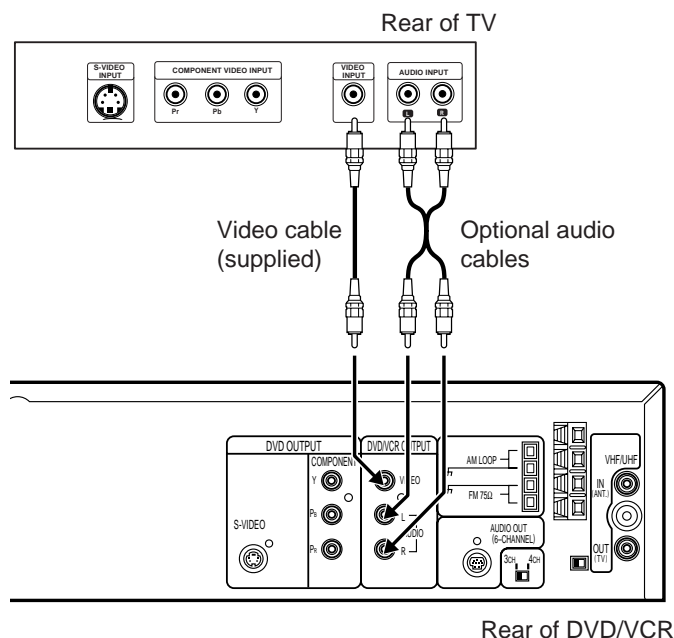
S-Video connection
1. Connect the S-VIDEO OUT jack on the DVD/VCR to the S-Video in jack on the TV using the optional S-Video cable.

2. Connect the Left and Right AUDIO OUT jacks of the DVD/VCR to the audio left/right in jacks on the TV using an optional audio cables.

Rear of TV

Optional S-Video cable

Optional audio cables

Rear of DVD/VCR
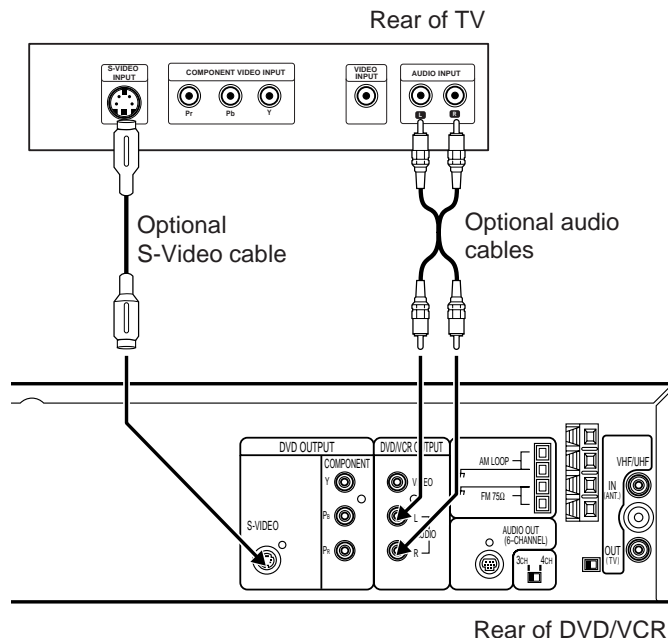
Component Video connection
1. Connect the COMPONENT VIDEO OUT jacks on the DVD/VCR to the corresponding in jacks on the TV using an optional Y Pb Pr cables.
2. Connect the Left and Right AUDIO OUT jacks of the DVD/VCR to the audio left/right in jacks on the TV using an optional audio cables.

Rear of TV

Optional Y Pb Pr cables

Optional audio cables

Rear of DVD/VCR

CATV (CABLE TV) Connections

Many cable companies offer services permitting reception of extra channels including pay or subscription channels. This DVD/VCR has an extended tuning range and can be tuned to most cable channels without using a cable company supplied converter box, except for those channels which are intentionally scrambled. If you subscribe to a special channel which is scrambled, you must have a descrambler box for proper reception.
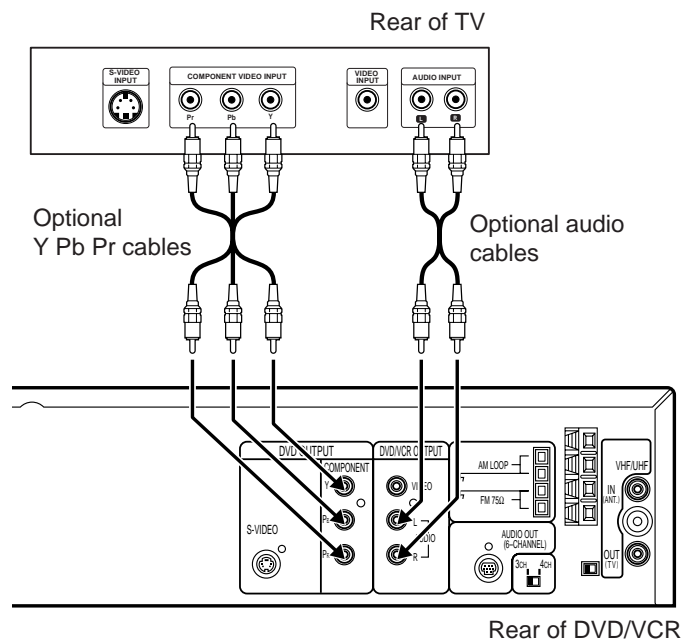
IMPORTANT:

Make sure the TV/CATV menu option is set to the "CATV" mode. This DVD/VCR cannot receive scrambled programs since it does not contain a descrambler. In order to receive scrambled programs, your existing descrambler must be used. Descrambler boxes are available from cable companies. Consult your local cable company for more information concerning connection to their descrambler equipment. There are many ways to connect your DVD/VCR to a cable system. Below are six common methods of connection.

Incoming Cable

DVD/VCR

VHF/UHF IN (ANT)

TV
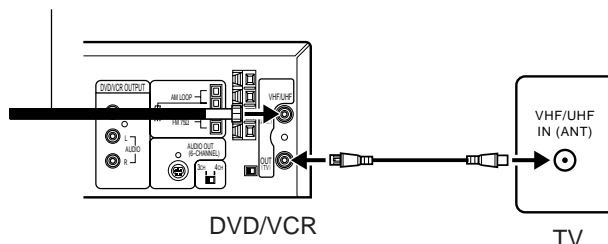
Allows:
• Recording of nonscrambled channels.
• Use of the programmable timer.
• Recording of one channel while watching another.

Incoming Cable

Converter/Descrambler

DVD/VCR

VHF/UHF IN (ANT)

TV
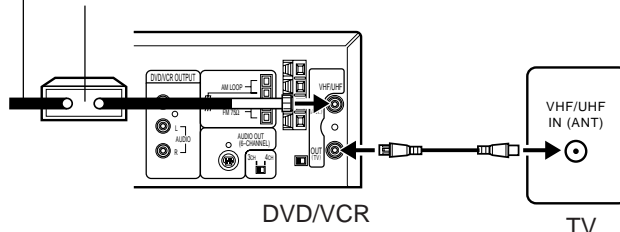
Allows:
• Recording of channels through the converter box (scrambled and unscrambled).
• Using the programmable timer to record only the channel selected at the converter box.

Prevents:
• Recording one channel while watching another.
• Using the DVD/VCR tuner to select channels.

Note:
To record from converter/descrambler, DVD/VCR tuner must be tuned to the converter output channel, usually channel 3 or 4.

Incoming Cable

DVD/VCR

Converter/ Descrambler

VHF/UHF IN (ANT)

TV
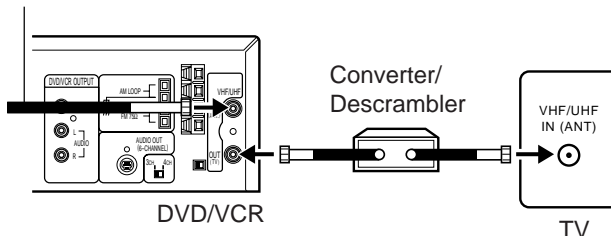
Allows:
• Recording of nonscrambled channels.
• Use of the programmable timer.
• Recording an unscrambled channel while watching any channel selected at the converter box.

Prevents:
Recording scrambled channels.

Note:
If you are playing a tape or using the tuner built into the DVD/VCR, the converter must be set to the video channel output of the DVD/VCR (either 3 or 4).

Incoming Cable

DVD/VCR

A/B Switch

VHF/UHF IN (ANT)

Splitter   Converter/Descrambler

TV
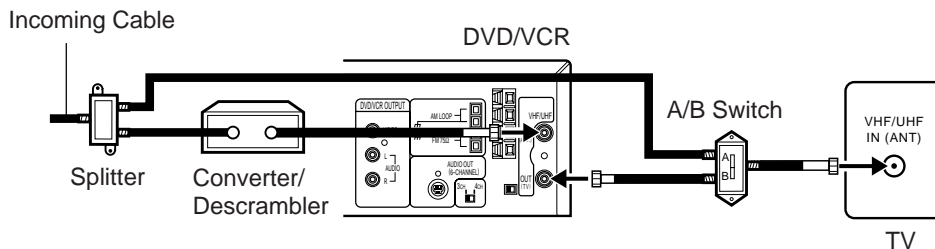
Allows:
- Recording of one channel while watching another.
- Using the programmable timer to record only the channel selected at the converter box.
- Recording of all channels through the converter box.

Prevents:
- Watching scrambled channels while recording another channel.
- Using the DVD/VCR tuner to select channels.

Incoming Cable

DVD/VCR

A/B Switch

VHF/UHF IN (ANT)

Splitter

Converter/Descrambler

TV
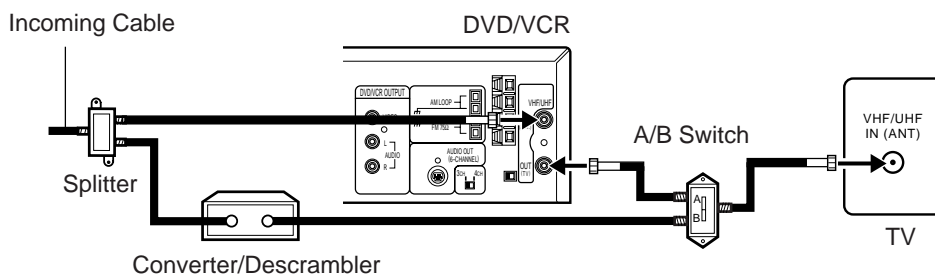
Allows:
- Recording of nonscrambled channels.
- Recording of one channel while watching another.
- Watching premium channels through the converter while recording nonscrambled channels.
- Using the programmable timer.

Prevents:
Recording scrambled channels.

Incoming Cable

Converter/Descrambler

DVD/VCR

A/B Switch

VHF/UHF IN (ANT)

Splitter

Converter/Descrambler

TV
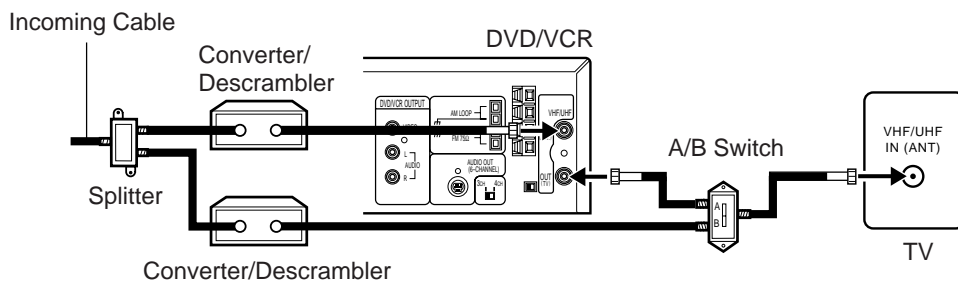
Allows:
- Recording of all channels through the converter box.
- Recording a scrambled or unscrambled channel while watching another (scrambled or unscrambled) channel.
- Using the programmable timer to record only the channel selected at the converter box.

Prevents:
Using the DVD/VCR tuner to select channels.

Note:
Whenever a Converter/Descrambler box is placed before the DVD/VCR, you must tune the DVD/VCR to the output of the Converter/Descrambler box, usually channel 3 or 4.

Need help? Call
1-800-813-3435

-E13-

Speaker Connections

To achieve proper stereo reproduction, connect the speaker wires without shorting to adjacent wires as shown below.

Note:
Do not connect the power cord to a 120 V AC 60 Hz outlet until all connections have been made.

Speaker Wire Color	Use
Black and Red	Front right speaker
Black and Blue	Front left speaker
Black and Green	Center speaker
Black and Orange	Surround right speaker
Black and Gray	Surround left speaker

Front right speaker

Front left speaker

Center speaker

Black   Red

Black   Red

Black   Red

Black   Red

Black   Blue

Black   Green

AUDIO INPUT
(6-CHANNEL)

SPEAKERS
(6Ω)

−   +

L
FRONT
R

CENTER

L
SURROUND
R

120V 60HZ

Black   Orange

Black   Gray

**Subwoofer
(Powered Subwoofer)**

Black   Red

Black   Red

DVD/VCR OUTPUT

VIDEO

AM LOOP

FM 75Ω

L

AUDIO

R

AUDIO OUT
(6-CHANNEL)

3CH   4CH

VHF/UHF

IN
(ANT.)

OUT
(TV)

Surround right speaker

Surround left speaker

Rear Panel

-E14-

Speaker Placement

Front right speaker
Center speaker
Front left speaker

Surround right speaker

Subwoofer
Place it near the Front speaker.

Surround left speaker

The supplied speakers have built-in magnetic stray field compensation. They may be placed close to a TV without affecting the color purity.
The five speakers are all the same and can be used for Front left, Center, Front right, Surround left, and Surround right speakers.

The front, center, and surround speakers should be placed at approximately the same distance from the listening position.
Place the front left and right speakers either side of the TV.
Place the center speaker directly above the TV.
Place the surround speakers either sides of the listening position, or slightly to the rear, approximately 2 feet–3 feet 3 inches (60 cm – 1 meter) higher than ear level.
The subwoofer can be placed near the front speaker and not too far from the TV.

Center speaker
Front left speaker
Subwoofer
Front right speaker
30° 30°
120°
Surround left speaker
Surround right speaker
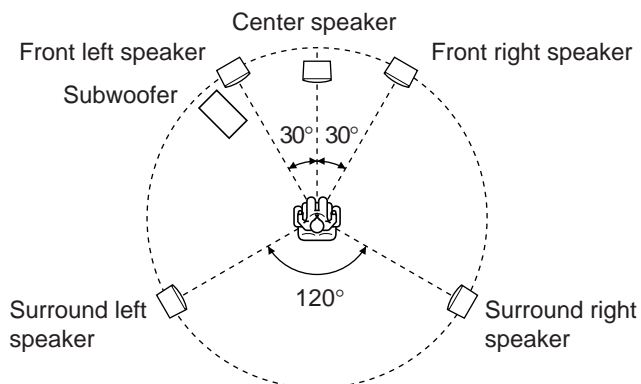
Notes:
• The angles in the diagram are approximate.
• Please refer to "Changing the Delay Time" on page E20.

Example: To hang the speaker on a wall

Approximately 3/32 inch (2.5 mm)

Round head screw (not supplied)
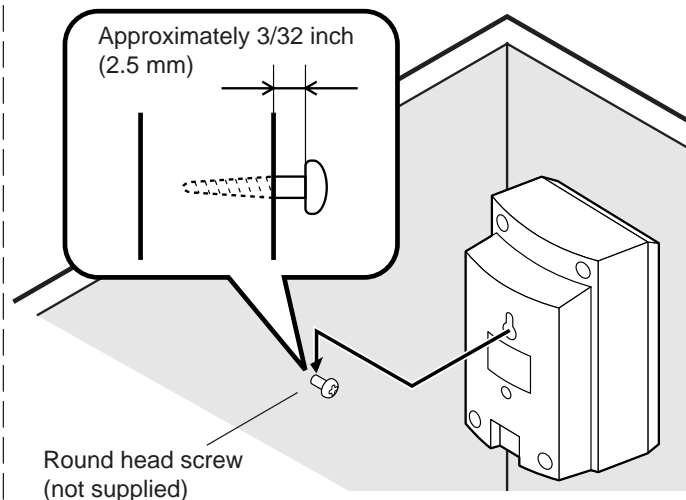
Example: To mount the speaker with a stand

Stand (not supplied)

Machine screw (not supplied)

Built-in nut for 3/16 machine screw
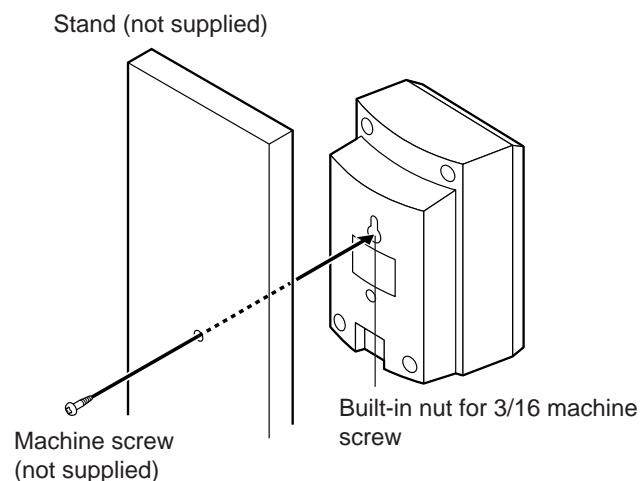
Note: Be careful of dropping the speaker system, it might cause damage or serious injuries.

FM/AM Antenna Connections

FM antenna
The FM indoor antenna lead wire is sufficient to receive most local FM broadcasts and should be connected to the rear FM 75Ω terminal. Extend the antenna lead wire as straight as possible and, while listening to the sound from the system, secure it in a position where the best FM reception is found.

In fringe areas, or where reception is distorted or noisy, an FM outdoor antenna (not supplied) should be connected instead of the FM indoor antenna lead wire. The terminals will accept 75-ohm coaxial cable.

AM antenna
The AM loop antenna is sufficient to receive most local AM broadcasts. Assemble the loop antenna.
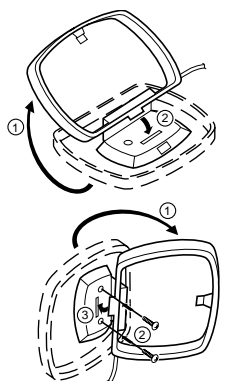
Unwind the antenna wires, then connect them to the AM LOOP terminals. Place the loop antenna in a position which yields the best AM reception, or attach it to a wall or other surface as shown.
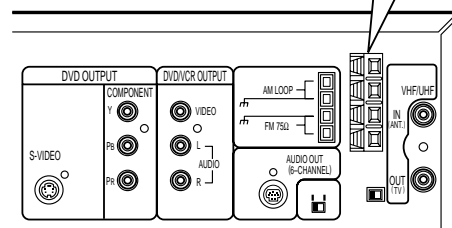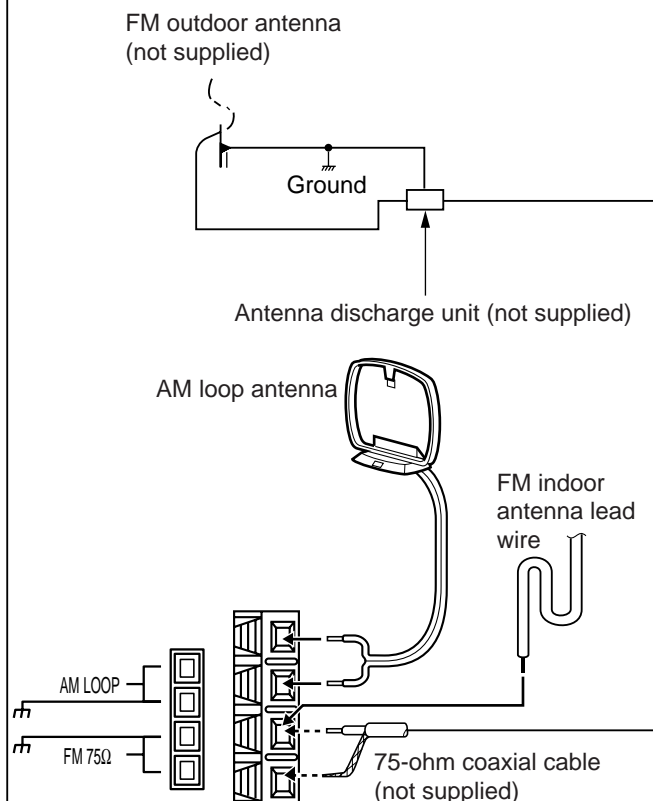
Screws (not supplied)

Note:
To minimize noise...
*   Keep the speaker wires, power cord and all other system connection cables away from the loop antenna.
*   Do not place the antenna close to a TV or speaker.

Note to CATV system installer:
This reminder is provided to call the CATV system installer's attention to Section 820-40 of the NEC which 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.

CAUTION:
When installing an outdoor antenna, follow the installation instructions in the attached "IMPORTANT SAFETY INSTRUCTIONS".

FM outdoor antenna (not supplied)

Ground

Antenna discharge unit (not supplied)

AM loop antenna

FM indoor antenna lead wire

AM LOOP

FM 75Ω

75-ohm coaxial cable (not supplied)

DVD OUTPUT   DVD/VCR OUTPUT

COMPONENT
Y

VIDEO

Pb

L

Pr

R

AUDIO

S-VIDEO

AUDIO OUT (6-CHANNEL)

AM LOOP

FM 75Ω

VHF/UHF

IN (ANT.)

OUT (TV.)

Rear panel

Power Supply
(Main Unit and Powered Subwoofer)

Connect the power cord to a 120 V AC 60 Hz outlet. This unit is equipped with a polarized plug. If you have difficulty inserting the plug, turn it over and reinsert it. If the unit will not be used for a long time, disconnect the AC plug from the AC outlet.
The Powered Subwoofer will automatically turn on when the DVD/VCR is turned on.
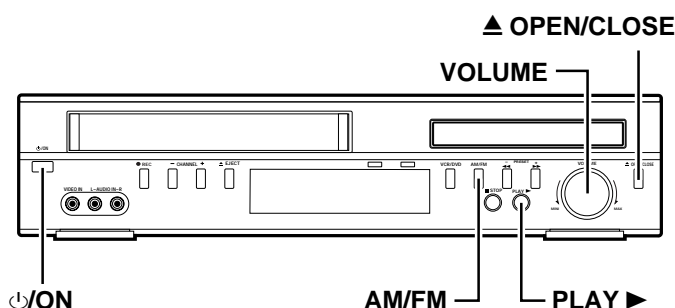
The POWER indicator lights on the subwoofer.

Notes:
*   Before plugging the power cord into an AC outlet, make sure that all the connections have been made.
*   The main unit is not disconnected from the AC power unless the power cord is unplugged from the AC outlet.

Need help? Call
1-800-813-3435

BEFORE OPERATION

Common Operation

▲ OPEN/CLOSE

VOLUME

⏻/ON   AM/FM   PLAY ►

VCR

OPEN/
CLOSE

DVD

AM/FM

INPUT

–VOLUME+

SOUND   ▲

BASS BOOST   ▼

►

Turning the power on and off

Press [⏻/ON] to turn the power on.

(After connecting the power cord, when you press [⏻/ON] for the first time, the volume-reset feature automatically sets the initial volume level.)

When the power cord is connected to the AC outlet, the unit will respond to commands from the remote control.

To turn the power off, press [⏻/ON] again.

Selecting the source

Press [VCR] to select the "VCR" function.

Press [DVD] to select the "DVD" function.

Press [AM/FM] to select the "Tuner" function.

Press [INPUT] repeatedly to select the external source connected to AUDIO/VIDEO IN jacks on the front panel or original source.

• When the source selection is changed to the "Tuner" function, disc and tape playback automatically stops.
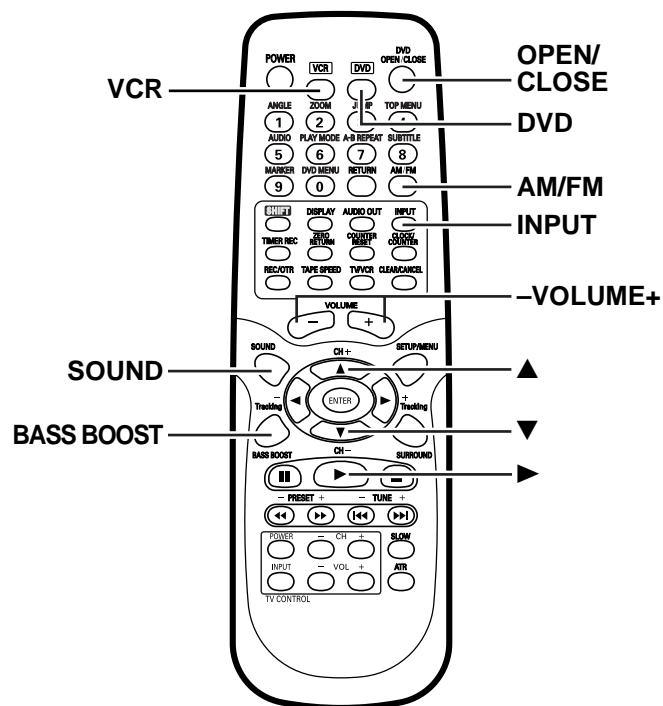
Adjusting the volume

Rotate [VOLUME] (or press [VOLUME] + or – on the remote control). The volume level appears on the display (Vol 0 ~ Vol 40).

Adjusting the bass, treble and speaker level

1. Press [SOUND] then press [ENTER] repeatedly to select the desired sound mode.
   Each time [ENTER] is pressed, the sound mode changes as follows:
   BA (Bass) ⟶ TR (Treble) ⟶ FL (Front left speaker) ⟶ C (Center speaker) ⟶ FR (Front right speaker) ⟶ SR (Surround right speaker) ⟶ SL (Surround left speaker) ⟶ SU (Subwoofer) ⟶ BA (Bass)…
2. Press "▲" or "▼" to adjust the sound level.
   Bass/ Treble: "+5"–"–5".
   Front left speaker/Front right speaker: "0"–"–10".
   Center speaker/Surround left speaker/Surround left speaker/ Subwoofer: "+10"–"–10".
3. Repeat steps 1 and 2 for another sound mode.

• You can also use the menu screen to adjust the speaker level. See "Adjusting the Speaker and Subwoofer level" on page E19.

Bass boost system

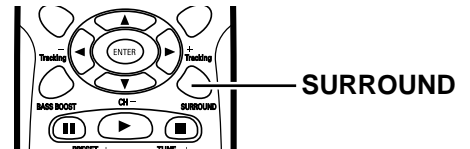Press [BASS BOOST] to switch the bass boost effect On and Off.

BA ON ⟶ BA OFF ⟶ BA ON...

Selecting Surround Mode

Press [SURROUND] to select the surround mode.
Each time the button is pressed, the surround mode changes as follows:
AUTO ⟶ Surr (Surround) ⟶ HALL ⟶ LIVE ⟶ 2ch ⟶ AUTO ...

SURROUND

Function	FL display	Description
DVD/CD	AUTO	The unit selects the surround mode automatically depending on the disc. **Dolby Digital (not encoded with Dolby Surround Sound)** "⊡⊡ D" appears on the FL display. Dolby Digital is a discrete 5.1 channel surround system, developed for cinema use. But, not all Dolby Digital sources are recorded with 6 channel. Some sources marked Dolby Digital may be recorded in Dolby Surround, a 2 channel system. **Dolby Digital (encoded with Dolby Surround Sound)** "⊡⊡ D" and "⊡⊡ PL" appear on the FL display. The surround mode is set to Dolby Pro Logic mode. Dolby Pro Logic is a decoding system that was developed to enhance the soundtracks of theatrical motion pictures with Dolby Surround. All speakers sound, but the surround left and right speakers are monophonic sound. **Other (PCM, CD, MP3, etc.)** The surround mode is set to 2.1 channel (Front left and right speakers, and Subwoofer).
	Surr	When using a disc with Dolby Digital 3 channel – 5.1 channel, it is set to Dolby Digital sound mode. When using an MP3 CD, it is set to matrix-surround mode (not Dolby Pro Logic). Other discs are set to Dolby Pro Logic mode.
	HALL	????????
	LIVE	????????
	2ch	The surround mode is set to 2.1 channel (Front left and right speakers, and Subwoofer).
TV VIDEO FM TUNER AM TUNER	AUTO	It is set to 2.1 channel (Front left and right speakers, and Subwoofer).
	Surr	All speakers work, but it is set to the matrix-surround mode (not Dolby Pro Logic). If a monaural source is used, it is set to 3.1 channel (Front left and right, Center speaker, and Subwoofer).
	2ch	It is set to 2.1 channel (Front left and right speakers, and Subwoofer).

Notes:
• DVD video disc with DTS may not work correctly. You can see the picture on the TV screen, but there is no sound.
• There is no Dolby Surround effect when monaural program material is used.
• When receiving weak FM broadcasts, set it to "2ch". The sound quality may improve.

Need help? Call
1-800-813-3435

-E18-

Adjusting the Speaker Volume Balance

This unit is set to the standard level before shipping from the factory. You may not need adjustment.
But, depending on the size of the room and the placement of the speakers, you may need a fine adjustment.
In this case, follow the steps below. Please use the remote control at the listening point.

1. Press [SETUP/MENU].
   The "Menu" screen appears on the TV screen.
2. Press [▼] to select "SPEAKER SETUP".
3. Press [ENTER].
   The Speaker Setup screen appears.
4. Press [ENTER].
   The Volume Adjust screen appears.
5. Press [▲] or [▼] to select "TEST TONE".
6. Press [ENTER].
7. The test tone will be heard from each speaker for 2 seconds in the following order.

TV screen	FL display	Speaker
F-L	FL	Front left Speaker
CENTER	C	Center Speaker
F-R	FR	Front right Speaker
SURR.R	SR	Surround right Speaker
SURR.L	SL	Surround left Speaker

8. Press [VOLUME] + or – until the test tone is at a comfortable level.
9. If the test tone level is not the same from each speaker, press [▲] or [▼] to adjust it while the speaker is activating.
   F-R/F-R: "0"–"–10"
   CENTER/SURR ⟶ R/SURR ⟶ L: "+10"–"–10"
10. Repeat steps 8 to 9 for other settings.
11. Press [SETUP/MENU] repeatedly to close the screen.
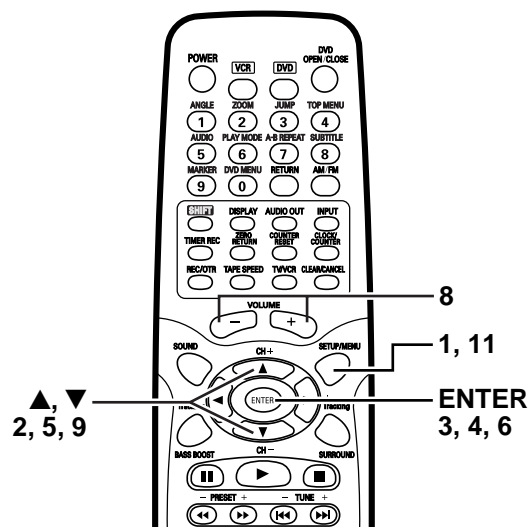
Adjusting the Speaker and Subwoofer Level

1. Press [SETUP/MENU].
   The "Menu" screen appears on the TV screen.
2. Press [▼] to select "SPEAKER SETUP".
3. Press [ENTER].
   The Speaker Setup screen appears.
4. Press [ENTER].
   The Volume Adjust screen appears.
5. Press [▲] or [▼] to select "TRIM".
6. Press [ENTER].
7. Press [ENTER] repeatedly to select the desired speaker.
   Each time the button is pressed, the selected speaker and tone level flash.
8. Press [▲] or [▼] to adjust the level as desired.
   F-L/F-R: "0"–"–10"
   CENTER/SURR ⟶ R/SURR ⟶ L/SUBWOOFER: "+10"–"–10"
   Note: No test tone.
9. Repeat steps 9 to 10 for other settings.
10. Press [SETUP/MENU] repeatedly to close the screen.

Note:
If no adjustment are made, the original display returns after approximately 60 seconds.

Need help? Call
1-800-813-3435

-E19-
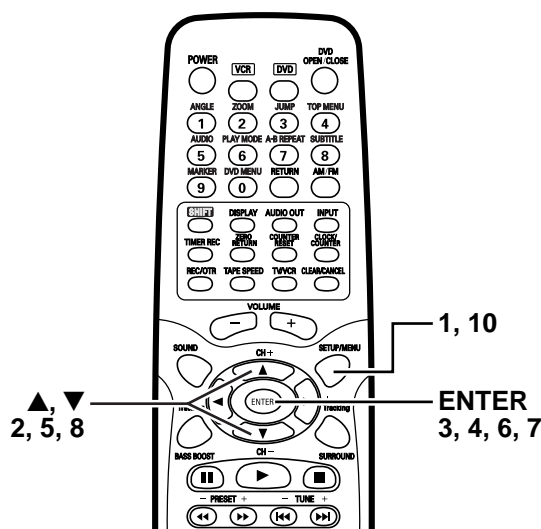
Changing the Delay Time

The sound from speakers can reach the listening position at different times depending the speaker placements. You can allow for this difference by changing the delay time of the center and surround speakers.

1. Press [■] to stop DVD playback completely.

2. Press [SETUP/MENU].
   The "Menu" screen appears on the TV screen.

3. Press [▼] to select "SPEAKER SETUP".

4. Press [ENTER].
   The Speaker Setup screen appears.

5. Press [▲] or [▼] to select "DELAY ADJUST".

6. Press [ENTER].
   The Delay Adjust screen appears.

7. Press [▲] or [▼] to select "CENTER DELAY".

8. Press [ENTER].

9. Press [▲] or [▼] to select the center speaker delay time.
   ("0ms", "1ms", "2ms", "3ms", "4ms" and "5ms")
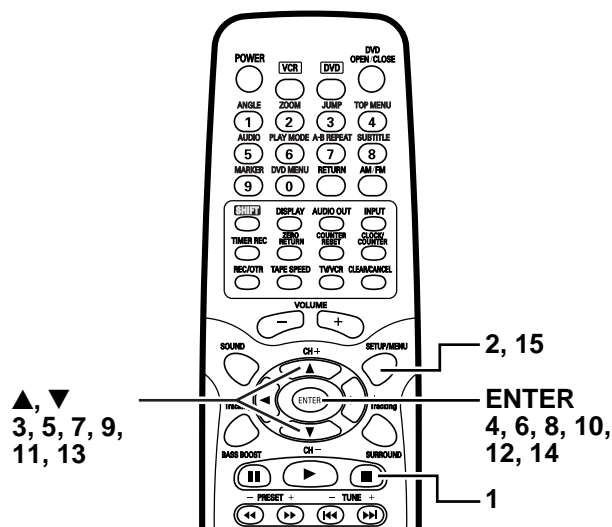
   Center speaker delay time
   If D1≦D2, set the delay time to "0ms".

   If D1>D2, set the delay time as follows:

Difference between D1 and D2	Delay time
1 foot (Approx. 30.5cm)	1ms
2 feet (Approx. 61cm)	2ms
3 feet (Approx. 91.5cm)	3ms
4 feet (Approx. 122cm)	4ms
5 feet (Approx. 152.5cm)	5ms
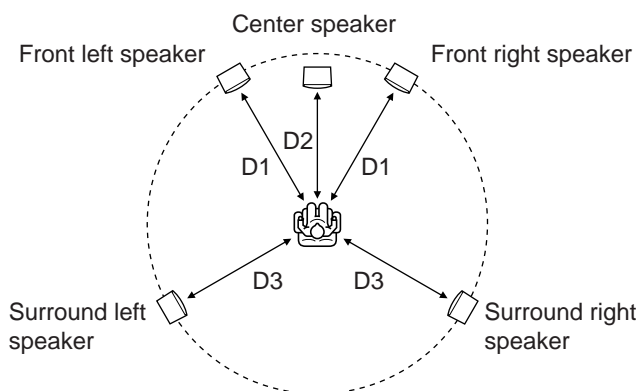
D1: The distance from the front speaker
D2: The distance from the center speaker
D3: The distance from the surround speaker

2, 15
ENTER
4, 6, 8, 10, 12, 14
1
▲, ▼
3, 5, 7, 9, 11, 13

10. Press [ENTER].
    "CENTER DELAY" and the selected delay time remain.

11. Press [▼] to select "SURR. DELAY".

12. Press [ENTER].

13. Press [▲] or [▼] to select the surround speaker delay time.
    ("0ms", "5ms", "10ms" and "15ms")

    Surround speaker delay time
    If D1≦D3, set the delay time to "0ms".

    If D1>D3, set the delay time as follows:

Difference between D1 and D3	Delay time
5 feet (Approx. 152.5cm)	5ms
10 feet (Approx. 305cm)	10ms
15 feet (Approx. 457.5cm)	15ms

14. Press [ENTER].
    "SURR. DELAY" and the selected delay time remain.

15. Press [SETUP/MENU] repeatedly to close the screen.

Note:
If no adjustment are made, the original display returns after approximately 60 seconds.

Need help? Call
1-800-813-3435

Setting the Video Channel

To view playback of a recorded tape or DVD disk, or to watch a program selected by the VCR's channel selector, the TV must be set to channel 3 or 4 (video channel).

When a TV is connected with the 75 ohm coaxial cable only.

1. Press [POWER] to turn on the DVD/VCR.
2. Press [VCR] to select the VCR mode.

   The VCR indicator on the front panel will light.
3. Set the 3/4 Channel selector switch on the rear panel to CH 3 or 4.
4. Turn ON the TV and set to CH 3 or 4 to correspond with the channel selected in step 3.
5. Press [TV/VCR] to select the VCR position.

   The VCR indicator will appear in the display.
6. Select any channel to receive a TV station in your area.

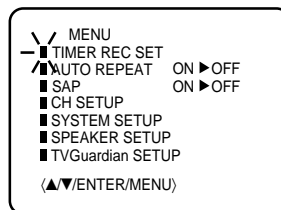   The channel number will appear on the screen for about 4 seconds.
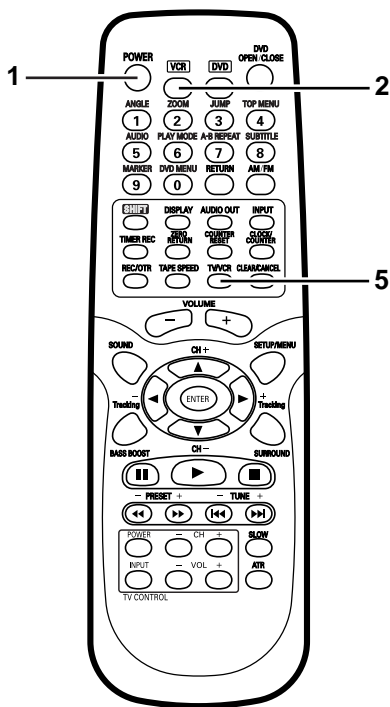
For a push-button TV tuner
If CH 3 or 4 corresponding to the video channel cannot be tuned on your TV, proceed as follows: set the DVD/VCR 3/4 channel selector and the TV to CH 3 or 4, play back a prerecorded tape and tune the TV to receive a sharp color picture from the video cassette recorder. Refer to your TV owner's manual for details.
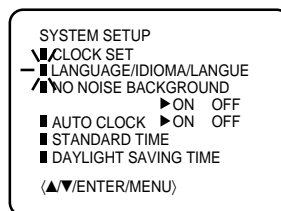
Setting the Language

You can choose from three different languages (English, French and Spanish) for the on-screen displays.
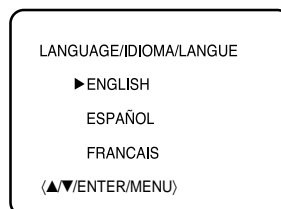
1. Press [SETUP/MENU].

   If you use the unit for the first time and press [SETUP/MENU], instead of the main menu screen below the "SYSTEM SETUP" menu screen in step 3 may appear.

   ```
   \ /  MENU
   — ▌ TIMER REC SET
   /▌ AUTO REPEAT    ON ▶OFF
      ▌ SAP          ON ▶OFF
      ▌ CH SETUP
      ▌ SYSTEM SETUP
      ▌ SPEAKER SETUP
      ▌ TVGuardian SETUP

      〈▲/▼/ENTER/MENU〉
   ```

2. Press [▲] or [▼] to select the "SYSTEM SETUP" option, then press [ENTER].

3. Press [▲] or [▼] to select the "LANGUAGE/IDIOMA/LANGUE" option, then press [ENTER].

   ```
      SYSTEM SETUP
   \▌ CLOCK SET
   — ▌ LANGUAGE/IDIOMA/LANGUE
   /▌ NO NOISE BACKGROUND
                    ▶ON   OFF
      ▌ AUTO CLOCK  ▶ON   OFF
      ▌ STANDARD TIME
      ▌ DAYLIGHT SAVING TIME

      〈▲/▼/ENTER/MENU〉
   ```

4. Press [▲] or [▼] to select the desired language: English (ENGLISH), Spanish (ESPAÑOL) or French (FRANCAIS), then press [ENTER].

   ```
      LANGUAGE/IDIOMA/LANGUE

         ▶ENGLISH

          ESPAÑOL

          FRANCAIS
      〈▲/▼/ENTER/MENU〉
   ```

5. Press [SETUP/MENU] until the MENU screen is cleared.
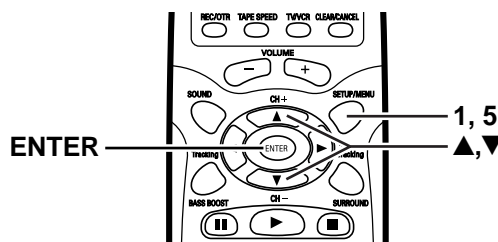
Notes:
• Both the VCR and the DVD have their own menu option (See page E54).
• If no buttons are pressed for more than 60 seconds, the MENU screen will return to normal TV-operation automatically.

Auto Clock Setting

The Auto Clock feature enables the automatic clock setting and updating, and also to set the Time Zone and Daylight Saving Time by receiving XDS (Extended Data Service) information carried on the channel signal.

Preparation:
You must set the antenna connection before the AC cord plug is inserted into the AC outlet.

Auto clock setting

WAIT 30 MINUTES! when the power switch is off, after the connections of the antenna and the power plug. Because the Auto Clock setting feature is activate.
After the clock is set automatically, you may have to set the Time Zone and Daylight Saving Time.
Press [POWER] to turn on the DVD/VCR after the Auto Clock operation completed.

- When shipped from factory, the AUTO CLOCK option is set to ON position.
- If you turn the DVD/VCR on during Auto Clock setting, the clock is not set.
- With cable box connection, if the Auto Clock Setting is unsuccessful, please select the PBS channel carrying the XDS information, then turn the DVD/VCR off. After 30 minutes, turn the DVD/VCR on, and if the clock is not set automatically, set the clock manually. (See page E24)
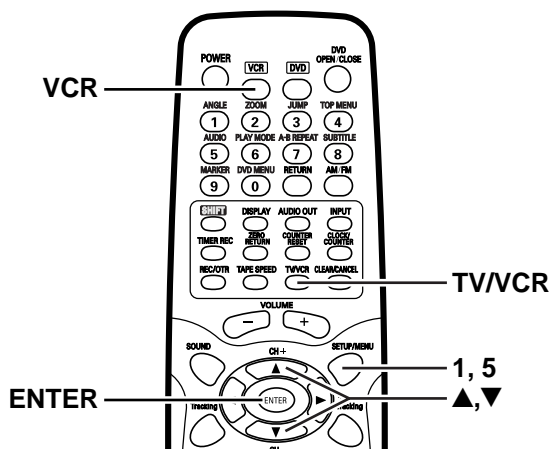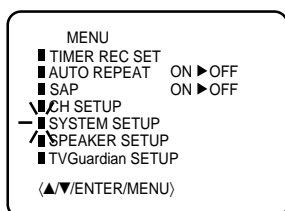
Time Zone setting (STANDARD TIME)

In the rare event that you live within broadcast range of two stations in two different time zones, the DVD/VCR may recognize the wrong station for the AUTO CLOCK set. To correct the situation:
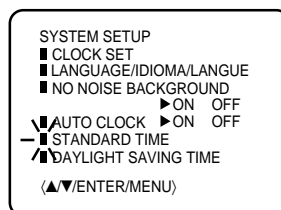
Preparation:
- Turn ON the TV.
- When a TV is connected with an audio/video cable, select the video input mode on the TV.
- When a TV is connected only with an antenna cable, set to the video channel 3 or 4. Then select VCR position with [TV/VCR].
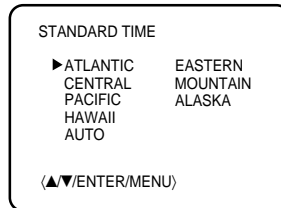- Press [VCR] to select the VCR mode. (The VCR indicator will light.)

1. Press [SETUP/MENU].
   The VCR menu screen will appear.

2. Press [▲] or [▼] to select the "SYSTEM SETUP" menu, then press [ENTER].

```
        MENU
    ■ TIMER REC SET
    ■ AUTO REPEAT    ON ▶OFF
    ■ SAP            ON ▶OFF
  ↘■ CH SETUP
  ─ ■ SYSTEM SETUP
  ↗■ SPEAKER SETUP
    ■ TVGuardian SETUP

    〈▲/▼/ENTER/MENU〉
```

3. Press [▲] or [▼] to select the "STANDARD TIME" option, then press [ENTER].

```
    SYSTEM SETUP
    ■ CLOCK SET
    ■ LANGUAGE/IDIOMA/LANGUE
    ■ NO NOISE BACKGROUND
              ▶ON   OFF
  ↘■ AUTO CLOCK  ▶ON  OFF
  ─ ■ STANDARD TIME
  ↗■ DAYLIGHT SAVING TIME

    〈▲/▼/ENTER/MENU〉
```

4. Press [▲] or [▼] to select your Time Zone, then press [ENTER].

```
    STANDARD TIME

    ▶ATLANTIC      EASTERN
     CENTRAL       MOUNTAIN
     PACIFIC       ALASKA
     HAWAII
     AUTO

    〈▲/▼/ENTER/MENU〉
```

5. Press [SETUP/MENU] until the MENU screen is cleared.

Notes:
- After Auto Clock setting, in some case the clock may display the other time zone's. You can correct the clock by selecting your Time Zone setting above.
- When the clock is not set or you set the clock manually, Time Zone setting is not available.
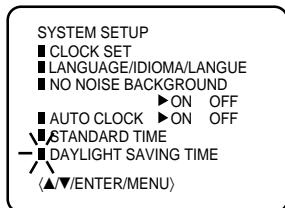
Need help? Call
1-800-813-3435

-E22-

Daylight saving time setting

You can set the Daylight saving time automatically or manually.

Preparation:
- Turn ON the TV.
- When a TV is connected with an audio/video cable, select the video input mode on the TV.
- When a TV is connected only with an antenna cable, set to the video channel 3 or 4. Then select VCR position with [TV/VCR].
- Press [VCR] to select the VCR mode. (The VCR indicator will light.)

1. Repeat the steps 1–2 on page E22 and press [▲] or [▼] to select "DAYLIGHT SAVING TIME", then press [ENTER].

```
SYSTEM SETUP
█ CLOCK SET
█ LANGUAGE/IDIOMA/LANGUE
█ NO NOISE BACKGROUND
            ▶ON    OFF
█ AUTO CLOCK  ▶ON   OFF
█ STANDARD TIME
█ DAYLIGHT SAVING TIME

〈▲/▼/ENTER/MENU〉
```

2. Press [▲] or [▼] to select one of the options, then press [ENTER].

```
DAYLIGHT  SAVING  TIME

      ON

      OFF

    ▶AUTO

〈▲/▼/ENTER/MENU〉
```
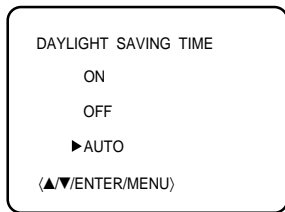
ON: for manual setting   (forward one hour)
OFF: for manual setting   (back one hour)
AUTO: for automatic setting (read XDS in the signal)

When you want to set the Daylight Saving Time manually, on the first Sunday in April you set to "ON", and on the last Sunday in October you set to "OFF".

Notes:
- When shipped from factory, the DAYLIGHT SAVING TIME option is set to "AUTO" position.
- When the clock is not set, Daylight Saving Time setting is not available.
- When there is no Daylight Saving Time in your area, always select "OFF" position in step 2.

VCR

TV/VCR

ENTER

▲,▼

Need help? Call
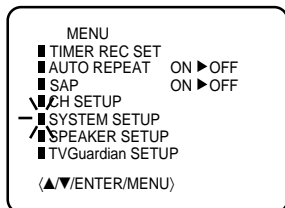*1-800-813-3435*

-E23-
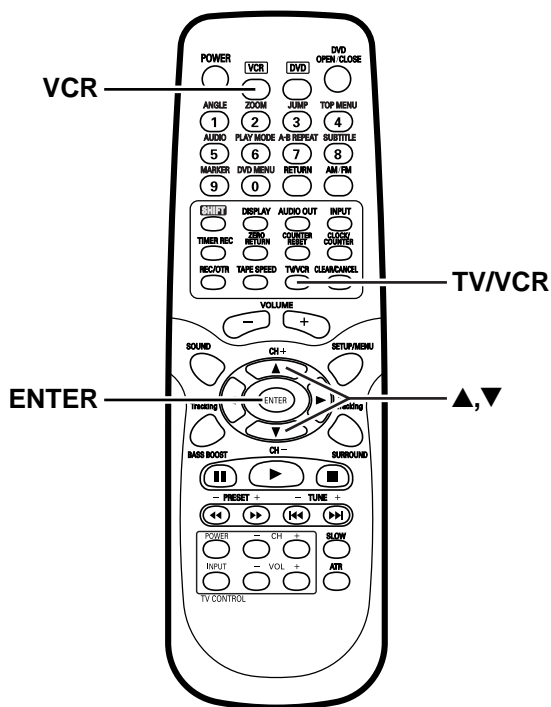
Manual Clock Setting

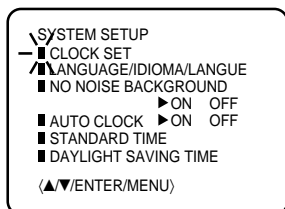You must set the date and time for timer recordings.

Preparation:
• Turn ON the TV and set to the video input mode.
• Press [VCR] to select the VCR mode. (The VCR indicator will light.)

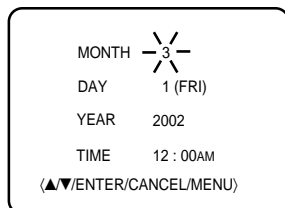Example: Setting the clock to "8:30 AM" March, 23 (SAT), 2002.

1. Press [SETUP/MENU].
   The VCR menu screen will appear.

2. Press [▲] or [▼] to select the "SYSTEM SETUP" menu, then press [ENTER].
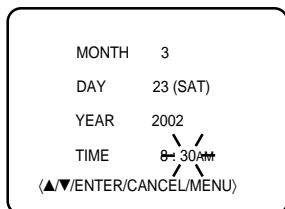
```
      MENU
   ■ TIMER REC SET
   ■ AUTO REPEAT    ON ▶OFF
   ■ SAP            ON ▶OFF
   ■ CH SETUP
 ─ ■ SYSTEM SETUP
   ■ SPEAKER SETUP
   ■ TVGuardian SETUP

   〈▲/▼/ENTER/MENU〉
```

3. Press [▲] or [▼] to select the "CLOCK SET" option, then press [ENTER].

```
   SYSTEM SETUP
 ─ ■ CLOCK SET
   ■ LANGUAGE/IDIOMA/LANGUE
   ■ NO NOISE BACKGROUND
                    ▶ON    OFF
   ■ AUTO CLOCK  ▶ON   OFF
   ■ STANDARD TIME
   ■ DAYLIGHT SAVING TIME

   〈▲/▼/ENTER/MENU〉
```

4. Press [▲] or [▼] to set the month, then press [ENTER].

```
   MONTH   ─ 3 ─

   DAY        1 (FRI)

   YEAR      2002

   TIME     12 : 00AM
   〈▲/▼/ENTER/CANCEL/MENU〉
```

5. Set the day, year and time as in step 4.

```
   MONTH      3

   DAY       23 (SAT)

   YEAR      2002

   TIME     8 : 30AM
   〈▲/▼/ENTER/CANCEL/MENU〉
```

6. After setting the clock, date and time starts functioning automatically.

```
   8 : 30AM  SAT




```
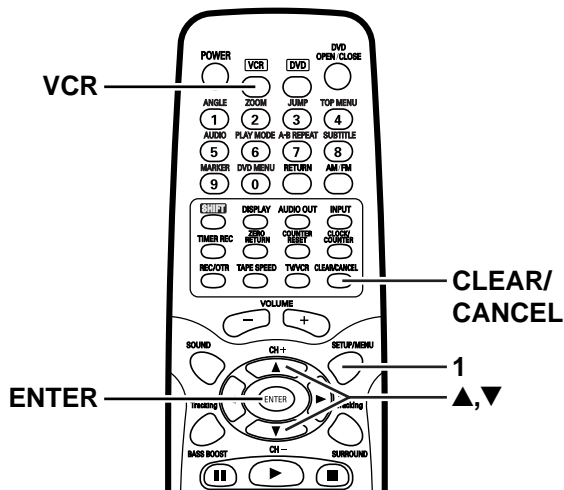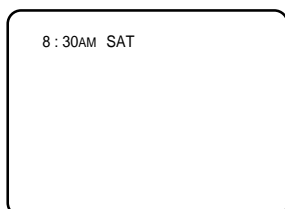
Notes:
• To make corrections any time during the process, press [CLEAR/CANCEL] repeatedly until the item you want to change blinks, then press [▲] or [▼].
• After a power failure or disconnection of the power, the timer settings will be lost. In this case, reset the present time.

VCR

CLEAR/CANCEL

1

ENTER

▲,▼

Tuner Setting

This DVD/VCR is equipped with a channel memory feature which allows channels to skip up or down to the next channel set into memory, skipping over unwanted channels. Before selecting channels, they must be programmed into the DVD/VCR's memory. In addition to normal VHF and UHF channels, this DVD/VCR can receive up to 125 Cable TV channels. To use this DVD/VCR with an antenna, set the TV/CATV menu option to the TV mode. When shipped from the factory, this menu option is in the CATV mode.
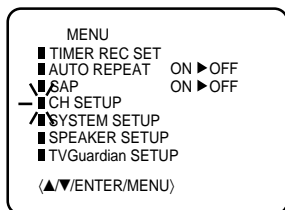
Preparation:
• Turn ON the TV and set to the video input mode.
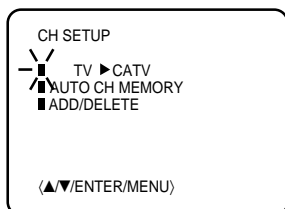• Press [VCR] to select the VCR mode. (The VCR indicator will light.)

Note:
You can't select "CH SETUP" if you set the channel to "L".
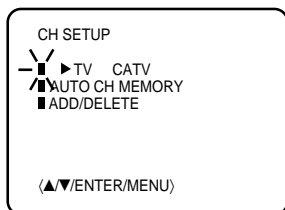
TV/CATV selection
1. Press [SETUP/MENU].
   The VCR menu screen will appear.

2. Press [▲] or [▼] to select "CH SETUP", then press ENTER.

```
        MENU
   ▌ TIMER REC SET
   ▌ AUTO REPEAT    ON ▶ OFF
   ▌ SAP            ON ▶ OFF
 — ▌ CH SETUP
   ▌ SYSTEM SETUP
   ▌ SPEAKER SETUP
   ▌ TVGuardian SETUP

   〈▲/▼/ENTER/MENU〉
```

3. Press [▲] or [▼] to select the "TV/CATV" option.

```
    CH SETUP

 — ▌   TV ▶ CATV
   ▌ AUTO CH MEMORY
   ▌ ADD/DELETE


   〈▲/▼/ENTER/MENU〉
```

4. Then press [ENTER] to select the TV or CATV mode.

```
    CH SETUP

 — ▌ ▶ TV   CATV
   ▌ AUTO CH MEMORY
   ▌ ADD/DELETE


   〈▲/▼/ENTER/MENU〉
```

• The arrow indicates the selected mode.
  TV: VHF/UHF channels
  CATV: CABLE TV channels

5. Press [SETUP/MENU] until the menu screen is cleared.
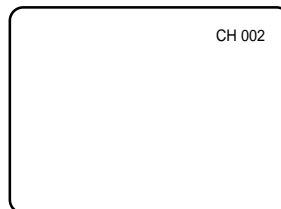
Need help? Call
1-800-813-3435
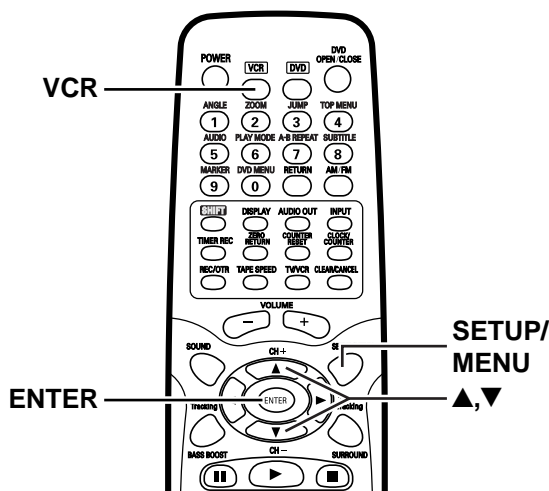
Setting channels automatically
The VCR can receive a maximum of 125 channels in CATV mode, 69 channels in TV mode by presetting the channels into memory.

1. Repeat above steps 1–2 and press [▲] or [▼] to select "AUTO CH MEMORY".

```
    CH SETUP

 — ▌ ▶ TV   CATV
   ▌ AUTO CH MEMORY
   ▌ ADD/DELETE


   〈▲/▼/ENTER/MENU〉
```

2. Then press [ENTER].

```
                    CH 002




```
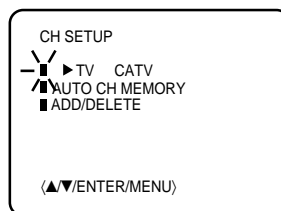
The auto tuning will start. The channel display will count up and when finished, the screen returns to normal.

3. Press [SETUP/MENU] until the menu screen is cleared.
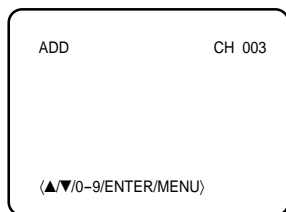
To ADD/DELETE Channels

You can add the channels you want or delete the channels you do not want manually.

Preparation:
- Turn ON the TV and set to the video input mode.
- Press [VCR] to select the VCR mode. (The VCR indicator will light.)

1. Repeat the steps 1–2 in "TV/CATV selection" on page E25. Then press [▲] or [▼] to select the "ADD/DELETE" option and press [ENTER].

```
CH SETUP

 ■  ►TV    CATV
\ ■ AUTO CH MEMORY
— ■ ADD/DELETE
/ \



 〈▲/▼/ENTER/MENU〉
```
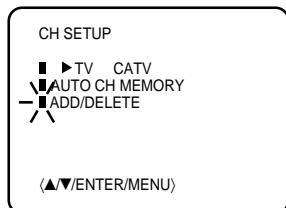
2. Press the number button(s), [▲] or [▼] to select a channel number you want to add or delete.
The channel number will blink.

```
ADD                    CH  003




 〈▲/▼/0–9/ENTER/MENU〉
```
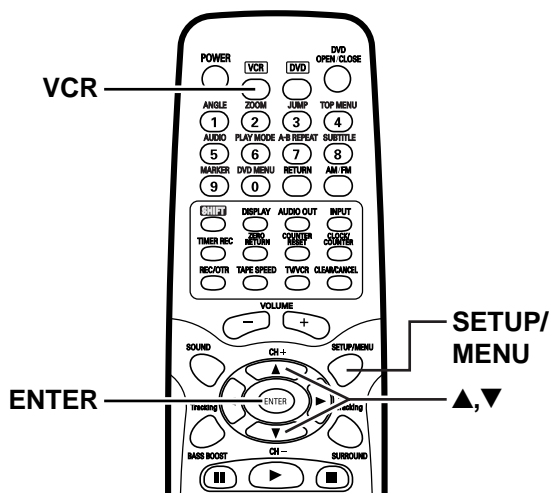
3. **To add channels**
Press [ENTER] until "ADD" appears on the screen to set to add the unmemorized channel.
To delete channels
Press [ENTER] until "DELETE" appears on the screen to set to delete the channel from memory.
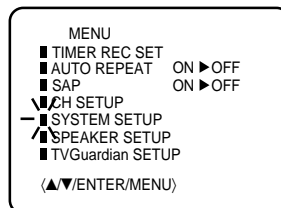
4. Repeat 2 and 3 to add or delete other channel.

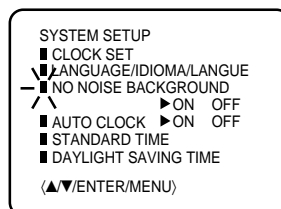5. Press [SETUP/MENU] until the menu screen is cleared.

Noise Elimination

When you don't want to receive a weak signal broadcast, the Blue back screen can be obtained by selecting the NO NOISE BACKGROUND "ON". When the unit is shipped from the factory, the NO NOISE BACKGROUND is set to "ON".

1. Press [SETUP/MENU].
The VCR menu screen will appear.

2. Press [▲] or [▼] to select the "SYSTEM SETUP" menu, then press [ENTER].

```
   MENU
 ■ TIMER REC SET
 ■ AUTO REPEAT    ON ►OFF
 ■ SAP            ON ►OFF
\ ■ CH SETUP
— ■ SYSTEM SETUP
/ ■ SPEAKER SETUP
 ■ TVGuardian SETUP

 〈▲/▼/ENTER/MENU〉
```

3. Press [▲] or [▼] to select the "NO NOISE BACKGROUND" option.

```
 SYSTEM SETUP
 ■ CLOCK SET
\ ■ LANGUAGE/IDIOMA/LANGUE
— ■ NO NOISE BACKGROUND
/ \           ►ON   OFF
 ■ AUTO CLOCK  ►ON   OFF
 ■ STANDARD TIME
 ■ DAYLIGHT SAVING TIME
 〈▲/▼/ENTER/MENU〉
```

4. Press [ENTER] to select the "ON" position.

5. Press [SETUP/MENU] until the menu screen is cleared.
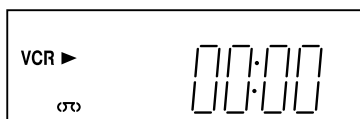
VCR
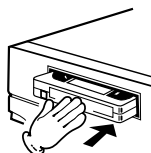
SETUP/ MENU

ENTER

▲,▼

CASSETTE TAPE PLAYBACK
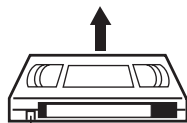
Loading and Unloading a Cassette Tape

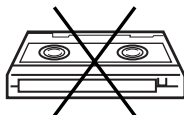Use only video cassette tapes marked **VHS**.

Loading

Push the center of the tape until it is automatically inserted.

Insert the cassette tape with its labeled side facing up and the erase prevention tab positioned at your left. An inverted cassette tape cannot be inserted.
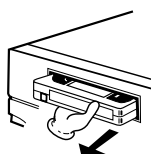

Erase prevention tab

Automatic power ON

When you insert a cassette tape the DVD/VCR power will turn ON automatically.

Automatic playback

When loading a cassette tape without an erase prevention tab, playback will start automatically.

Unloading

1. Press [⏏ EJECT] on the unit.
2. Remove the cassette tape.

Automatic tape eject

This DVD/VCR will automatically rewind the tape when the tape has ended. And when the tape is rewinded to its beginning, the cassette tape will be ejected automatically.

To prevent accidental erasure

Remove the erase prevention tab with a screwdriver.

Erase prevention tab

To record again

Cover the hole with a piece of adhesive tape.

Adhesive tape

Tape speed and maximum recording time

Tape Speed	Video cassette tape				
	T-160	T-120	T-90	T-60	T-30
SP (Standard Play)	2-2/3 hours	2 hours	1-1/2 hours	1 hour	30 minutes
SLP (Super Long Play)	8 hours	6 hours	4-1/2 hours	3 hours	1-1/2 hours

Basic Playback

Preparation:
- Turn ON the TV and set to the video input mode.
- Press [VCR] to select the VCR mode. (The VCR indicator will light.)

1. Load a prerecorded tape (When loading a cassette tape without the erase prevention tab, playback will start automatically).

2. Press [▶].
   - Playback will start.
   - "▶" will appear on the screen for about 4 seconds.

To stop playback

Press [■] once.
The tape will stop but remain fully loaded and ready to play.
"■" will appear on the screen for about 4 seconds.

To rewind the tape or forward it rapidly

1. Stop the playback or recording with [■].
2. To rewind the tape, press [◀◀].
   - "◀◀" will appear on the screen for about 4 seconds.
   To forward the tape, press [▶▶].
   - "▶▶" will appear on the screen for about 4 seconds.
3. To stop the tape-winding, press [■]. To switch to playback directly (without STOP), press [▶].

Forward/Reverse picture search mode

When the tape is being winded, you can switch to picture search mode (see next page). To do this, press [◀◀] or [▶▶] and hold it down. The unit will resume the tape winding as soon as the button is released.

Notes:
- This VCR selects the playback tape speed SP, LP or SLP automatically.
- The Cassette tape and DVD disc can be played back simultaneously. If you press [VCR] or [DVD], the tape playback and DVD playback alternate with each other on the screen.
- When you select the VCR mode during DVD playback, DVD playback will stop automatically after approx. 5 minutes.
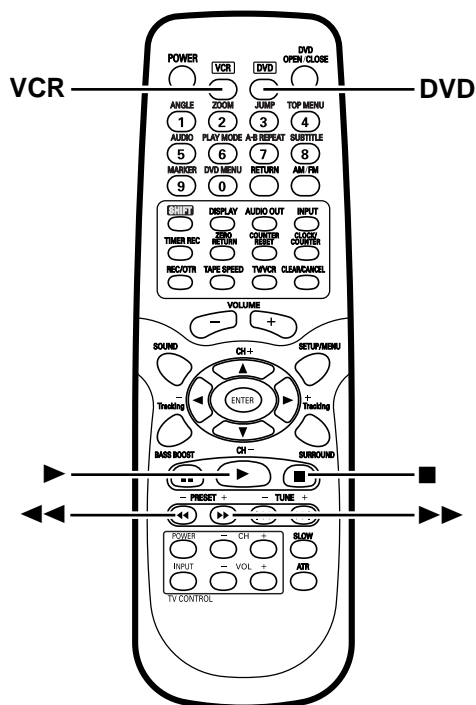
Need help? Call
1-800-813-3435

Special Playback

Picture Search
Reverse picture search function:
Press [◄◄] x 1 or x 2 during the playback.
Forward picture search function:
Press [►►] x 1 or x 2 during the playback.
To return to playback: Press [►].

SPEED SEARCH TIMES

TAPE SPEED	PICTURE SEARCH SPEED	
	PRESS ONCE	PRESS TWICE
SP (Standard Play)	3 X	5 X
LP (Long Play)	7 X	9 X
SLP (Super Long Play)	9 X	15 X

Still Picture
Press [❙❙] during playback.
To resume normal playback: Press [►] or [❙❙].

Slow Motion
During playback press [SLOW].
To return to playback: Press [►] or [SLOW].

Slow tracking and vertical lock adjustment:
If noise bars appear in the picture during slow motion, press [Tracking] +/– to reduce the noise bars.
If the still picture jitters excessively, press [Tracking] +/– to stabilize the still picture.

Frame by Frame picture
Press [❙❙] during playback.
Press [SLOW] one by one: The picture advances frame by frame.
To return to playback: Press [►] or [❙❙].

Adjusting tracking condition
Automatic tracking adjustment:
Whenever you insert a tape and start playback, automatic tracking starts working and continuously analyzes the signal to enable optimum picture quality during playback.

Manual tracking adjustment:
If automatic tracking cannot eliminate noises well during playback, press [Tracking] +/– to eliminate the noises. "MANUAL TR." will appear. Press it briefly for a fine adjustment, or press and hold for a coarse adjustment.
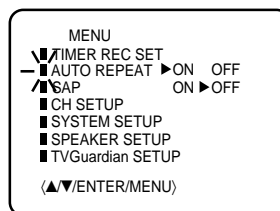• Press [ATR] to reactivate automatic tracking again.
"AUTO TR." will appear.

Notes:
• The audio output is muted during SPEED SEARCH, STILL, FRAME ADVANCE and SLOW MOTION.
• During picture search mode there will be noise bars which are caused by the system.
• The Special Playback will automatically change to playback after approx. 5 minutes to protect the video tape against excessive wear.

Repeat playback
The entire video tape will be played until its end. The tape will then automatically rewind to the beginning and the playback will be repeated.

1. Press [SETUP/MENU].
2. Press [▲] or [▼] to select "AUTO REPEAT".
3. Then press [ENTER] to select "ON" or "OFF".
   • If "ON" is selected, the playback will be repeated endlessly.

```
            MENU
  ▼▼ TIMER REC SET
 ─ ❙ AUTO REPEAT ► ON   OFF
  ▲ ❙ SAP          ON ► OFF
    ❙ CH SETUP
    ❙ SYSTEM SETUP
    ❙ SPEAKER SETUP
    ❙ TVGuardian SETUP

    〈▲/▼/ENTER/MENU〉
```

4. Press [SETUP/MENU] until the menu screen is cleared.
   • If you press [DISPLAY], "↻" will appear on the screen.
5. To start the playback, press [►].
   The playback will be repeated endlessly.

To cancel repeat mode:
Follow the above steps 1–2, then press [ENTER] to select the OFF position. Press [SETUP/MENU] to return to the TV.

Need help? Call
1-800-813-3435
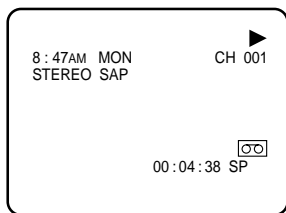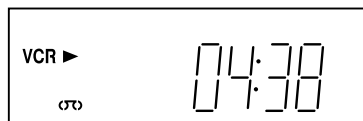
-E29-

ZERO RETURN Function

This function makes tape-rewinding stop at the counter 00:00:00 position automatically.

Preparation:
• Turn ON the TV and set it to the video input mode.
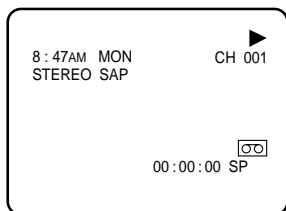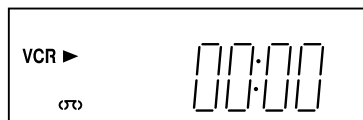• Press [VCR] to select the VCR mode. (The VCR indicator will light.)

1. Press [DISPLAY].
   The counter display shows the tape running time during playback or recording.

2. Press [COUNTER RESET] at the desired tape position.
   The counter display will be reset to the "00:00:00" position (e.g. the begining of recording).
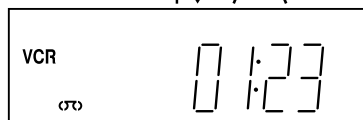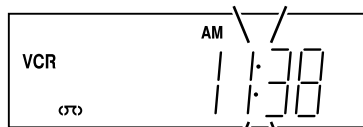

3. Press [■] when playback or recording is finished.
4. Press [ZERO RETURN].
   The tape will be rewinded or fast forwarded and automatically stop at the "00:00:00" position.

The CLOCK/COUNTER-button

Press [CLOCK/COUNTER]. The clock and tape counter alternate with each other in the display.

Notes:
• If you rewind the tape beyond "00:00:00", a minus sign ("–") will be displayed in front of the time.
• When you load a tape, the counter will reset to "00:00:00".
• The counter does not function on nonrecorded (blank) sections of the tape. When you rewind, fast forward or play tapes through blank sections, the counter stops.
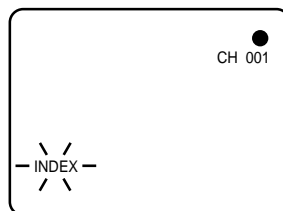
-E30-
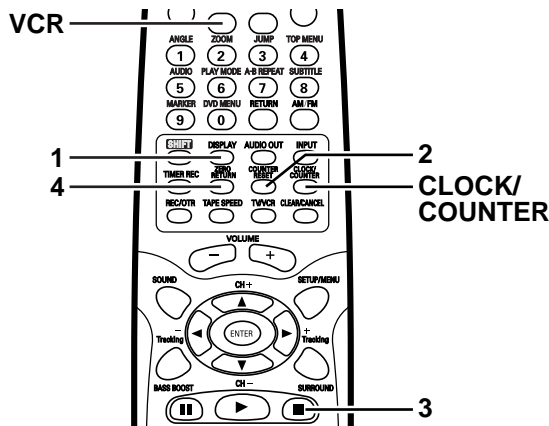
Video Index Search System

This function enables you to locate the beginning of any recording made on the VCR.

Recording an INDEX MARK

The Index Search function automatically records an INDEX mark on the tape whenever a recording is initiated.

Index Search
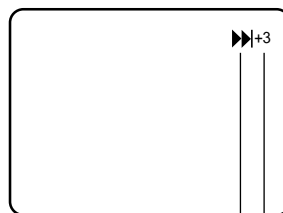
Press [►►I] or [I◄◄] during stop or play mode.
For Succeeding programs: Press [►►I].
For Preceding programs: Press [I◄◄].
(Additional press increases the INDEX NO. up to 9.)
When the [►►I] or [I◄◄] is pressed, the unit starts searching the INDEX NO. selected and finds the portion, then playback starts automatically.
To stop the Index Search, press [■].

►►I or I◄◄ is displayed
INDEX NO. (up to 9)

Notes:
• When you record an INDEX mark at the very beginning of the tape, the mark may not be found.
• During INDEX search, the tape may stop and begin to play at a slightly different location.
• INDEX may not function properly with old or worn out video tapes.
• INDEX marks may not be found if it is extremely close to the point where the search began.
• In recording, if you stop recording temporarily, the INDEX mark is not recorded on the tape.
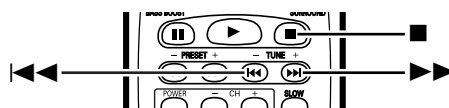
RECORDING

Recording a TV program

Recording and viewing the same TV program
Preparation:
- Turn ON the TV and set to the video input mode.
- Press [VCR] to select the VCR mode. (The VCR indicator will light.)
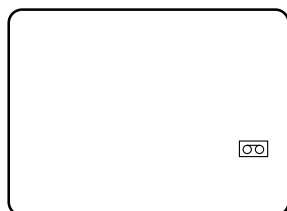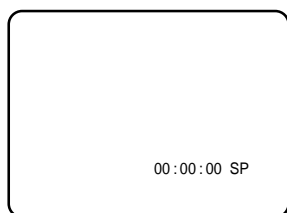
1. Load a cassette tape with the erase prevention tab intact. The VCR will automatically turn on.

2. Press [TAPE SPEED] to select the desired tape speed SP or SLP.
   The tape counter and SP or SLP will appear on the screen for about 4 seconds.

   00:00:00 SP

3. Set the TV/CATV option to the appropriate position (See page E25).
   TV: VHF/UHF channels
   CATV: CABLE TV channels
4. Press [number buttons (0–9)] or [CH] +/– to select the channel to be recorded.
   In the TV mode
   1–9   Press [0] and then [1]–[9] as required.
             Example: To select "2", press [0][2].
   10–69   Press 2 digits in order.
             Example: Press [2][2] for "22".
   In the CATV mode
   1–9   Press [0] twice and then [1]–[9] as required.
             Example: To select "2", press [0][0][2].
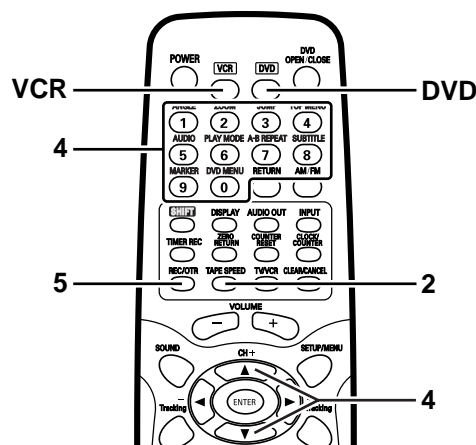   10–12   Press [0] first and then the remaining 2 digits in order from left to right.
             Example: Press [0][1][2] for "12".
   13–99   Press 2 digits in order.
             Example: Press [2][2] for "22".
   100–125   Press the 3 digits in order.
             Example: Press [1][1][0] for "110".

   CH 110
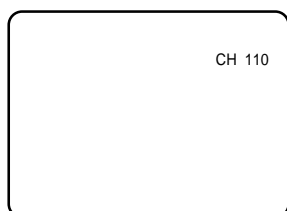
VHF/UHF/CATV CHANNELS

TV	CATV
VHF 2–13	VHF 2–13
UHF 14-69	STD/HRC/IRC 14–36 (A) (W) 37–59 (AA) (WW) 60–85 (AAA) (ZZZ) 86–94 (86) (94) 95–99 (A-5) (A-1) 100–125 (100)(125) 01 (5A)

5. Press [REC/OTR].
   "●" will appear on the screen for about 4 seconds and "REC" will appear on the display.

   CH 110

   INDEX
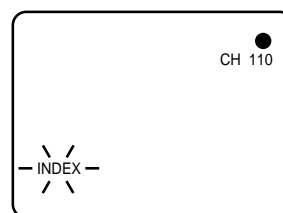
Notes:
- If the erase prevention tab is removed, the tape will eject when [REC/OTR] is pressed for recording.
- If you wish to watch the DVD playback during the normal recording on VCR, press [DVD] to change to DVD mode and perform the DVD playback (see page E39).
- You can not record disc material in DVD, Video CD, Audio CD, etc. onto a video tape with this DVD/VCR.

To stop recording

Press [■] to stop recording.
"■" will appear on screen for about 4 seconds.

To stop recording temporarily

Press [II] to avoid recording unwanted material. Press again to continue the recording.
"● II" will appear on screen for about 4 seconds.

Notes:
- The pause function will be released after 5 minutes to prevent damage to the tape or the VCR. The VCR will change to the STOP mode.
- You can select a recording channel in the recording pause mode.
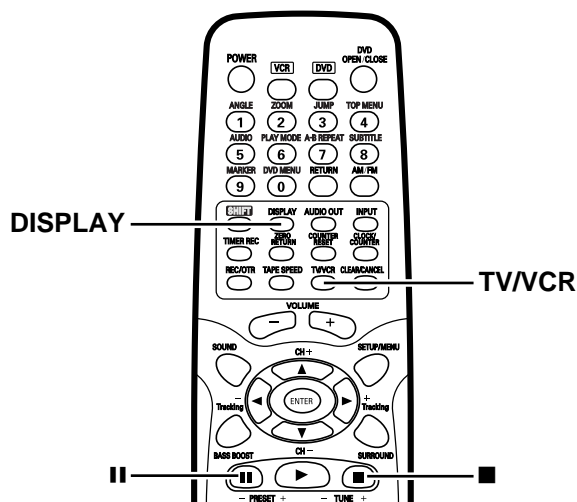
Recording one program while watching another

While the VCR is recording, press [TV/VCR] to select the TV position.
The "VCR" will go off and recording will continue.
Select the TV channel you want to watch by using the TV channel selector.

Note:
Some CATV hookups do not permit viewing one channel while recording another. See pages E12, E13.

DISPLAY

TV/VCR

II ■

To Display VCR operation Status

Press [DISPLAY]. The clock, day of the week and more information will be indicated.

While watching TV:

CLOCK   DAY OF THE WEEK

8 : 47AM   MON   CH 125 — CHANNEL
STEREO AND — STEREO SAP
SEPARATE AUDIO
PROGRAM (SAP)

00 : 00 : 00 SP — TAPE SPEED

REAL TIME COUNTER

While operating a tape:

▶ — OPERATING MODE

8 : 30AM   MON   CH 125
HI-FI STEREO — HI-FI

AUTO REPEAT — ↻ 🔲 — TAPE IN
00 : 00 : 00 SP
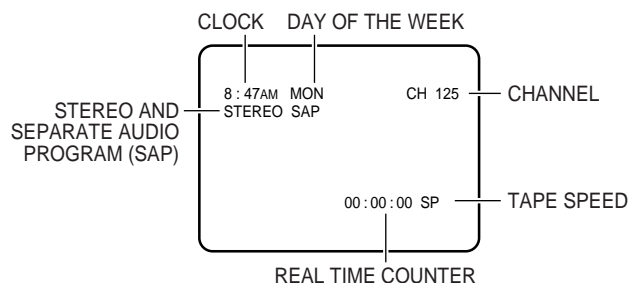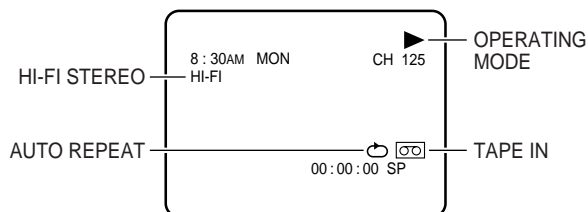
To cancel the display:
Press [DISPLAY] until all indicators disappear.

Auto Rewind feature
This VCR will automatically rewind the tape when the tape has ended (except during One-touch Timer Recording and TIMER REC). It will also eject the tape.

Need help? Call
1-800-813-3435

-E32-

One-touch Timer Recording (OTR)

The One-touch Timer Recording feature provides a simple and convenient way to make a timed recording.

Preparation:
- Turn ON the TV and set to the video input mode.
- Press [VCR] to select the VCR mode. (The VCR indicator will light.)

Example: One-touch Timer Recording for 30 minutes.

1. Load a cassette tape with the erase prevention tab intact. The VCR will automatically turn on.

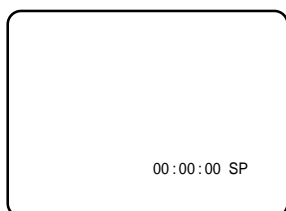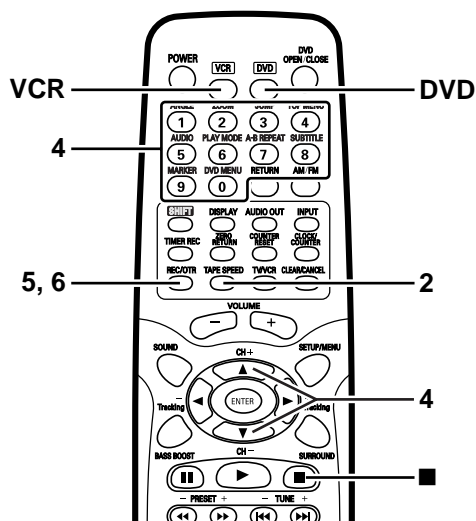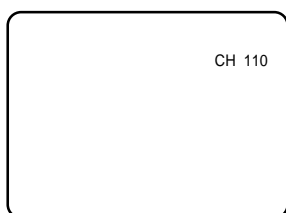2. Press [TAPE SPEED] to select the desired tape speed SP or SLP.
The tape counter and SP or SLP will appear on the screen for about 4 seconds.

00:00:00 SP

3. Set the TV/CATV option to the appropriate position (See page E25).
TV: VHF/UHF channels
CATV: CABLE TV channels

4. Press [number buttons (0–9)] or [CH] +/– to select the channel to be recorded.

CH 110

5. Press [REC/OTR].

6. Press [REC/OTR] again to stop recording after 30 minutes. Each additional press of [REC/OTR] will increase recording time as shown in the chart below, up to a maximum of 5 hours. The OTR and recording time will appear on the screen for about 4 seconds. And, REC will keep blinking in the display.

OTR 0:30
CH 125

INDEX
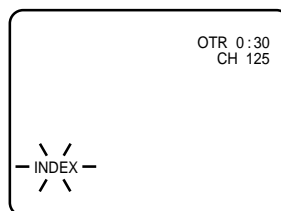
Press	Recording time	Press	Recording time
once	NORMAL REC	6 times	3:00
twice	0:30	7 times	4:00
3 times	1:00	8 times	5:00
4 times	1:30	9 times	NORMAL REC
5 times	2:00		

To cancel OTR

Press [■] or turn off the power.
"■" will appear on screen for about 4 seconds.

Note:
If you wish to watch the DVD playback during the OTR, press [DVD] to change to DVD mode and perform the DVD playback (see page E39).

VCR   DVD

4

5, 6   2

4

■

Need help? Call
1-800-813-3435

Timer Recording

Timer recording can be programmed on-screen with the remote control. The built-in timer allows automatic unattended recording of up to 8 programs within 1 month.

Preparation:
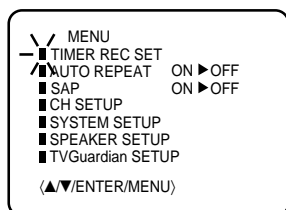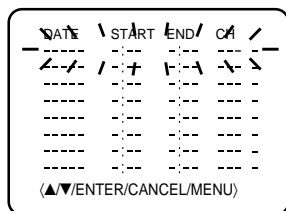• Press [VCR] to select the VCR mode.
  Load a cassette tape with the erase prevention tab intact.
• Press the [DISPLAY] button to verify that the time and date are correct (see page E32).

Example: Program a timer recording for the 26th day, channel 125 (CATV), 11:00–11:30 PM on timer program number 1 (Tape speed: SLP).
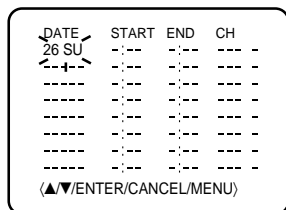
1. Press [SETUP/MENU].
   The VCR menu screen will appear.

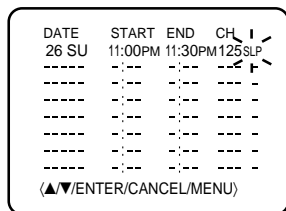2. Select the "TIMER REC SET" option, then press [ENTER].

```
      MENU
   TIMER REC SET
   AUTO REPEAT    ON ►OFF
   SAP            ON ►OFF
   CH SETUP
   SYSTEM SETUP
   SPEAKER SETUP
   TVGuardian SETUP

   〈▲/▼/ENTER/MENU〉
```

3. Press [▲] or [▼] to select one of the program line, then press [ENTER].

```
   DATE   START  END   CH
   -----  -:--   -:--  --- -
   -----  -:--   -:--  --- -
   -----  -:--   -:--  --- -
   -----  -:--   -:--  --- -
   -----  -:--   -:--  --- -
   -----  -:--   -:--  --- -
   -----  -:--   -:--  --- -

   〈▲/▼/ENTER/CANCEL/MENU〉
```

4. Press [▲] or [▼] to select the date, then press [ENTER].

```
   DATE   START  END   CH
   26 SU  -:--   -:--  --- -
   -----  -:--   -:--  --- -
   -----  -:--   -:--  --- -
   -----  -:--   -:--  --- -
   -----  -:--   -:--  --- -
   -----  -:--   -:--  --- -
   -----  -:--   -:--  --- -
   -----  -:--   -:--  --- -

   〈▲/▼/ENTER/CANCEL/MENU〉
```

5. Set the start time, end time, channel and tape speed as in step 4.

```
   DATE   START    END    CH
   26 SU  11:00PM  11:30PM 125SLP
   -----  -:--     -:--    --- -
   -----  -:--     -:--    --- -
   -----  -:--     -:--    --- -
   -----  -:--     -:--    --- -
   -----  -:--     -:--    --- -
   -----  -:--     -:--    --- -
   -----  -:--     -:--    --- -

   〈▲/▼/ENTER/CANCEL/MENU〉
```
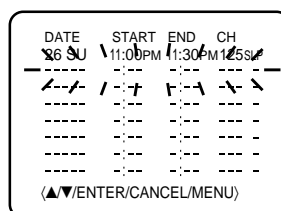
Notes:
• Press [CLEAR/CANCEL] to move cursor backward for correction.
• To record from external source set the channel to "L". "L" will appear next to CH 125 (or 69).
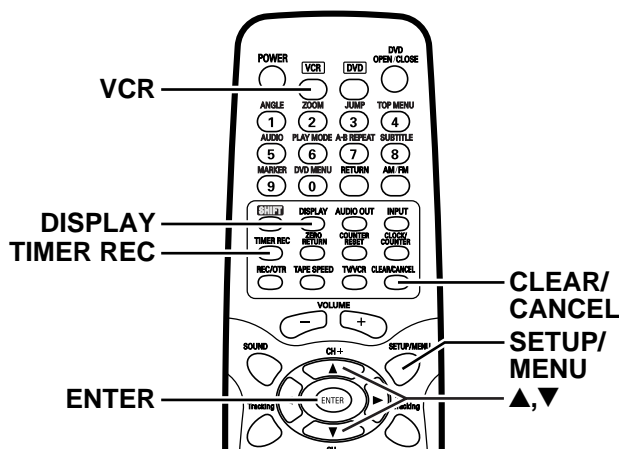
6. To enter other programs, repeat step 3 through 5.
   • To return to the normal screen, press [SETUP/MENU] twice.

```
   DATE   START    END    CH
   26 SU  11:00PM  11:30PM 125SLP
   -----  -:--     -:--    --- -
   -----  -:--     -:--    --- -
   -----  -:--     -:--    --- -
   -----  -:--     -:--    --- -
   -----  -:--     -:--    --- -
   -----  -:--     -:--    --- -
   -----  -:--     -:--    --- -

   〈▲/▼/ENTER/CANCEL/MENU〉
```

7. Press [TIMER REC].
   The clock symbol (⏲) will appear on the display and the VCR stands by for recording. At the same time, VCR mode will change to DVD mode automatically. You can use DVD even if the VCR is in the Timer recording mode.
   If you do not use the DVD, turn the power off.
   The timer recording will start at 5 seconds before the time you predetermined.
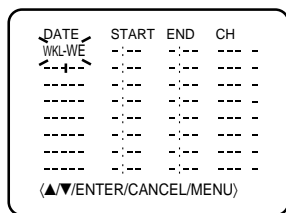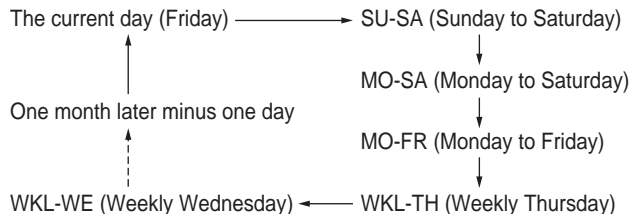
Notes:
• If the clock symbol (⏲) does not appear on the display in spite of the pressing of [TIMER REC], the cassette may not have been loaded yet. (see page E27)
• If the cassette is ejected in spite of the pressing of [TIMER REC], the erase prevention tab of the cassette may have been removed. (see page E27)
• If the clock symbol (⏲) blinks when the timer recording ended, the TV program has not been completely recorded because of an insufficient tape supply. Press [TIMER REC] to cancel the timer program or press [▲ EJECT] to remove the cassette tape.
• During timer recording standby mode, the VCR mode cannot be selected. To use the VCR, press [TIMER REC] at first, then press [VCR] to change to VCR mode. After you use the VCR, press [TIMER REC] again to put the VCR into timer recording standby mode.
• If you press [TIMER REC] during timer recording, the recording operation will be interrupted. If you press [TIMER REC] again within the programmed time, the recording operation will start again.
• After a power failure or disconnection of the power plug, all programmed recording settings and time display will be lost upon resumption of power. In this case, reset the clock (see page E24) and reprogram any timer recordings.

Timer recording special case
Weekly (e.g. WKL-TU: each Tuesday) or daily (e.g. MO-SA: Monday to Saturday) Timer recording

Follow the procedure of timer recording on the previous page. At picture 4 press [▲] or [▼] repeatedly until the desired setting appears. Then press [ENTER].

When you press [▼] repeatedly, the indicator at DATE will change as follows, in this case the day is Friday.

The current day (Friday) ──────────→ SU-SA (Sunday to Saturday)

↓

One month later minus one day   MO-SA (Monday to Saturday)

↑   ↓

MO-FR (Monday to Friday)

↑   ↓

WKL-WE (Weekly Wednesday) ←── WKL-TH (Weekly Thursday)

In case Timer programs-overlap
• Do not overlap timer programs as portions of the conflicting programs will be lost. The first recording time has priority over the next recording time as shown in the diagram below.
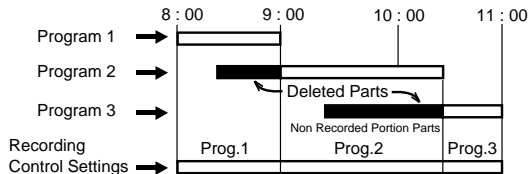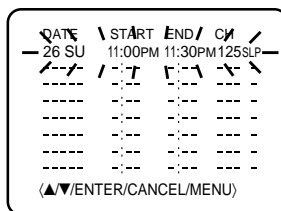

Notes:
• The daily/weekly recording can be made continuously until the recording is canceled or the tape reaches the end.
• During timer recording the automatic rewinding mechanism does not function.

Confirmation/Cancellation of the Timer recording
1. If the Timer has been activated, press [TIMER REC] to deactivate the Timer.
   The clock symbol (⏲) will disappear.

2. Then press [VCR] to change to VCR mode.

3. **To confirm Timer program:**
   At picture 2 on the previous page select the "TIMER REC SET" option and press [ENTER].
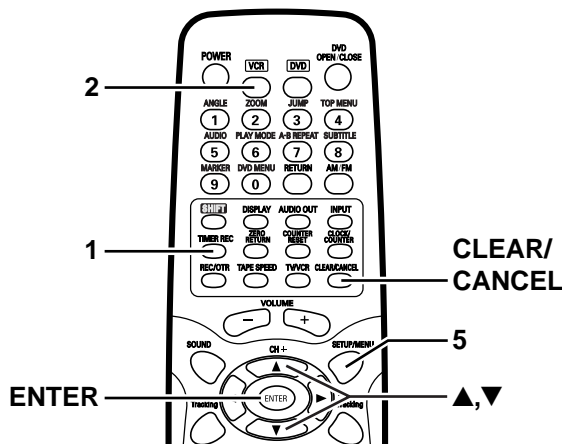   Then the timer program list below will appear on the screen.

4. **To cancel Timer program:**
   Press [▲] or [▼] to select the unnecessary program, then press [CLEAR/CANCEL] to cancel the program.
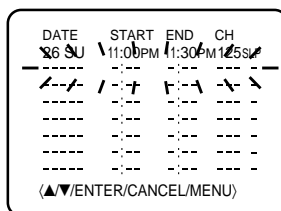
5. Press [SETUP/MENU] repeatedly until the TV-picture appears.

Notes:
• If there are other timer record programs remaining, [TIMER REC] must be pressed to reactivate the timer, otherwise the remaining timer record programs will be ignored.
• You cannot confirm the Timer program during timer recording operation.
• You can correct or cancel a programmed setting in program confirm mode.

Stereo Recording and Playback

The VHS Hi-Fi audio system permits high fidelity recording of MTS STEREO TV broadcasts.

When a MTS STEREO broadcast is received, the word STEREO will appear on the screen and the program can be viewed or recorded in stereo.
The Hi-Fi STEREO recording procedure is the same as for normal recordings.

STEREO

Note:
When using a CATV system, stereo TV programs may be transmitted over a mono cable channel. In this case the word "STEREO" will not appear and the sound will be in mono.

Output selection

When viewing an MTS STEREO TV program, or playing a prerecorded VHS Hi-Fi STEREO videotape, press [AUDIO OUT] to select how the audio will be heard through the speakers. Normally set to the Hi-Fi STEREO position, this button can be set to the MONO position if the stereo broadcast or videotape audio is of poor quality. The "R" and "L" positions allow the audio from the Right or Left Hi-Fi channel to be heard over both TV speakers. This button has no effect when viewing a MONO videotape or TV program. Each time when you press the button, OUTPUT SELECTION display appears on the screen for several seconds. Refer to the chart below.

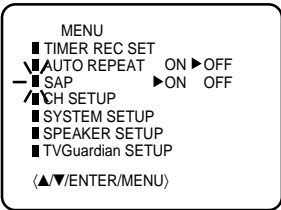| OUTPUT SELECTION	SOUND HEARD ON BOTH SPEAKERS
STEREO	STEREO
L ch	LEFT CHANNEL AUDIO
R ch	RIGHT CHANNEL AUDIO
MONO	MONO

Notes:
- When playing back a tape that is not recorded in Hi-Fi stereo mode, the audio will automatically be monaural.
- When listening to a VHS Hi-Fi video tape or MTS broadcast through the VHF/UHF jack (Audio/Video cord not connected), the sound will be monaural.
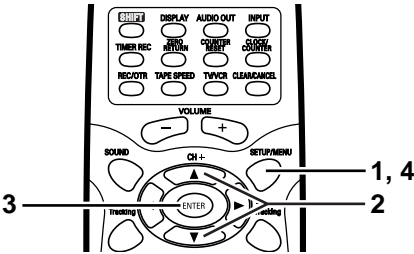

AUDIO OUT
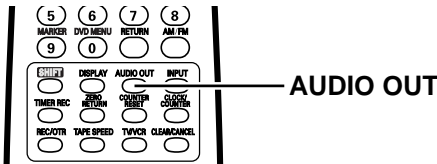
Separate Audio Program (SAP)

Your VCR is fitted with a SAP broadcast system which enables you to switch to a separate audio program when viewing a selected channel.
This function applies only when the program is broadcast in multi-languages through the SAP broadcast system.

1. Press [SETUP/MENU].

2. Press [▲] or [▼] to select "SAP".

3. Press [ENTER] to select "ON".


```
        MENU
     ▋ TIMER REC SET
    ▐▋AUTO REPEAT    ON ▶OFF
  ▬ ▋ SAP           ▶ON  OFF
  ▟▌CH SETUP
     ▋ SYSTEM SETUP
     ▋ SPEAKER SETUP
     ▋ TVGuardian SETUP

     〈▲/▼/ENTER/MENU〉
```
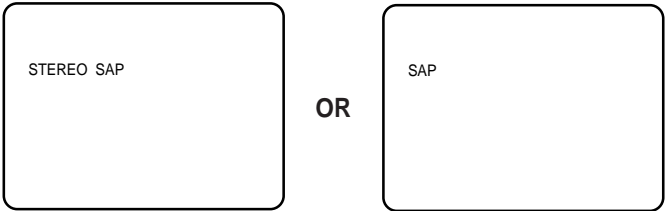
4. Press [SETUP/MENU] until the menu screen is cleared.

Listening to SAP

When the VCR is turned on or a channel selection is made, make certain the letters "SAP" appears on the screen. This means that the "Separate Audio Program" broadcasting is available.

STEREO SAP

OR

SAP

Duplicating a Video Tape

If you connect the VCR to another VCR or camcorder, you can duplicate a previously recorded tape.
Make all connections before turning on the power.

1. Load a blank cassette tape with the erase prevention tab intact into the recording VCR.
   Load a previously recorded tape into the playback VCR or CAMCORDER.

2. Press [TAPE SPEED] to select the desired tape speed SP or SLP.
   • It is recommended that you set the Speed to the SP mode on the recording VCR for best results.

3. Press [INPUT] to select AUDIO/VIDEO input position.
   "L" will appear in the display.

4. Press [REC/OTR] on the recording VCR, then press [❙❙].

5. Press the [▶] button on the playback VCR or CAMCORDER, then press the [❙❙] button.

6. Release the recording pause and the playback still simultaneously to begin the duplicating process.

Connection with second Video recorder
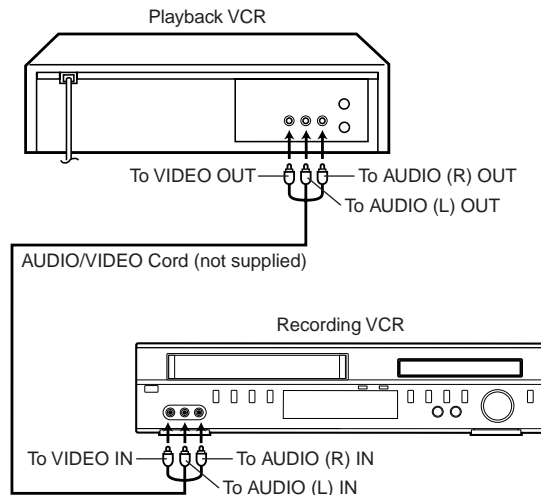
Connection with Video camera
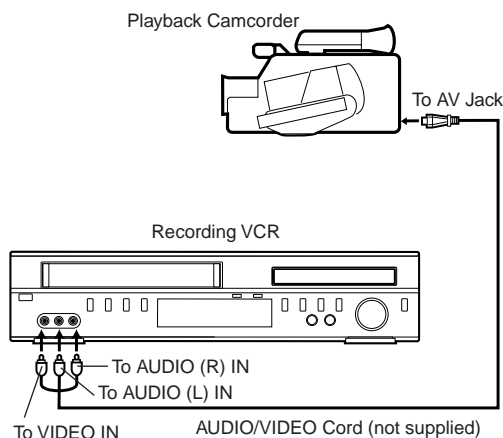
For duplicating a previously recorded tape from a camcorder, follow the camcorder manufacturer's instructions. A typical camcorder dubbing hookup is shown above.

Need help? Call
1-800-813-3435

PLAYABLE DISCS

The following types of discs can be played on this unit.

Disc type and logo mark		Recorded content	Disc size	Maximum playing time
DVD Video	DVD VIDEO	Audio + Video	5 inches (12 cm)	Approx. 4 hours (Single sided disc) Approx. 8 hours (Double sided disc)
			3 inches (8 cm)	Approx. 80 minutes (Single sided disc) Approx. 160 minutes (Double sided disc)
Music CD	COMPACT disc DIGITAL AUDIO	Audio	5 inches (12 cm)	74 minutes
			3 inches (8 cm)	20 minutes

Region Number

Region number (Regional restriction code) is built-in to the DVD video player and DVD video discs.
Region number "1" or "ALL" of DVD video discs can be used on this unit.

DVD Video Disc

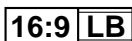There are the marks on some DVD video disc package.
Examples:

3))	Multiple languages
2	Multi-language subtitles
3	Multi-angle
16:9 LB	Multi-aspect
	Region number
CC	Closed caption

Handling, Storing and Cleaning Discs

• Fingerprints and dust should be carefully wiped from the signal surface of the disc (glossy side) with a soft cloth. Wipe in a straight motion from the center to the outside of the disc.
• Never use chemicals such as record cleaning sprays, antistatic sprays or fluids, benzene or thinner to clean the discs. These chemicals will permanently damage the plastic surface of the disc.
• To remove a disc from its storage case, press down on the center of the case and lift the disc out, holding it carefully by the edges.

CAUTION:

• Only the above types of discs can be played on this unit. DVD-ROM, CD-ROM, SVCD, CVD, VCD, etc. cannot be played.
• This unit is to be used exclusively with the NTSC color system. PAL and SECAM system discs cannot be used with this unit.
• For MP3 CD, please see page E50.

DVD Video Disc

Title 1		Title 2		
Chapter 1	Chapter 2	Chapter 1	Chapter 2	Chapter 3

DVD video discs are divided into titles, and the titles are sub-divided into chapters.

Music CD Disc

Track 1	Track 2	Track 3	Track 4	Track 5

Music CD discs are divided into tracks.

• Discs should be returned to their cases after use to protect them from dust and scratches.
• To prevent warping the disc, do not expose it to direct sunlight, high humidity or high temperatures for extended periods of time.
• Do not apply paper or write anything on either side of the disc. Sharp writing instruments, or the inks used in some felt-tip pens, may damage the surfaces of the disc.

DISC PLAYBACK

Preparations

• Turn on the TV and select the video input source.

To use the remote control for TV

Note:

You must set the remote control code for TV first. (See Page E8.)

1. Press [(TV CONTROL) POWER] to turn on the power.
   • When using the remote control, the Transmitter Window on the remote control must be pointed toward your TV.
2. Press [(TV CONTROL) INPUT] to select the video input source.
3. Set the TV volume minimum.

Notes:

• Only remote-controlled TVs can be operated using this remote control. (Refer to your TV instruction manual for more details.)
• There may be some older TV models that cannot be operated with this remote control. If this is the case, use the original remote control supplied with the TV.

• Select the playback picture size according to the aspect ratio of the TV. (See "Setting Picture" in "INITIAL SETTINGS" on Page E55.)


Important Note:

• This instruction manual explains the basic instruction of this DVD video player using the remote control unit.
• Some DVD video discs have different functions that may not be explained in this instruction manual. You may need extra instructions. In this case, please follow the instructions displayed on the TV screen or jacket or case of the disc.
• " ✋ " may appear on the TV screen during operation. This icon means that the function is not available on the disc now.
• For improvement, on-screen displays subject to change without notice.

Basic Playback

Notes:

• Do not touch the disc tray while it is moving.
• Never place anything except a disc on the disc tray. Foreign objects can damage the unit.
• Do not apply excessive force to the disc tray.
• Discs must be placed on the disc tray one at a time.

When operation buttons are pressed, that operation is displayed on the TV screen. The display turns off after several seconds.

1. Press [POWER].
2. Press [DVD] to select DVD function.
   • "SANYO" logo appears on the TV screen.
   • The DVD indicator on the front panel will light.
   • "No Disc" appears on the TV screen.
3. Press [⏏ OPEN/CLOSE] (or OPEN/CLOSE on the remote control).
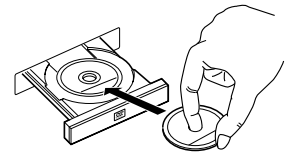   • "⏏" appears on the TV screen and the disc tray opens.
   Note:
   To open or close the disc tray, be sure to press [OPEN/CLOSE]. Do not press the disc tray with your hand.

4. Place the disc with the label facing up on the disc tray.
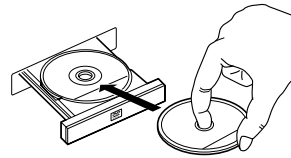
For 5-inch (12cm) disc   For 3-inch (8cm) disc

5. Press [OPEN/CLOSE] again.
   The disc tray closes. "Reading" appears on the TV screen.
   Note:
   Some discs may start playback automatically.
6. Press [▶] (or [PLAY ▶]) to start playback.
   • "▶" appears.
   Example:

Elapsed playing time
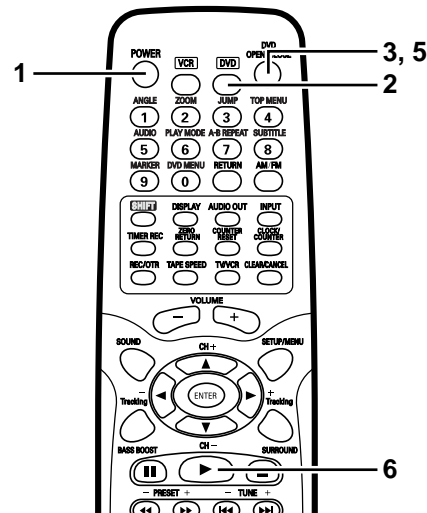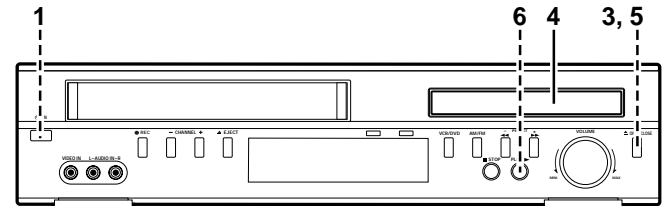
Note:

If the disc is loaded with the label side downward (and it is a single sided disc), or if a badly scratched disc is loaded, "Err (Error)" appears on the FL display and "Incorrect Disc" appears on the TV screen. If this occurs, load the disc correctly or replace the disc.

If a menu screen appears on the TV screen...

Select the desired menu by pressing [▲], [▶], [▼] or [◀] (or the number buttons), then press [ENTER]. Playback of the selected menu starts.

Note:

For more details, please refer to the jacket or case of the disc.

Stopping Playback

- Press [■] (or [■ STOP]) once during playback. "▶" briefly appears on the TV screen.
  When you press [▶] (or [PLAY ▶]), playback starts automatically from the point where you stopped. "▶" appears on the TV screen.

  Note:
  Some discs may not resume playback.

- Press [■] (or [■ STOP]) twice during playback. "■" appears on the TV screen and playback stops completely.
  When you press [▶] (or [PLAY ▶]), playback starts from the beginning of the disc.

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■ STOP **PLAY ▶**
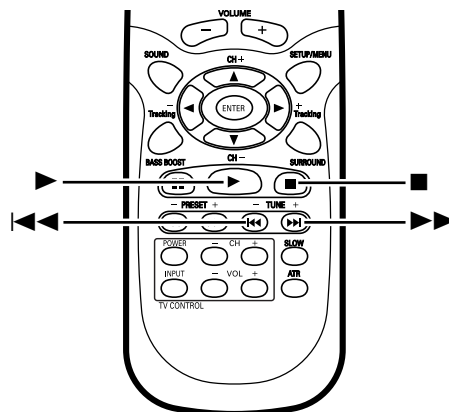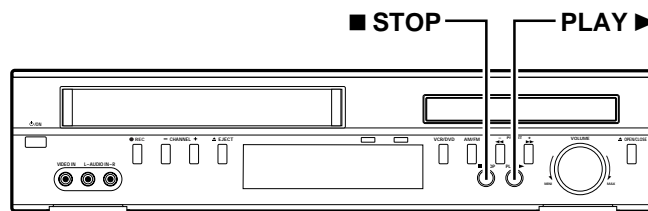
Chapter (Track) Skip

Skipping forward
Press [▶▶|] during playback to skip to the next chapter (or track). "▶▶|" appears on the TV screen.
A chapter (or track) is skipped each time the button is pressed.

Skipping backward
Press [|◄◄] during playback to skip back to the beginning of the chapter (or track) currently play.
"|◄◄" appears on the TV screen.
Press the button again immediately to skip back to the beginning of the previous chapter (or track).

Note:
You can skip only through the chapters, not over the title on the DVD disc.

Need help? Call
1-800-813-3435

Selecting a DVD Menu

Notes:
- The operation may differ depending on the disc used.
- Selecting a menu may not be possible on some discs.

1. Press [DVD MENU] while holding [SHIFT] down.
   The main menu screen will appear.

2. Press [▲], [▼], [◄] or [►] (or the number buttons) to select the desired menu.

3. Press [ENTER].
   The selected menu playback starts.
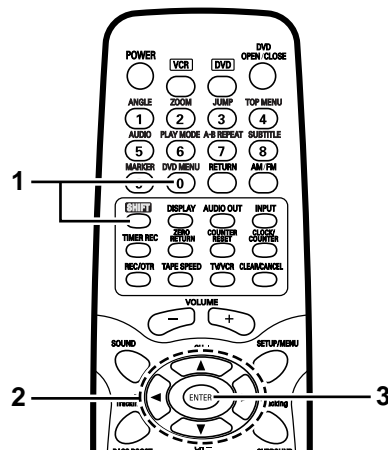
Selecting a Title Menu [DVD]

Notes:
- The operation may differ depending on the disc used.
- Selecting a title may not be possible on some discs.

1. Press [TOP MENU] while holding [SHIFT] down.
   The title menu will appear (if the disc contains a title menu).

2. Press [▲], [▼], [◄] or [►] (or the number buttons) to select the desired title.

3. Press [ENTER].
   The selected title playback starts.
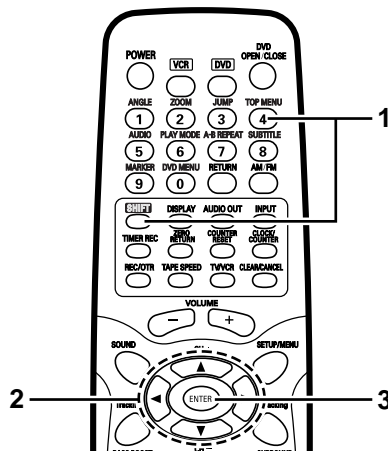
Important Note:
" 🖐 " may appear on the TV screen during operation. This icon means that the function is not available on the disc now.

Need help? Call
1-800-813-3435

Title Search [DVD]

1. Press [JUMP] while holding [SHIFT] down during playback or in the stop mode.
   The Jump screen appears on the TV screen.
   Example:
   Jump Time   : --:--:--
        Title   :   ---
        Chapter :   ---

2. Press [▲] or [▼] to select the Title.

3. Press the number button(s) to enter the title number.
   Example:
   To select Title No.3, press [3].
   To select Title No.10, press [1], then [0].
   To select Title No.24, press [2], then [4].
   Note:
   If you make a mistake, press [CLEAR/CANCEL].

4. Press [ENTER].
   Playback starts from the selected title.

Chapter Search [DVD]

1. Press [JUMP] while holding [SHIFT] down during playback or in the stop mode.
   The Jump screen appears on the TV screen.
   Example:
   Jump Time   : --:--:--
        Title   :   ---
        Chapter :   ---

2. Press [▲] or [▼] to select the Chapter.

3. Press the number button(s) to enter the chapter number.
   Example:
   To select Chapter No.3, press [3].
   To select Chapter No.10, press [1], then [0].
   To select Chapter No.24, press [2], then [4].
   Note:
   If you make a mistake, press [CLEAR/CANCEL].

4. Press [ENTER].
   Playback starts from the selected chapter .
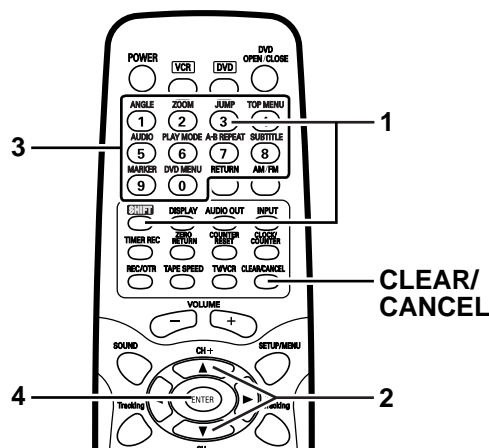
Time Search [DVD]

1. Press [JUMP] while holding [SHIFT] down during playback.
   The Jump screen appears on the TV screen.
   Example:
   Jump Time   : --:--:--
        Title   :   ---
        Chapter :   ---

2. Press [▲] or [▼] to select the Time.

3. Press the number button(s) to enter the time.
   Example:
   20 minutes 5 seconds   Press [2], [0], [0] and [5].
   42 minutes 39 seconds   Press [4], [2], [3] and [9].
   1 hour 4 minutes 35 seconds   Press [1], [0], [4], [3] and [5].
   Note:
   If you make a mistake, press [CLEAR/CANCEL].

4. Press [ENTER].
   Playback starts from the searched time.

Important Note:
" ✋ " may appear on the TV screen during operation. This icon means that the function is not available on the disc now.

Need help? Call
1-800-813-3435

-E42-
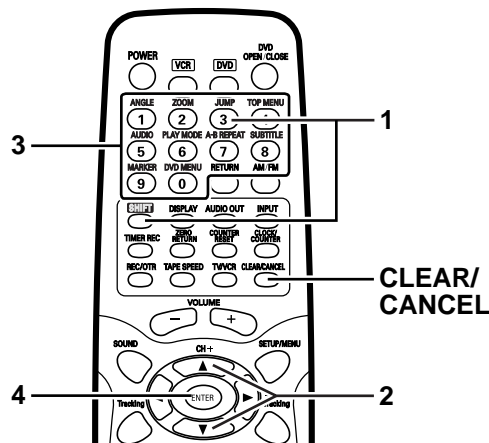
Time Search [CD]

1. Press [JUMP] while holding [SHIFT] down during playback or in the stop mode.
   The Jump screen appears on the TV screen.
   Example:
   Jump Time : --:--:--
       Track :   ---

2. Press [▲] or [▼] to select the Time.

3. Press the number button(s) to enter the time.
   Example:
   2 minutes 5 seconds   Press [2], [0] and [5].
   42 minutes 39 seconds   Press [4], [2], [3] and [9].
   Note:
   If you make a mistake, press [CLEAR/CANCEL].

4. Press [ENTER].
   Playback starts from the searched time in the track (or from the beginning of the disc).
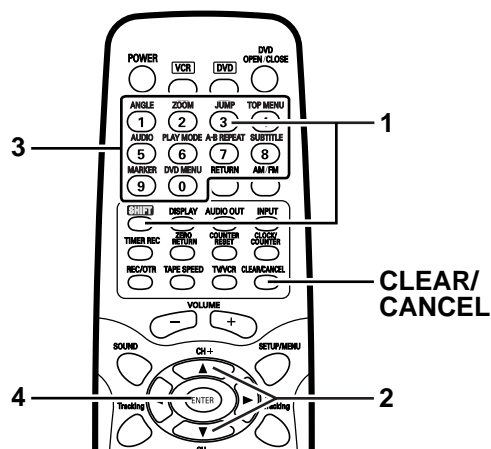
Track Search [CD]

1. Press [JUMP] while holding [SHIFT] down during playback or in the stop mode.
   The Jump screen appears on the TV screen.
   Example:
   Jump Time : --:--:--
       Track :   ---

2. Press [▲] or [▼] to select the Track.

3. Press the number button(s) to enter the track.
   Example:
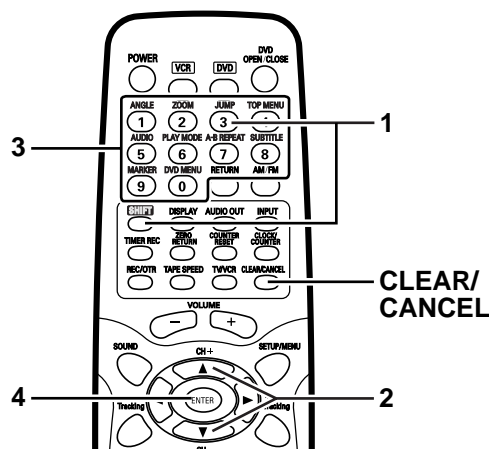   To select Track No. 3, press [3].
   To select Track No. 10, press [1], then [0].
   To select Track No. 24, press [2], then [4].
   Note:
   if you make amistake, press [CLEAR/CANCEL].

4. Press [ENTER].
   Playback starts from the selected track.

Note: Please refer to "Example for Music CD" in "Selecting On-Screen information" on page E49.
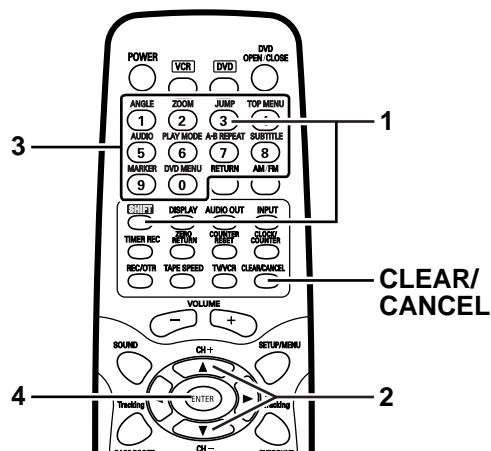
Important Note:
" ✋ " may appear on the TV screen during operation. This icon means that the function is not available on the disc now.

Need help? Call
1-800-813-3435

Fast Playback

Fast forward playback

Press [▶▶] repeatedly to select the fast speed forward playback. Each time the button is pressed, the speed is changed.

▶▶ ⟶ ▶▶▶ ⟶ ▶▶▶▶ ⟶ ▶▶▶▶▶ (4 steps)

Press [▶] to return to normal playback.

Fast reverse playback

Press [◀◀] repeatedly to select the fast speed reverse playback. Each time the button is pressed, the speed is changed.

◀◀ ⟶ ◀◀◀ ⟶ ◀◀◀◀ ⟶ ◀◀◀◀◀ (4 steps)

Press [▶] to return to normal playback.

Note:
The sound is muted during fast playback in DVD.
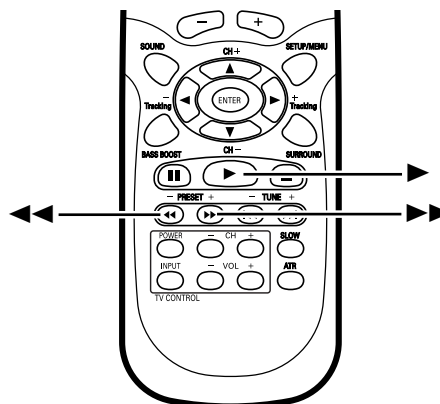
Slow Motion Playback [DVD]

Forward slow playback

Press [SLOW] repeatedly to select the forward slow speed playback. Each time the button is pressed, the speed is changed.

▮▶1/2 ⟶ ▮▶1/4 ⟶ ▮▶1/6 ⟶ ▮▶1/7 (4 steps)

Press [▶] to return to normal playback.

Note:
• The sound is muted during slow motion playback.
• Slow motion playback is operated forward only.
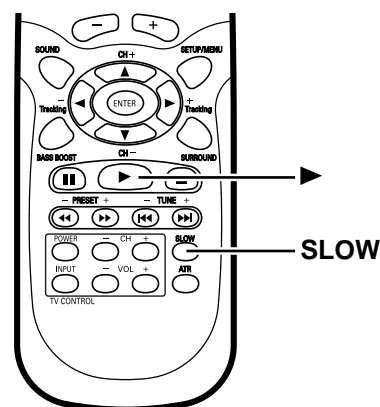
> **Important Note:**
> " ✋ " may appear on the TV screen during operation. This icon means that the function is not available on the disc now.

Still Picture (Pause)

Press [❚❚] during playback.
• "❚❚" appears on the FL display.
• "❚❚" appears on the TV screen.

Press [▶] to return to normal playback.

[DVD]
   Still picture mode
[CD]
   Pause mode

Note: The sound is muted.

Need help? Call
1-800-813-3435

-E44-
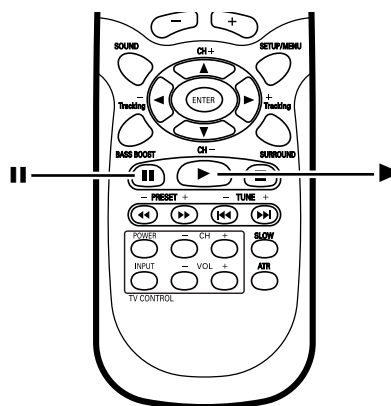
Frame by Frame Advance Playback [DVD]

Press [❙❙] during still picture.
- "❙❙▶" appears on the TV screen.

Each time the button is pressed, the picture advances one frame.
Press [▶] to return to normal playback.

Notes:
- The sound is muted.
- Frame playback is operated forward only.

ZOOM SHIFT

▲, ▶, ▼, ◀

❙❙

▶

Picture Zoom [DVD]

1. Press [ZOOM] while holding [SHIFT] down during normal/ slow/fast playback or still picture.
   The central part of the picture is magnified, and "🔍 1" appears on the TV screen.
   - Each time the button is pressed, the zoom mode will be changed as follows:

   🔍 1 ⟶ 🔍 2 ⟶ 🔍 3 ⟶ 🔍 Off

   - Press [▲], [▶], [▼] or [◀] to change the zoom point.

2. Press [ZOOM] while holding [SHIFT] down to select "🔍 Off" to return to the original screen.

Note:
Picture Zoom may not work on some discs.

Viewing from a Desired Camera Angle (Multi-Angle) [DVD]

Some DVD video discs may contain scenes which have been shot simultaneously from a number of different camera angles. The jacket or case of discs that are recorded with angles will be marked.
Example:

ANGLE SHIFT

Note:
The recorded angles differ depending on the disc used.

1. Play the disc that is recorded with angles.

2. Press [ANGLE] while holding [SHIFT] down repeatedly until the desired angle appears.
   Example:

   3/5

Important Note:
" ✋ " may appear on the TV screen during operation. This icon means that the function is not available on the disc now.

Need help? Call
1-800-813-3435

-E45-

Normal Repeat Playback

[DVD]
1. Press [PLAY MODE] while holding [SHIFT] down during playback or stop mode.
   The Play mode screen ("Repeat") appears.
2. Press [◄], [►] or [ENTER] once or twice to select Chapter or Title.

Repeat: Chapter	Repeat of chapter being played
Repeat: Title	Repeat of title being played
Repeat: Off	Normal playback mode

The selected repeat mode may work.
3. Press [PLAY MODE] while holding [SHIFT] down again to close the screen.
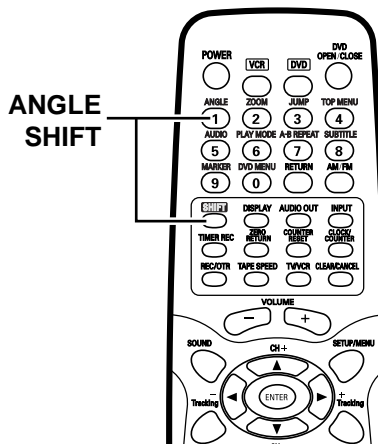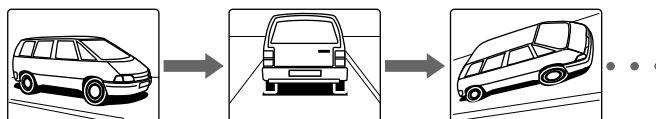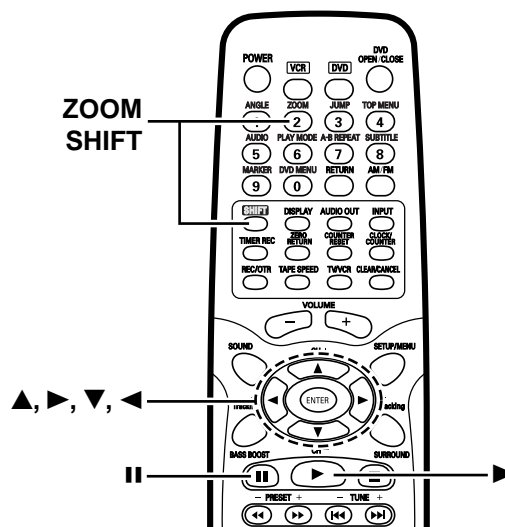
[CD]
1. Press [PLAY MODE] while holding [SHIFT] down during playback or stop mode.
   The Play mode screen ("Play Mode" and "Repeat") appears.
2. Press [▼] to skip Play Mode and select Repeat.
3. Press [◄], [►] or [ENTER] once or twice to select Track or All.

Repeat: Track	Repeat of track being played
Repeat: All	Repeat all tracks
Repeat: Off	Normal playback mode

The selected repeat mode may work.
4. Press [PLAY MODE] while holding [SHIFT] down again to close the screen.

Note:
In case of stop mode, press [►] to start Repeat playback.

Designated Range Repeat Playback (A-B Repeat)

1. Press [A-B REPEAT] while holding [SHIFT] down during playback at the beginning of the section you want to repeat (Point A).
   • " A-" appears on the TV screen.
2. Press [A-B REPEAT] while holding [SHIFT] down again at the end of the section you want to repeat (Point B).
   • " A-B" appears on the TV screen.
   The section between points A and B is played repeatedly.
3. To return to normal playback, press [A-B REPEAT] while holding [SHIFT] down again.
   • " Off" appears on the TV screen.

Notes:
• Normal repeat playback or A-B repeat playback mode may not work correctly with some discs.
• During the Random/Programmed playback the A-B repeat feature will not operate.

Random Playback [CD] [MP3]

1. Press [PLAY MODE] while holding [SHIFT] down during playback or stop mode.
   The Play mode screen ("Play Mode" and "Repeat") appears.

   Play Mode : Off
   Repeat   : Off

2. Press [◄] or [►] to select Random.

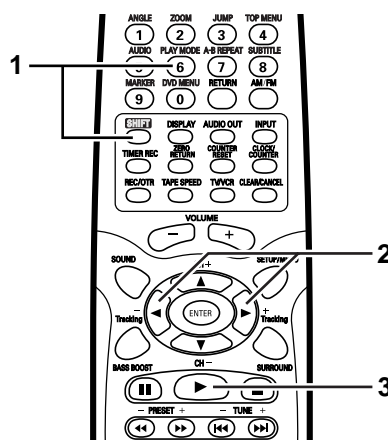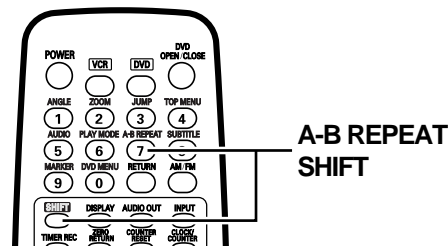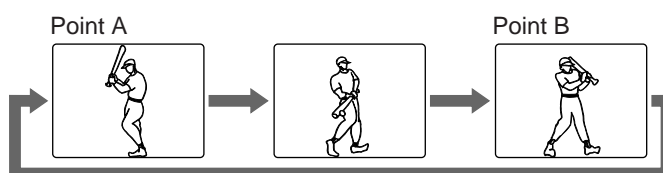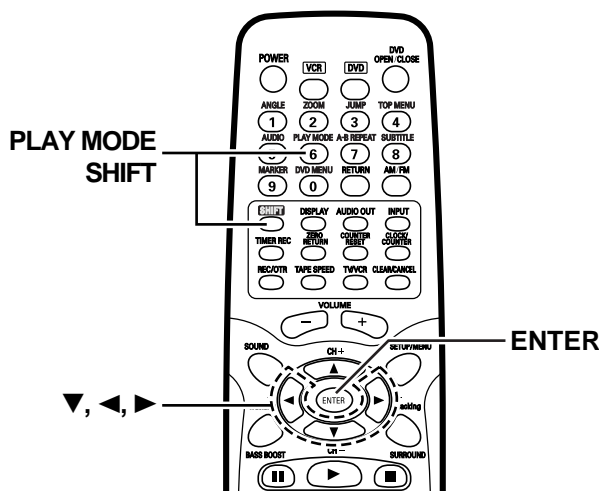   Play Mode : Random
   Repeat   : Off

3. Press [►] to start Random Playback.

Note:
To stop Random Playback completely, press [■] twice.

Important Note:
" ✋ " may appear on the TV screen during operation. This icon means that the function is not available on the disc now.

Point A   Point B

PLAY MODE
SHIFT

ENTER

▼, ◄, ►

A-B REPEAT
SHIFT

1

2

3

Programmed Playback [CD] [MP3]

Up to 12 selections can be programmed.

Programming procedure

1. Press [PLAY MODE] while holding [SHIFT] down in the stop mode.
   The Play mode screen ("Play Mode" and "Repeat") appears.

   Play Mode   : Off
   Repeat   : Off

2. Press [◄] or [►] to select Program.
   The Program screen appears.

   Play Mode   : Program
   Repeat   : Off
   1 --- 4 --- 7 --- 10 ---
   2 --- 5 --- 8 --- 11 ---
   3 --- 6 --- 9 --- 12 ---
   Clear   Program Playback

3. Press the number buttons to select the track number.
   Example:
   To select Track No.3, press [3].
   To select Track No.10, press [1], then [0].
   To select Track No.24, press [2], then [4].
   Notes:
   • If you make a mistake, press [CLEAR/CANCEL].
   • To quit the "Play Mode" screen, press [PLAY MODE] while holding [SHIFT] down.

4. Press [▼] to move the highlighted box down.
   Example:
   Play Mode   : Program
   Repeat   : Off
   1 9-- 4 --- 7 --- 10 ---
   2 --- 5 --- 8 --- 11 ---
   3 --- 6 --- 9 --- 12 ---
   Clear   Program Playback

5. Repeat steps 3 and 4 above to select another track.

6. Press [▲], [▼], [◄] or [►] to select "Program Playback" on the TV screen.

7. Press [ENTER].
   Program playback starts in the programmed order.

   To return to normal playback, press [PLAY MODE] while holding [SHIFT] down and select Play Mode "Off".
   • The program is canceled when you open the disc tray or turn the power off.
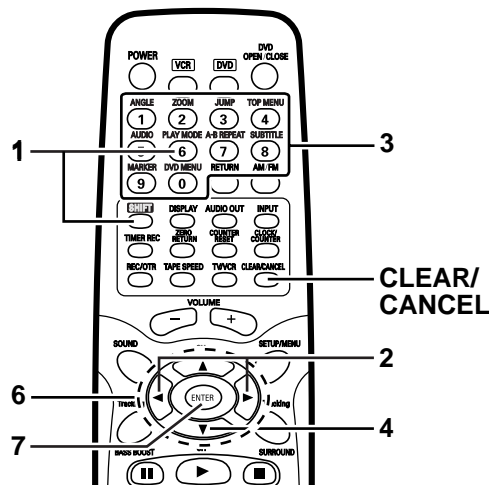
CLEAR/ CANCEL

To clear the program one by one

1. Repeat the steps 1 to 2 as described in "Programming procedure" to open the Program screen.

2. Press [▲], [▼], [◄] or [►] to select the track number.

3. Press [CLEAR/CANCEL].

To clear all the programs

1. Repeat the steps 1 to 2 as described in "Programming procedure" to open the Program screen.

2. Press [▲], [▼], [◄] or [►] to select "Clear".

3. Press [ENTER].

To change the program

1. Repeat the steps 1 to 2 as described in "Programming procedure" to open the Program screen.

2. Press [▲], [▼], [◄] or [►] to select the track number.

3. Press the number buttons to select the track number to be replaced.

Note:
To quit the "Play Mode" screen, press [PLAY MODE] while holding [SHIFT] down.

Need help? Call
1-800-813-3435

Selecting Subtitle Language [DVD]

This operation works only with discs on which multiple subtitle languages are recorded.

1. Press [SUBTITLE] while holding [SHIFT] down during playback. " ⊡ Off " appears.

2. Press [SUBTITLE] while holding [SHIFT] down repeatedly until the desired subtitle language appears on the TV screen. After few seconds, " ⊡ " disappears.
   Example:

   ⊡ 1/3 Eng
   └── English

> **Need help? Call**
> *1-800-813-3435*
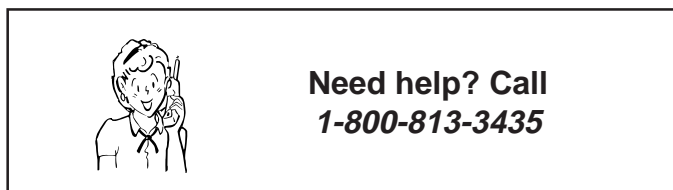
Selecting Audio Soundtrack Language (Multi-Language) [DVD]

This operation works only with discs on which multiple audio soundtrack languages are recorded.

1. Press [AUDIO] while holding [SHIFT] down during playback.

2. Press [AUDIO] while holding [SHIFT] down repeatedly until the desired language appears on the TV screen.
   Examples:

   🔲 1/3 Eng Dolby Digital
   English ──┘   └── Dolby Digital sound

Notes:
- When the desired language is not selected even if the button is pressed, the language is not available on the disc.
- When the power is turned on or the disc is replaced, select the language again.
- If the language is not recorded on the disc, only the available language on the disc will be heard.

Karaoke Playback [DVD]

You can turn the vocal on or off recorded on the DVD KARAOKE.

1. During DVD KARAOKE disc playback, press [AUDIO] while holding [SHIFT] down.
2. Press [▲] or [▼] until the KARAOKE symbol (🎙) appears.
   Examples:
   🔲 1/8 Eng Dolby Digital
   🎙 On
3. Press [◄] or [►] to select "On" or "Off".
   On: The primary vocal is output when it is recorded on the disc.
   Off: The primary vocal is not output.

Notes:
- In some cases, the subtitle language is not changed to the selected one.
- When a disc supporting closed caption is played, the subtitle and the closed caption may overlap each other on the TV screen. In this case, turn the subtitle off.
- When the desired language is not selected even if the button is pressed, the language is not available on the disc.
- When the power is turned on or the disc is replaced, select the subtitle language again.
- If the subtitle language is not necessary, press [SUBTITLE] while holding [SHIFT] down to select " ⊡ Off".

Hello!   Holà!   ¡Hola!
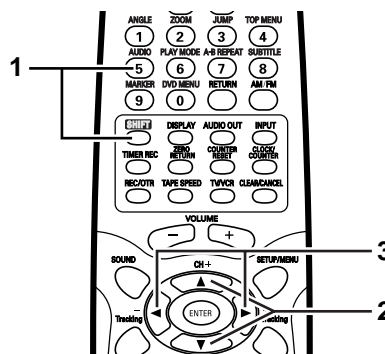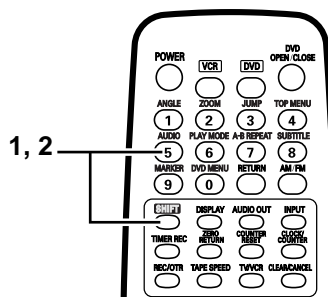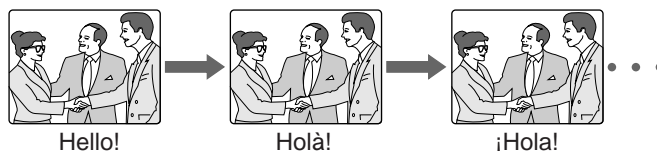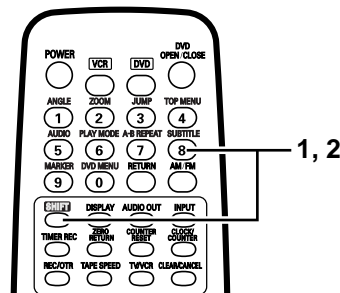
Notes:
- The vocal output feature is used during playback of Dolby Digital (multi-channel) recorded DVD KARAOKE discs. This feature allows you to turn off vocal audio tracks, or restore them for back-ground accompaniment.
- When playing KARAOKE, connect appropriate audio equipment such as an amplifier to the DVD.

Selecting On-Screen Information

Example for DVD:

Press [DISPLAY] repeatedly to show the disc information (Title, Chapter, Title elapsed playing time, Language, etc.).

1. Press [DISPLAY] during playback.

Title total time

Title elapsed playing time

▶ 00:08:20 01:12:33

2. Press [DISPLAY].

Title total time

Title elapsed playing time

Chapter number

Title number

▶ 00:08:40 01:12:33

Title   1/99 Chapter 1/999 ᛖᗡ 1/9

🔲 1/8 Eng DolbyDigital

▢ 1/32 Eng

Camera angle

Subtitle language   A kind of audio

Audio language
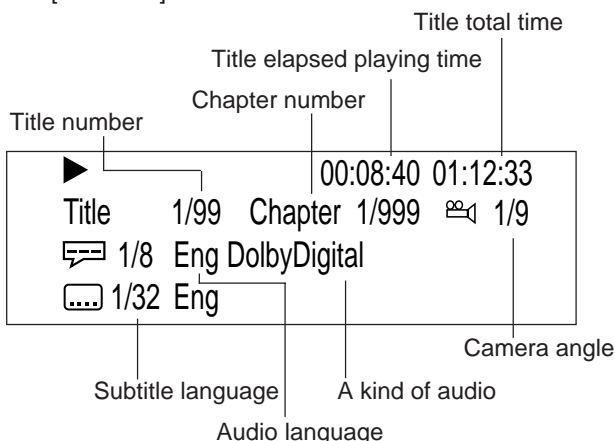
3. Press [DISPLAY] to close the disc information.

Example for Music CD:

When a CD is loaded or playback is started, the disc information may appear on the TV screen.
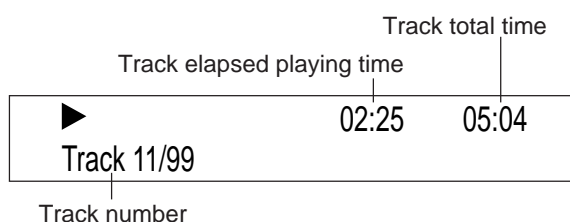
Track total time

Track elapsed playing time

▶ 02:25   05:04

Track 11/99

Track number

Important Note:

" 🖐 " may appear on the TV screen during operation. This icon means that the function is not available on the disc now.

MARKER
SHIFT

DISPLAY

ENTER

▲,▼
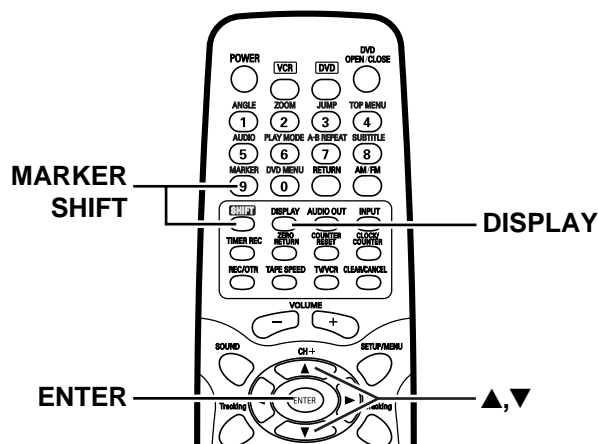
Marking Desired Scenes [DVD] [CD]

The unit stores the points that you want to watch (or listen it) again. You can resume playback from that scene.

Marking the Scenes

1. Press [MARKER] while holding [SHIFT] down during playback. Marker screen appears.
   Marker 1 : ∗∗:∗∗:∗∗
   Marker 2 : ∗∗:∗∗:∗∗
   Marker 3 : ∗∗:∗∗:∗∗

2. Select the blank Marker using [▲] or [▼], then press [ENTER] at the desired scene.
   Example:
   Marker 1 : 00:27:54
   Marker 2 : ∗∗:∗∗:∗∗
   Marker 3 : ∗∗:∗∗:∗∗
   • Up to 3 scenes can be selected.
   • Repeat this procedure to set the other 2 scenes.

3. To quit the Marker screen, press [MARKER] while holding [SHIFT] down.

Returning to the Scenes

1. Press [MARKER] while holding [SHIFT] down during playback or stop mode.
   Example:
   Marker 1 : 00:27:54
   Marker 2 : 01:16:25
   Marker 3 : 02:08:31

2. Press [▲] or [▼] to select the Marker 1-3.
   Example:
   Marker 1 : 00:27:54
   Marker 2 : 01:16:25
   Marker 3 : 02:08:31

3. Press [ENTER].
   Playback starts from the marked scene.
   • To quit the Marker screen, press [MARKER] while holding [SHIFT] down.

To Cancel the Mark

1. Press [MARKER] while holding [SHIFT] down.
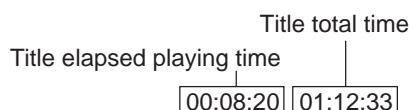2. Press [▲] or [▼] to select the Marker 1-3.
3. Press [CLEAR/CANCEL].

Notes:
• You may not mark it on some discs.
• The marking is canceled when you open the disc tray or turn the power off.

Need help? Call
1-800-813-3435

-E49-

MP3 CD OPERATION

This player can play back the CD-R/RW that have recorded music data or MP3 files. However, some CD-R/RWs can not be played back depending on the recording conditions.
Before playing back MP3 CD, please read the following.

MP3 CD Information

Limitations on MP3 CD playback
- This unit can read 200 files per one directory. If one directory has more than 200 files, it reads up to 200 files, the more files will be omitted.
- This unit can recognize up to 50 directory trees per disc.
- MP3 CD may not be played in the recorded order.
- As for multi-session disc, only the first session can be played.
- If the CD has both audio tracks and MP3 files, only audio tracks are played.
- It would take 30 seconds or more for this player to read MP3 files depending on its structure.

Limitations on display
- The maximum number for display is 17 letters.
- Available letters for display are the following: capital or small alphabets of A through Z, numbers of 0 through 9 and _ (underline).
- Other letters than those above are replaced in "-" (hyphen).

Notes on MP3 files
- The recommend recording setting for a high-quality sound is 38 kHz, 44.1 kHz and 48 kHz of sampling frequency, and 32kbps ~ 320kbps of fixing bit rate (or variable bit rate).
- To play back MP3 CD in the recorded order,
  1. Please use the MP3 software with the function that can record data alphabetically or numerically.
  2. Put the name including two-digit or three-digit number like "01" "02" or "001" "002" on each file.
  3. Please refrain from making many sub-folders by preference.

CAUTION:
- Some MP3 CDs can not be played back depending on the recording conditions.
- The CD-R/RW that has no music data or non-MP3 files can not be played back.

MP3 CD Playback

1. Press [OPEN/CLOSE].
   - "⏏" appears on the TV screen and the disc tray opens.
   Note:
   To open or close the disc tray, be sure to press [OPEN/CLOSE]. Do not press the disc tray with your hand.

2. Place the disc with the label facing up on the disc tray.
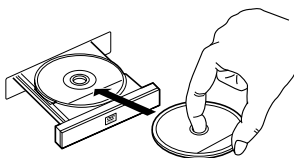
3. Press [OPEN/CLOSE].
   The disc tray closes.
   - "Reading" appears on the TV screen.
   - A table of contents in the root directory appears on the TV screen.

   Example:

MP3			📁
Track -/12	00:00		📄
📁	1	Pops	

1	Japan	6	BLUE EYES
2	Bay Bridge	7	Blurry Eyes
3	CLOSE MY EYES	8	flower
4	DIVE TO BLUE	9	Lies and Truth-
5	Honey	10	winter fall
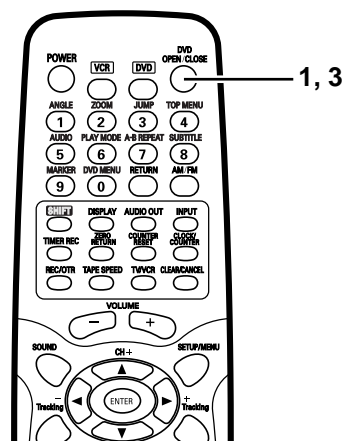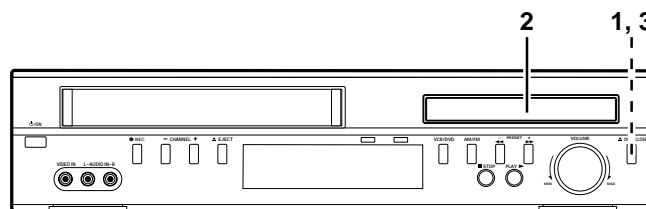
Notes:
- If the disc is loaded with the label side downward, or if a badly scratched disc is loaded, "Err (Error)" appears. If this occurs, load the disc correctly or replace the disc.
- During MP3 CD Playback, you can not use SEARCH and A-B REPEAT functions.

4. Press [◀] or [▶] or [ENTER] to select folder.

5. Press [▲], [▼], [◀], [▶] or [number buttons (0–9)] to select your desired track.

6. Press [ENTER] to start playback.

- In case the folder include more than 11 tracks, press [◀] or [▶] to display next track list.
  Example:
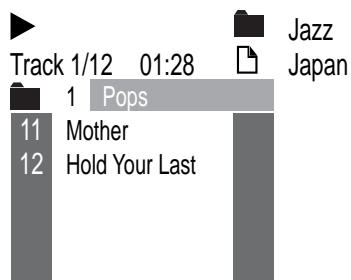
Stopping Playback

Press [■] during playback. "■" appears on the TV screen. Press [▶] to resume playback (from the stopped point). To stop the playback completely, press [■] twice.

Pause

Press [II] during playback.
- "II" appears on the TV screen.
- "II" appears on the FL display.
Note:
The sound is muted.

Press [▶] to return to normal playback.

File Skip

Skipping forward
Press [▶▶I] during playback to skip to the next file.
"▶▶" appears on the TV screen.
Each time the button is pressed, a file is skipped within the same directory.

Skipping backward
Press [I◀◀] during playback to skip back to the beginning of the file currently play.
"I◀◀" appears on the TV screen.
Press the button again immediately to skip back to the beginning of the previous file.

Programmed Playback

Please see page E47.

Random Playback

Please see page E46.
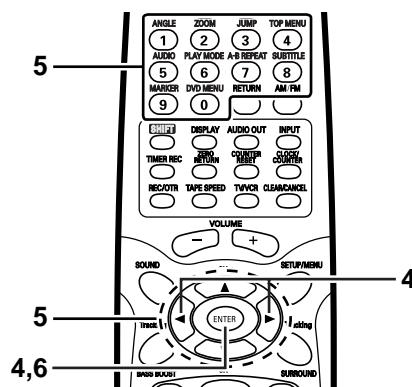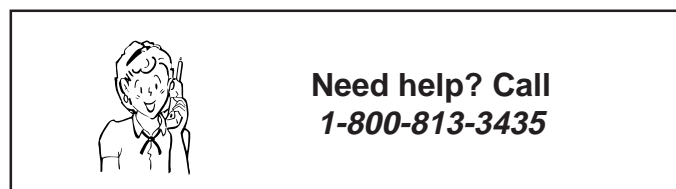
Need help? Call
1-800-813-3435

Important Note:
" ✋ " may appear on the TV screen during operation. This icon means that the function is not available on the disc now.
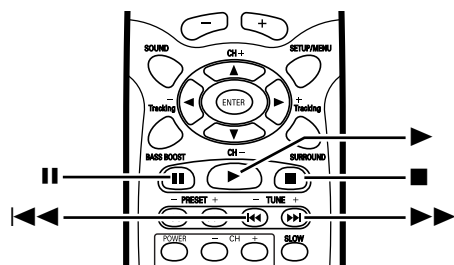
Repeat Playback

1. Press [PLAY MODE] while holding [SHIFT] down during playback or stop mode.
   The Play mode screen ("Play Mode" and "Repeat") appears.

2. Press [▼] to select Repeat.
   Play Mode: Off
   Repeat: [Off]

3. Press [◀], [▶] or [ENTER] repeatedly to select Track or All.

Repeat: Track	Repeat of track being played
Repeat: All	Repeat all tracks
Repeat: Off	Normal playback mode

4. Press [PLAY MODE] while holding [SHIFT] down again to close the screen.

In case of stop mode, press [▶] to start Repeat playback.
To resume normal playback, select Repeat Off.

Note:
Repeat playback may not work correctly with some discs.
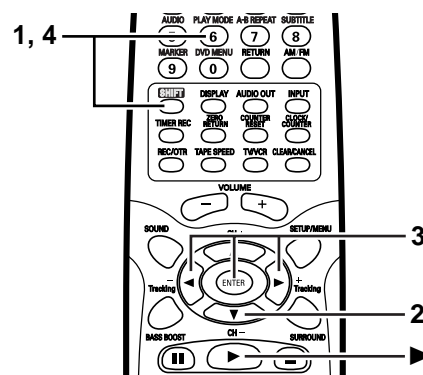
TVGuardian® OPERATION

In this instruction manual, the language in on-screen display is English. If you change the language (see page E21), please follow the selected language in on-screen display.

Before Setting
• Set the subtitle language to "Off" (See page E54.)
• Press [VCR] to select the "VCR" mode.

Set the TVG MODE to On Mode (TOLERANT, MODERATE, STRICT)

1. Press [SETUP/MENU].
   The setup screen appears.

2. Press [▲] or [▼] to select "TVGuadian SETUP" option.

```
      MENU
   ▮ TIMER REC SET
   ▮ AUTO REPEAT      ON ▶ OFF
   ▮ SAP              ON ▶ OFF
   ▮ CH SETUP
   ▮ SYSTEM SETUP
   ▮ SPEAKER SETUP
   ▮ TVGuardian SETUP

     〈▲/▼/ENTER/MENU〉
```

3. Press [ENTER].
   The TVGuardian setup screen appears.

4. Press [▼] or [▲] to select "TVG MODE" option.

```
   TVGuardian SETUP
   ▮ DVD SPEAKER MUTE
                  :CENTER
   ▮ CC DISPLAY    :ON
   ▮ TVG MODE      :OFF



     〈▲/▼/ENTER/MENU〉
```

5. Press [ENTER].

6. Press [▼] or [▲] to select the setting option.
   If "TOLERANT", "MODERATE" or "STRICT" is selected, word setting option menu appears.

```
   TVGuardian SETUP
   ▮ DVD SPEAKER MUTE
                  :CENTER
   ▮ CC DISPLAY    :ON
   ▮ TVG MODE      :OFF



     〈▲/▼/ENTER/MENU〉
```

OFF: In the OFF mode, TVG will not operate. Your player will operate as normal.
TOLERANT: In the Tolerant mode, only the most offensive foul language will be filtered.
MODERATE: In the Moderate mode, more offensive words will be filtered.
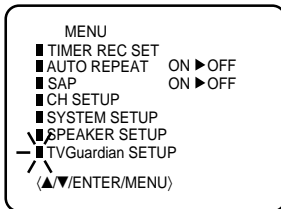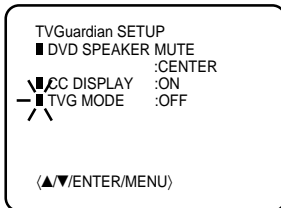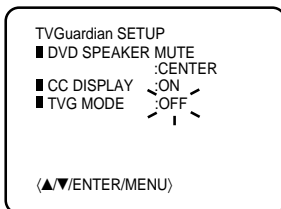**STRICT:** In the Strict mode, all the foul language words known to the TVG process will be filtered.

7. Press [ENTER].

Note:
• If TVG MODE is not necessary, select "OFF".
• When shipped from factory, the TVG MODE option is set to "OFF" position.

Need help? Call
1-800-813-3435

ENTER
3, 5, 7

1, 10
▲, ▼
2, 4, 6
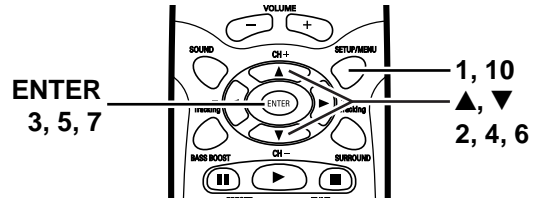
8. **TVG WORD Settings**
   In addition to the main TVG modes, three additional sets of words are available to the user to selectively turn on or off. On means that the words belonging to the set will be filtered. Off means that they will not be affected by the TVG processing.

   Press [▼] or [▲] to select the setting option, then press [ENTER].

```
   TVGuardian SETUP
   ▮ DVD SPEAKER MUTE
                    :CENTER
   ▮ CC DISPLAY    :ON MUTE
   ▮ TVG MODE      :TORELANT
   ▮ DAMN AND HELL      :ON
   ▮ RELIGIOUS          :ON
   ▮ SEXUAL REFERENCE   :ON

     〈▲/▼/ENTER/MENU〉
```
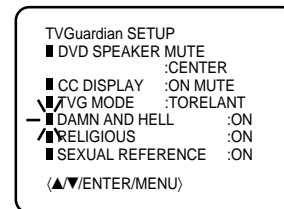
DAMN AND HELL: This set includes variations of "Damn" and "Hell".
RELIGIOUS: This set includes numerous Religious words, such as God and Jesus. One might want to turn this Word Set to Off if watching religious programming material.
SEXUAL REFERENCE: This set includes various sexually related words.

9. Press [▼] or [▲] to select "ON" or "OFF", then press [ENTER].

```
   TVGuardian SETUP
   ▮ DVD SPEAKER MUTE
                    :CENTER
   ▮ CC DISPLAY    :ON MUTE
   ▮ TVG MODE      :TORELANT
   ▮ DAMN AND HELL      :ON
   ▮ RELIGIOUS          :ON
   ▮ SEXUAL REFERENCE   :ON

     〈▲/▼/ENTER/MENU〉
```
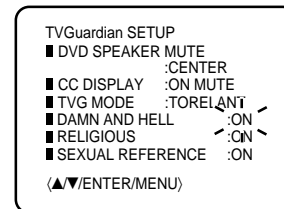
10. Press [SETUP/MENU] until the MENU screen is cleared.

Notes:
• When the user changes from any TVG On mode (Tolerant, Moderate or Strict) to the Off mode, all the word sets are turned Off. Whenever you change from the TVG Off mode to any three On modes, all three of these word sets are changed to On setting.
• When shipped from factory, the TVG WORD option is set to "ON" position.

DVD SPEAKER MUTE Setting

1. Press [SETUP/MENU].
2. Press [▼] or [▲] to select "TVGuadian SETUP" option, then press [ENTER].
3. Press [▲] or [▼] to select "DVD SPEAKER MUTE" option, then press [ENTER].

```
TVGuardian SETUP
■ DVD SPEAKER MUTE
                —  :ALL  —
■ CC DISPLAY    :ON
■ TVG MODE      :OFF


⟨▲/▼/ENTER/MENU⟩
```
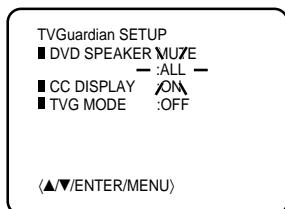
4. Press [▼] or [▲] to select the setting option, then press [ENTER].

   CENTER: If the TVG MODE is On mode, mute the sound of center speaker while DVD is playing.
   ALL: If the TVG MODE is On mode, mute the sound of all speakers while DVD is playing.

5. Press [SETUP/MENU] until the MENU screen is cleared.

Note:
• When shipped from factory, the DVD SPEAKER MUTE option is set to "CENTER" position.

CC (Closed Caption) DISPLAY Setting with TVG MODE is On Mode

1. Press [SETUP/MENU].

2. Press [▲] or [▼] to select "TVGuadian SETUP" option, then press [ENTER].

3. Press [▲] or [▼] to select "CC DISPLAY" option, then press [ENTER].

4. Press [▼] or [▲] to select the setting option, then press [ENTER].

```
TVGuardian SETUP
■ DVD SPEAKER MUTE
                :CENTER
■ CC DISPLAY  —:ON MUTE—
■ TVG MODE     :TORELANT
■ DAMN AND HELL      :ON
■ RELIGIOUS          :ON
■ SEXUAL REFERENCE   :ON

⟨▲/▼/ENTER/MENU⟩
```
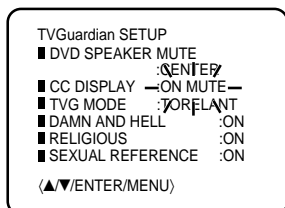
   ON MUTE: Whenever Foul Language is detected, captions are displayed with a suitable replacement word substituted for the foul language, and audio is muted for the foul language.
   CONTINUOUS: You can see all captions, whether or not any foul language was detected. But like the ON MUTE mode, captions are displayed with a suitable replacement word substituted for the foul language, and audio is muted for the foul language.
   OFF: You cannot see captions.

5. Press [SETUP/MENU] until the MENU screen is cleared.
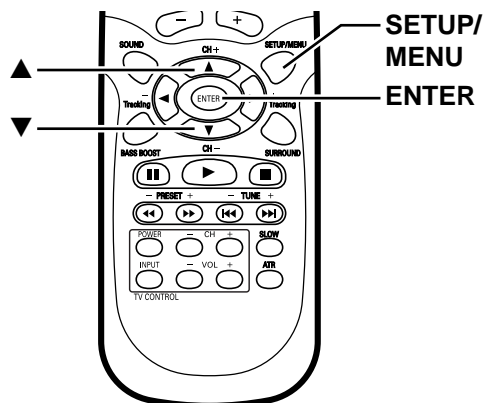
SETUP/
MENU
ENTER
▲
▼

CC (Closed Caption) DISPLAY Setting with TVG MODE is OFF Mode

1. Press [SETUP/MENU].
2. Press [▲] or [▼] to select "TVGuadian SETUP" option, then press [ENTER].
3. Press [▲] or [▼] to select "CC DISPLAY" option, then press [ENTER].
4. Press [▼] or [▲] to select the setting option, then press [ENTER].

```
TVGuardian SETUP
■ DVD SPEAKER MUTE
                 :CENTER
■ CC DISPLAY    :ON
■ TVG MODE      :OFF


⟨▲/▼/ENTER/MENU⟩
```
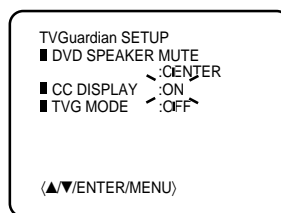
   ON: You can see all captions.
   OFF: You cannot see captions.

5. Press [SETUP/MENU] until the MENU screen is cleared.

Notes:
• When playback starts, the TVG information may appear on the TV screen (TVG or NO TVG).
• Although the CC DISPLAY is set to OFF, the closed caption may appear on the TV screen according to a TV with closed caption capability.

TVGuardian® and TVG® are registered trademarks of Principle Solutions, Inc.

IMPORTANT INFORMATION:
• The built-in TVGuardian® Foul Language Filter (TVG®) works only English language DVD video disc supporting closed caption, not any other languages.
• For improvement, on-screen displays subject to change without notice.

```
┌──────────────────────────────────┐
│          Need help? Call         │
│         1-800-813-3435           │
└──────────────────────────────────┘
```

INITIAL SETTINGS

Once the initial settings have been completed, the player can always be operated under the same conditions.
The settings will be retained in the memory until they are changed, even if the power is turned off.

Setting Language

1. Press [SETUP/MENU] in the stop mode or No Disc.
    The setup screen appears.

    Language Picture Sound Parental Other

2. Press [▼] or [ENTER].
    The Language screen appears.

3. Press [▲] or [▼] to select the item.
    Example:

    Language Picture Sound Parental Other

    | Menu | English |
    | Subtitle | Automatic |
    | Audio | English |

4. Press [▶] or [ENTER].
    The submenu appears.

5. Press [▲] or [▼] to select your desired language.
    Example:

    Language Picture Sound Parental Other

    | Menu | English | English |
    | Subtitle | Automatic | Francais |
    | Audio | English | Espanol |
    | | | Other |
    | | ---- | Original |

6. Press [ENTER].
    The selected language remains.

7. Repeat steps 3 through 6 for other setting.
    English, Francais, Espanol:
    The language you have selected will play if it is recorded on the disc.

    Other:
    If you want to select another language, enter the language code (see the language code list on page E61).

    Original:
    The unit will select the first priority language of each disc.

    Automatic:
    •   The unit will automatically select the same language in the AUDIO setting.
    •   When the unit selects the same language as the AUDIO, the subtitles will not appear during playback.
   •   When you do not use the same language as the AUDIO, the subtitles will appear during playback.

    Off:
    Subtitles do not appear.

8. Press [SETUP/MENU] or [RETURN] to close the screen.

Notes:
•   **In this instruction manual, the language in on-screen display is English.**
    If you change the language, please follow the selected language in on-screen display.
•   You cannot switch audio sound track languages if there is only one language recorded on the disc.
•   When you play back a DVD video disc, the player automatically displays the pre-selected subtitle language if it is included on the disc.
•   If "Other" is selected, enter the language code. (See "LANGUAGE CODE LIST" on page E61.)

RETURN
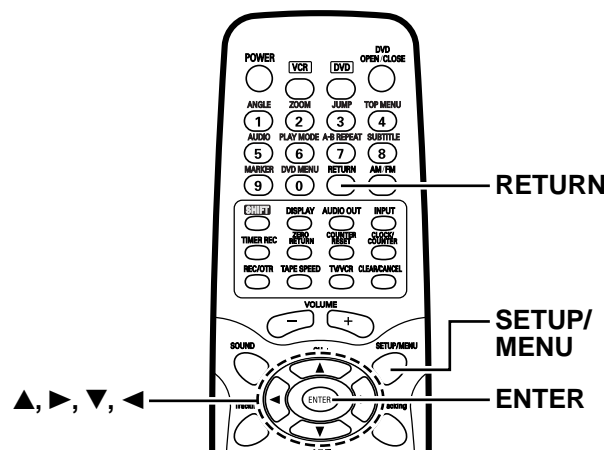
SETUP/MENU

▲, ▶, ▼, ◀   ENTER

Setting OSD Language

1. Press [SETUP/MENU] in the stop mode or No Disc.

2. Press [▶] to select "Other".

    Language Picture Sound Parental Other

3. Press [▼] or [ENTER].
    The OSD Language screen appears.

    Language Picture Sound Parental Other
    OSD Language   English

4. Press [▶] or [ENTER].
    The submenu appears.

5. Press [▲] or [▼] to select your desired language.
    Example:

    Language Picture Sound Parental Other
    OSD Language   English   English
                                     Francais
                                     Espanol

6. Press [ENTER].
    The language remains. (The OSD Language is changed.)

7. Press [SETUP/MENU] or [RETURN] to close the screen.

Setting Picture

1. Press [SETUP/MENU] in the stop mode or No disc.

2. Press [▶] to select "Picture".

3. Press [▼] or [ENTER].
   The Picture screen ("Tv Screen" and "Display") appears.
   "TV Screen" is selected.

4. Press [▶] or [ENTER].
   The submenu appears.

5. Press [▲] or [▼] to select your desired screen type.

   Language Picture Sound Parental Other
   Tv Screen   4:3 ▭   4:3 ▭
   Display   On   4:3 ▭
                             16:9 ▭

6. Press [ENTER].
   The TV screen size is set.

7. Press [▼] to select "Display".

8. Press [▶] or [ENTER] to select "On" or "Off".
   On: On-screen displays appear when you press the buttons.
   Off: On-screen displays do not appear when you press any
        buttons.

9. Press [SETUP/MENU] or [RETURN] to close the screen.

4:3 ▭ (Letterbox):
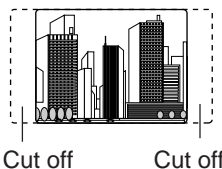Select when a conventional TV set is connected.
When the wide screen disc is played back, the black bands appear at the top and bottom of screen.

4:3 ▭ (Panscan):
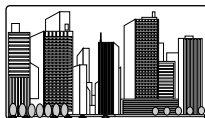Select when a conventional TV set is connected.
When the wide screen disc is played back, it displays pictures cropped to fill to your TV screen. The left and right edges are cut off.

Cut off   Cut off

16:9 ▭ (Wide screen):
Select when a wide screen TV set is connected.
Played in "FULL" size. (Setting the wide screen TV to "FULL" mode is also necessary.)

Notes:
• The screen size may differ depending on the DVD video discs.
• If you select 16:9 ▭ to get rid of the black bands on screen when wide screen disc is played back, picture may be slightly distorted.
• In some discs, even if 4:3 ▭ is selected, the black bands may remain on the screen.

Setting Sound

Used to adjust the sound level between the powerful sound and the faint sound.

1. Press [SETUP/MENU] in the stop mode or No disc.

2. Press [▶] to select "Sound".

3. Press [▼] or [ENTER].
   The Sound screen (DRC) appears.
   (DRC: Dynamic Range Control)

4. Press [▶] or [ENTER].
   The submenu ("Std" and "Min") appears.

5. Press [▲] or [▼] to select your desired sound type.

   Language Picture Sound Parental Other
   DRC   Std   Std
                              Min

   Std : Level difference is medium.
   Min : Level difference is small.

6. Press [ENTER].

7. Press [SETUP/MENU] or [RETURN] to close the screen.

Notes:
• The DRC function works only during playback of Dolby Digital recorded discs.
• The level of DRC may differ depending on the DVD video disc.

Need help? Call
1-800-813-3435

-E55-

Setting Parental

Some discs are specified not suitable for children. Such discs can be limited not to play back with the unit.

1. Press [SETUP/MENU] in the stop mode or No disc.

2. Press [▶] to select "Parental".

3. Press [▼] or [ENTER].
   The Parental screen ("Password" and "Parental") appears.

   Language Picture Sound Parental Other
   Password   ┌────┐■⌒
   Parental   Off

4. Press [▼] to skip "Password" and select "Parental".

5. Press [◀] or [▶] repeatedly to select the level (1–8) or "Off".

   Language Picture Sound Parental Other
   Password   ────■⌒
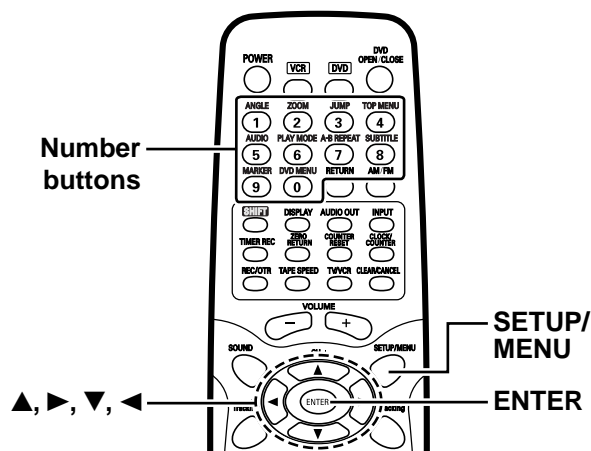   Parental   ┌──1──┐

6. Press [▲] to select "Password".

7. Press [number buttons (0–9)] to input a 4-digit password.
   Be sure to remember this number!
   If you input a wrong number, press [CLEAR/CANCEL].

8. Press [ENTER].

   Language Picture Sound Parental Other   Language Picture Sound Parental Other
   Password   ┌1 2 3 4┐■⌒   ➡   Password   ────■⌒
   Parental   1   Parental   1

9. Press [SETUP/MENU] or [RETURN] to close the screen.

To change the Parental Level

1. Repeat the steps 1 ~ 3 as above to open the Parental screen.
2. Press [number buttons (0–9)] to enter the password you have stored.
3. Press [ENTER].
   The rating is now unlocked.
4. Press [▼] to select "Parental", then press [◀] or [▶] to change the parental level.
5. Press [▲] to select "Password".
   Press [number buttons (0–9)] to enter the password.
   Note: You can change the password if you want.
6. Press [ENTER].
   Now the parental level is changed and locked.
7. Press [SETUP/MENU] or [RETURN] to close the screen.

Number buttons

SETUP/MENU

ENTER

▲, ▶, ▼, ◀

Parental Control
MPAA (Motion Picture Association of America) Guideline is a rating system that provides advanced cautionary information to parent about the content of movie programs.

The parental lock level is equivalent to the following MPAA Rating System.
Level 7: NC-17 (No one 17 and under admitted)
Level 6: R (Restricted)
Level 4: PG13 (Parental guidance cautioned)
Level 3: PG (Parental guidance suggested)
Level 1: G (General audiences)

Some DVD discs contain a restriction level which enables parents to prevent playback of discs by children. This DVD video player is equipped with a password designed to prevent children changing the level.

You cannot play DVD video discs rated higher than the level you selected unless you cancel the parental lock function.
For example, when you select level "5", the DVD video player will not play discs with ratings of "6", "7" or "8".
The information will appear on the TV screen.
When you select level "Off", all DVD video discs can be played back.

If you forget the password…
1. Press [OPEN/CLOSE] to open the disc tray.
2. Remove the disc.
3. Press [OPEN/CLOSE] again to close the tray.
   "No Disc" appears on the TV screen.
4. While holding [■ STOP] down on the front panel, press [**7**] on the remote control.
   "Initialize" appears on the TV screen.
5. Enter a new password again.

Note:
DVD video discs may or may not respond to the parental lock settings. Make sure this function works with your DVD video discs.

Need help? Call
1-800-813-3435

LISTENING TO THE RADIO

To turn the unit on and listen to the last received station, press [AM/FM] on the remote control.

Automatic/Manual Tuning

1. Press [AM/FM] to select FM or AM.
2. **Automatic tuning**
   Press [TUNE] + or – for at least 1 second to tune in a station. The unit will scan up or down the band and receive the next receivable station. Press the button again to continue.
   Manual tuning
   Press [TUNE] + or – briefly until the desired frequency is displayed. The frequency changes in 200 kHz steps for FM and 10 kHz steps for AM.
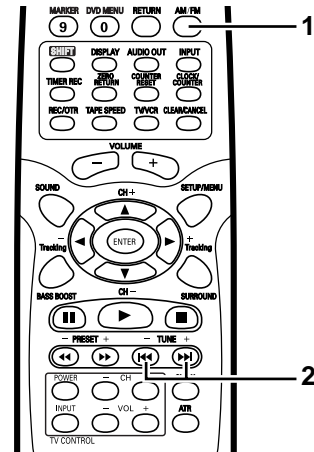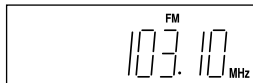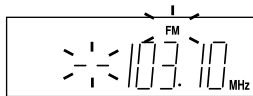
To Preset Stations

Up to 24 FM and 12 AM stations can be preset.
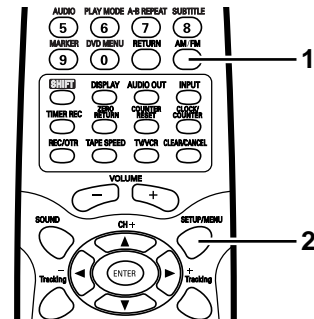
Automatic presetting (APT)
1. Press [AM/FM] to select FM or AM.
2. Press [SETUP/MENU] for at least 3 seconds.
   "– –" and "FM (or AM)" blink.

The automatic tuning mode is set and automatic presetting begins from the low end of the band.
When 24 FM or 12 AM stations have been preset or the high end of the band is reached, automatic presetting stops.
"– –" disappears and the station memorized on channel 1 will be heard.
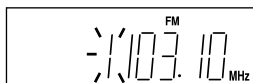
Note:
If APT is activated, all previously programmed stations of the band will be cleared and new stations will be programmed.
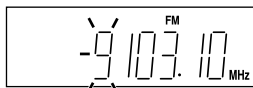
Need help? Call
1-800-813-3435

Manual presetting

1. Tune in the station to be preset as described in "Automatic/ Manual Tuning".

2. Press [SETUP/MENU].
   "Preset number" blinks.

3. While "preset number" is blinking, press [PRESET] + or – to select the channel to be preset.
   - The number buttons on the remote control can also be used.
   - In this example, the channel is "9".

4. While "preset number" is blinking, press [ENTER].
   "Preset number" bliking stops.

5. Press [SETUP/MENU].
   "Preset number" disappears.
   - In this example, "103.1 MHz" FM station is preset on FM channel 9.
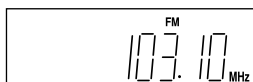
6. Repeat steps above to add more preset stations.

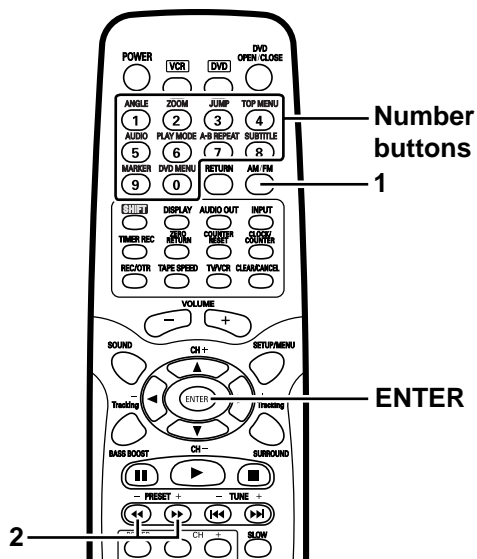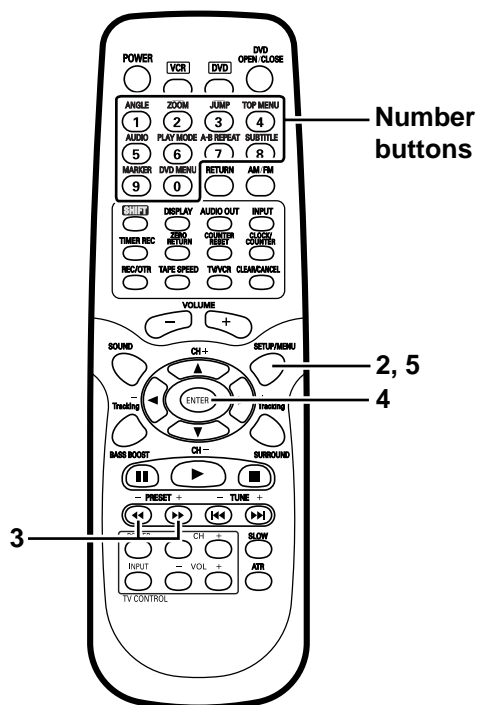- When presetting a new station, the previous preset station is cleared.

Listening to Preset Stations

1. Press [AM/FM] to select FM or AM.
2. Press [PRESET] + or – briefly to select the desired channel.
   - If using the number buttons, press the number button(s), then press [ENTER].

     Example:
     To select preset number 4, press [0] [3], then [ENTER].
     To select preset number 12, press [1] [2], then [ENTER].

TROUBLESHOOTING GUIDE

If you have followed the instructions and are having difficulty operation the unit, locate the SYMPTOM in the left column below. Check the corresponding POSSIBLE CAUSE and CORRECTIVE ACTION columns to locate and remedy the problem.

Symptom	Cause	Correction
No power.	• The power cord is disconnected.	• Plug the power cord into the wall outlet securely.
The power is on,but the DVD/VCR does not work.	• No disc is inserted. • No tape is inserted.	• Insert a disc or tape. (Check that the disc or tape indicator in the display window is lit.)
No picture.	• The TV is not set to receive DVD/VCR signal output.	• Select the appropriate video input mode on the TV so the picture from the DVD/VCR appears on the TV screen.
	• TV/VCR mode for DVD/VCR is set to TV.	• Press the TV/VCR button on the remote control repeatedly to choose VCR mode. VCR indicator light appears in the display window.
	• The video cable is not connected securely.	• Connect the video cable securely.
	• The connected TV power is turned off.	• Turn on the TV.
	• An unplayable disc is loaded.	• Load a playable disc. (Check the disc logo, type, color system and regional code.)
	• The S-video cable is not connected.	• Connect the video cable into the jack.
	• The video cable or 75 ohm coaxial cable is not connected.	• Connect the video cable into the jack. • Connect the 75 ohm coaxial cable into the jack.
No sound.	• The audio cables are not connected securely.	• Connect the audio cable securely.
	• The power of the equipment connected with the audio cable is turned off.	• Turn on the equipment connected with the audio cable.
	• Volume control is set to minimum.	• Turn up the volume.
	• The wrong function is selected.	• Select the correct function.
	• Faulty speaker connections.	• Connect the speaker wires firmly to the speaker terminals.
Sound is heard from only one speaker.	• Faulty connection of speaker wires.	• Connect the speaker wires firmly to the speaker terminals.
The playback picture is poor.	• The disc is dirty.	• Clean the disc.
	• Tape heads are dirty.	• Clean video heads.
	• Tape is a rental or was recorded on another VCR.	• Use [Tracking] +/− for manual tracking adjustment while tape is playing.
	• An unplayable disc is loaded.	• Load a playable disc. (Check the disc logo, type, color system and regional code.)
The DVD/VCR does not start playback.	• No disc is inserted. • No tape is inserted.	• Insert a disc or tape. (Check that the disc or tape indicator is lit.)
	• An unplayable disc is inserted.	• Insert a playable disc. (Check the disc type,color system,and Regional code.)
	• The disc is placed upside down.	• Place the disc with the playback side down.
	• The disc is not placed within the guide.	• Place the disc on the disc tray correctly inside the guide.
	• The disc is dirty.	• Clean the disc.
	• "PARENTAL" is set.	• Cancel the parental lock function or change the rating level. Reset it after play. (See page E56.)
The remote control does not work properly.	• The remote control is not pointed at the remote sensor of the DVD/VCR.	• Point the remote control at the remote sensor of the DVD/VCR.
	• The remote control is too far from the DVD/VCR.	• Operate the remote control within 16 ft (5 m).
	• There is an obstacle in the path of the remote control and the DVD/VCR.	• Remove the obstacle.
	• The batteries in the remote control are weak, or installed incorrectly. • This remote control use the same buttons for VCR and DVD functions (ex. PLAY).	• Check the battery polarity (+ or −). • Replace the batteries. • When using a VCR, first press the [VCR] button. When using a DVD, first press the [DVD] button.

Symptom	Cause	Correction
Some channels are skipped over when using [CH] +/–.	• Those channels were deleted with the ADD/DELETE option.	• Use ADD/DELETE to restore channels. See "To ADD/DELETE Channels"on page E26.
Picture and sound of broadcasting channel are weak or missing.	• Antenna or cables are loose.	• Tighten connections or replace cable.
	• Wrong TV/CATV option is being used.	• See "To ADD/DELETE Channels" on page E26 for details.
The conversation in DVD programs is hard to listen to.	• Center speaker level is low.	• Raise the Center speaker level.
Camcorder image is not shown.	• Camcorder is off.	• Turn camcorder on and operate properly.
Camcorder image via A/V input to DVD/VCR is not shown on TV screen.	• DVD/VCR INPUT SELECT is not set to LINE.	• Press INPUT to select LINE input channel.
Timer recording is not possible.	• Clock in DVD/VCR is not set to correct time.	• Set clock to correct time. See "Manual Clock Setting" on page E24.
	• DVD/VCR is on which disables timer.	• Turn DVD/VCR off to enable timer. TIMER indicator light appears in the display window.
	• Timer has been programmed incorrectly.	• Reprogram Timer. See "Timer Recording" on pages E34 and E35.
	• TIMER indicator light does not appear after programming timer.	• Reprogram Timer and turn DVD/VCR off to enable timer.
TIMER indicator light appears after DVD/VCR is turned off.	• DVD/VCR is in Timer Recording mode.	• This is the normal indication that the DVD/VCR is in TIMER mode.
The operation or display is not normal.	• The player must be reset.	1. Disconnect the power cord. 2. Reconnect the power cord. 3. Resume operation.

SERVICING:
Should this product require service, refer to the SANYO DVD limited warranty.

If you do not have a convenient SANYO service station nearby, contact the SANYO dealer where you purchased the unit. Be sure to give the model number and explain the problem. The dealer will advise you how to obtain service.

MAINTENANCE

WARNING:
FOR YOUR PERSONAL SAFETY, BE SURE TO DISCONNECT THE AC POWER CORD BEFORE PROCEEDING WITH ANY MAINTENANCE OR CLEANING.

Cleaning the cabinet
Use a clean soft cloth moistened with plain lukewarm water and wrung dry. Never use benzol, benzene or other strong chemical cleaners since these could damage the finish of your unit. It is important that no liquid reaches the inside of the unit.

LANGUAGE CODE LIST

Enter the appropriate code number for the initial settings "AUDIO", "SUBTITLE" and "MENU LANGUAGE".

Language Name	Code	Language Name	Code	Language Name	Code	Language Name	Code
Abkhazian	1112	Fiji	1620	Lingala	2224	Singhalese	2919
Afar	1111	Finnish	1619	Lithuanian	2230	Slovak	2921
Afrikaans	1116	French	1628	Macedonian	2321	Slovenian	2922
Albanian	2927	Frisian	1635	Malagasy	2317	Somali	2925
Amharic	1123	Galician	1722	Malay	2329	Spanish	1529
Arabic	1128	Georgian	2111	Malayalam	2322	Sundanese	2931
Armenian	1835	German	1415	Maltese	2330	Swahili	2933
Assamese	1129	Greek	1522	Maori	2319	Swedish	2932
Aymara	1135	Greenlandic	2122	Marathi	2328	Tagalog	3022
Azerbaijani	1136	Guarani	1724	Moldavian	2325	Tajik	3017
Bashkir	1211	Gujarati	1731	Mongolian	2324	Tamil	3011
Basque	1531	Hausa	1811	Nauru	2411	Tatar	3030
Bengali; Bangla	1224	Hebrew	1933	Nepali	2415	Telugu	3015
Bhutani	1436	Hindi	1819	Norwegian	2425	Thai	3018
Bihari	1218	Hungarian	1831	Oriya	2528	Tibetan	1225
Breton	1228	Icelandic	1929	Panjabi	2611	Tigrinya	3019
Bulgarian	1217	Indonesian	1924	Pashto, Pushto	2629	Tonga	3025
Burmese	2335	Interlingua	1911	Persian	1611	Turkish	3028
Byelorussian	1215	Irish	1711	Polish	2622	Turkmen	3021
Cambodian	2123	Italian	1930	Portuguese	2630	Twi	3033
Catalan	1311	Japanese	2011	Quechua	2731	Ukrainian	3121
Chinese	3618	Javanese	2033	Rhaeto-Romance	2823	Urdu	3128
Corsican	1325	Kannada	2124	Romanian	2825	Uzbek	3136
Croatian	1828	Kashmiri	2129	Russian	2831	Vietnamese	3219
Czech	1329	Kazakh	2121	Samoan	2923	Volapük	3225
Danish	1411	Kirghiz	2135	Sanskrit	2911	Welsh	1335
Dutch	2422	Korean	2125	Scots Gaelic	1714	Wolof	3325
English	1524	Kurdish	2131	Serbian	2928	Xhosa	3418
Esperanto	1525	Laothian	2225	Serbo-Croatian	2918	Yiddish	2019
Estonian	1530	Latin	2211	Shona	2924	Yoruba	3525
Faroese	1625	Latvian, Lettish	2232	Sindhi	2914	Zulu	3631

SPECIFICATIONS

Amplifier Section

Inputs:
VIDEO (AUDIO) IN: 500 mV/50 kΩ
Outputs:
SUBWOOFER PRE OUT: 2 V/1 kΩ
COMPONENT VIDEO OUT:
Y: 1.0 Vp-p (75 Ω)
PB: 0.7 Vp-p (75 Ω)
PR: 0.7 Vp-p (75 Ω)
MONITOR OUT S-VIDEO:
Y: 1.0 Vp-p (75 Ω)
C: 0.286 Vp-p (75 Ω)
MONITOR OUT VIDEO: 1.0 Vp-p (75 Ω)

VCR Specifications

Head system:
Four head helical scan azimuth system
Timer:
12-hour display type with AM, PM
Tape speed SP:
33.35 mm/sec, LP: 16.67 mm/sec, EP: 11.12 mm/sec
Tape width:
12.7 mm
Maximum recording time:
SP: 2 HOURS (T-120), EP: 6 HOURS (T-120)/8 HOURS (T-160)
Rewind time:
About 3 minutes (T-120)
Antenna:
75 ohms (VHF/UHF)
VHF output signal:
Channel 3 or 4 (Switchable)
Channel coverage VHF:
2-13, UHF: 14 – 69, CATV: 1 – 125 (4A, A–W, W+1 – W+84, A-5 – A-1)
Frequency range:
20 Hz to 20 kHz
Signal-to-noise ratio:
More than 43dB
Dynamic range:
More than 83 dB
Channel separation:
More than 55 dB

DVD Video Player Section

Type:
DVD Video player
Signal format:
NTSC color
Laser:
Semiconductor laser, wavelength 650 nm/790 nm
Signal to noise ratio:
More than 105 dB
Wow and flutter:
Below measurable level

Tuner Section

(FM)
Frequency range:
87.9 MHz – 107.9 MHz (200 kHz steps)
Usable sensitivity:
20.2 dBf (mono)
(AM)
Frequency range:
520 kHz – 1,710 kHz (10 kHz steps)
Usable sensitivity:
500 µV/m (AM loop antenna)

General

Power requirements:
AC 120V, 60 Hz
Power consumption:
110 Watts
Dimensions (W x H x D):
Approx. 17.1" x 3" x 14.8" (435 x 75 x 375 mm)
Weight:
Approx. 14.1 lbs (6.4 kg)

Active Subwoofer (ASX-3000)
Subwoofer
Continuous minimum sine wave RMS power output into 6 ohms at 70 Hz with no more than 10 % total harmonic distortion .... 75 Watts

Satellite Speakers (Front Left & Right, Center, Surround Left & Right)
Continuous minimum sine wave RMS power output per channel into 8 ohms at 1 kHz with no more than 10 % total harmonic distortion (with the other amplifiers off) .... 25 Watts

AUDIO INPUT (6-CHANNEL):
DIN 9-pin
950 mV/47 kΩ (Subwoofer)
2300 mV/1.5 kΩ (Satellite)
SPEAKERS (Output):
FRONT (L/R): 8 Ω
CENTER: 8 Ω
SURROUND (L/R): 8 Ω
Power requirements:
AC 120V, 60Hz
Power consumption:
150 Watts
Unit used:
6.5" (16 cm) diameter, Cone type
Dimensions (W x H x D):
Approx. 9.1" x 15.4" x 13.8" (230 x 390 x 350 mm)
Weight:
Approx. 22.1 lbs (10 kg)

Satelite Speaker
Front left, Front right, Center, Surround left, and Surround right speakers (STM-8501S, magnetic shield)
Unit used:
3.1" (8 cm) diameter, Cone type, Full range
Maximum music power handling capacity:
60 Watts
Nominal impedance:
8 Ω
Dimensions (W x H x D):
Approx. 5.9" x 4.3" x 4.5" (150 x 110 x 115 mm)
Weight:
Approx. 1.6 lbs (0.73 kg)/speaker

IMPORTANT INFORMATION
Because its products are subject to continuous improvement, SANYO reserves the right to modify product designs and specifications without notice and without incurring any obligation.

Limited Warranty

LABOR 90 DAYS	PARTS 1 YEAR	CARRY-IN ONLY

THIS WARRANTY IS VALID ONLY ON SANYO PRODUCTS PURCHASED FROM A WAL-MART STORE AND USED IN THE UNITED STATES OF AMERICA, EXCLUDING HAWAII AND ALL U.S. TERRITORIES AND PROTECTORATES. THIS WARRANTY APPLIES ONLY TO THE ORIGINAL RETAIL PURCHASER AND DOES NOT APPLY TO PRODUCTS USED FOR ANY INDUSTRIAL, PROFESSIONAL OR COMMERCIAL PURPOSE.

Subject to the OBLIGATIONS and EXCLUSIONS below, SANYO Manufacturing Corporation. ("SANYO") warrants this SANYO product against defects in materials and workmanship for the periods of LABOR and PARTS specified above. SANYO will repair or replace (at its option) the product and any of its parts which fail to conform to this warranty with new or refurbished products or parts. The warranty period commences on the date the product was first purchased at retail from a Wal-Mart Store.

OBLIGATIONS

In order to obtain warranty service, the product must be delivered to and picked up from a Wal-Mart Store at the original retail purchaser's expense. The original dated bill of sale, or sales slip from a Wal-Mart Store must be submitted to a Wal-Mart Store at the time warranty service is requested.

EXCLUSIONS

1. This warranty does not cover (A) the adjustment of customer-operated controls as explained in the appropriate model's instruction manual, or (B) the repair of any product whose serial number has been altered, defaced or removed.
2. This warranty shall not apply to the cabinet or cosmetic parts, broken or damaged video heads, batteries or routine maintenance.
3. This warranty does not apply to uncrating, setup, installation, removal of the product for repair or reinstallation of the product after repair.
4. This warranty does not apply to repairs or replacements necessitated by any cause beyond the control of SANYO including, but not limited to, any malfunction, defect or failure caused by or resulting from unauthorized service or parts, improper maintenance, operation contrary to furnished instructions, shipping or transit accidents, modification or repair by user or any third party, abuse, misuse, neglect, accident, incorrect line voltage, fire, flood or other Acts of God, or normal wear and tear.

The foregoing is in lieu of all other express warranties and SANYO does not assume or authorize any party to assume for it any other obligation or liability.

THE DURATION OF ANY WARRANTIES WHICH MAY BE IMPLIED BY LAW (INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS) IS LIMITED TO THE TERM OF THIS WARRANTY. IN NO EVENT SHALL SANYO OR THE MANUFACTURER OF THE PRODUCT BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING FROM OWNERSHIP OR USE OF THIS PRODUCT, OR FOR ANY DALAY IN THE PERFORMANCE OF ITS OBLIGATIONS UNDER THIS WARRANTY DUE TO CAUSES BEYOND ITS CONTROL.

SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS AND/OR DO NOT ALLOW THE EXCLUSION OR LIMITATION OF CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS AND EXCLUSIONS MAY NOT APPLY TO YOU.

THIS WARRANTY GIVES YOU SPECIAL LEGAL RIGHTS. YOU MAY HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE.

R97/10/20 (M)

For your protection in the event of theft or loss of this product, please keep the following information with a sales receipt in a safe place.

Model No. _____ **Serial No.** _____ **Date of Purchase** _____

Purchase Price _____ **Where Purchased** _____

SANYO

SANYO Manufacturing Corporation

SANYO

SANYO Electric Co., Ltd.
Printed in Thailand