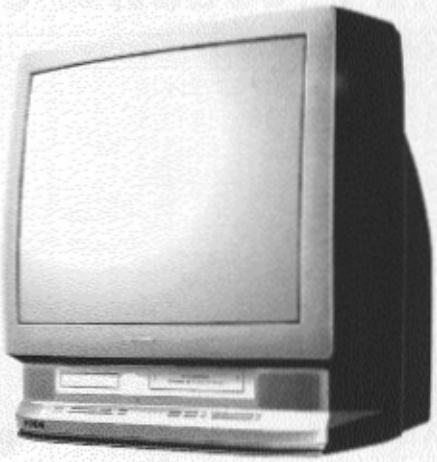


Panasonic Omnivision VHS

TV/DVD/VCR Combination

Operating Instructions

Model PV-DM2799

Getting Started

Basic Operation

Advanced Operation

For Your Information

VCRPlus+ Easy Taping.

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

DOLBY DIGITAL dts DIGITAL OUT DVD VIDEO COMPACT disc DIGITAL VIDEO COMPACT disc DIGITAL AUDIO

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

Spanish Quick Use Guide is included. (Guía para rápida consulta en español está incluida.)

For assistance, call 1-800-211-PANA(7262).

Important Safeguards and Precautions

READ AND RETAIN ALL SAFETY AND OPERATING INSTRUCTIONS. HEED ALL WARNINGS IN THE MANUAL AND ON UNIT

INSTALLATION

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

2 POWER CORD PLUG
For safety, this unit has a polarized type plug (one wide blade), or a three-wire grounding type plug. Always hold the plug firmly and make sure your hands are dry when plugging in or unplugging the AC power cord. Regularly remove dust, dirt, etc. on the plug.

POLARIZED PLUG CAUTION:
The plug fits into outlet one way. If it cannot be fully inserted, try reversing it. If it still will not fit, have an electrician install the proper wall outlet. Do not tamper with the plug.

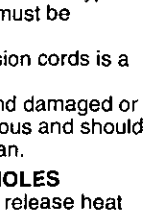
GROUNDING PLUG CAUTION:
The plug requires a three-hole grounding outlet. If necessary, have an electrician install the proper outlet. Do not tamper with the plug.

3 POWER CORD
To avoid unit malfunction, and to protect against electrical shock, fire or personal injury:
- Keep power cord away from heating appliances and walking traffic. Do not rest heavy objects on, or roll such objects over the power cord.
- Do not tamper with the cord in any way.
- An extension cord should have the same type plug (polarized or grounding) and must be securely connected.
- Overloaded wall outlets or extension cords is a fire hazard.
- Frayed cords, damaged plugs, and damaged or cracked wire insulation are hazardous and should be replaced by a qualified electrician.

4 DO NOT BLOCK VENTILATION HOLES
Ventilation openings in the cabinet release heat generated during operation. If blocked, heat build-up may result in a fire hazard or heat damage to cassettes.
For your protection:
a. Never cover ventilation slots while unit is ON, or operate unit while placed on a bed, sofa, rug, or other soft surface.
b. Avoid built-in installation, such as a book case or rack, unless properly ventilated.

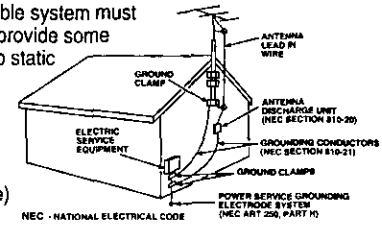
5 PLACEMENT AVOID EXTREMELY HOT LOCATIONS OR SUDDEN TEMPERATURE CHANGES
Do not place unit over or near a heater or regulator, in direct sunlight, inside closed vehicles, in high temperature [over 95°F (35°C)], or in over 75% humidity. If unit is suddenly moved from a cold place to a warm one, moisture may condense in unit and on the tape causing damage.
Never subject unit to vibration, impact, or place it so that the surface is tilted as internal parts may be seriously damaged.

6 TO AVOID PERSONAL INJURY
- Never place unit on support or stand that is not firm, level, and adequately strong. The unit could fall causing serious injury to a child or adult and damage to the unit.
- Move any appliance and cart combination with care. Quick stops, excessive force, and uneven surfaces may cause objects to overturn.
- Carefully follow all operating instructions.



OUTDOOR ANTENNA INSTALLATION

1 SAFE ANTENNA AND CABLE CONNECTION
An outside antenna or cable system must be properly grounded to provide some protection against built up static charges and voltage. Section 810 of the National Electrical Code, ANSI/NFPA 70 (in Canada, part 1 of the Canadian Electrical Code) provides information regarding proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.



2 KEEP ANTENNA CLEAR OF HIGH VOLTAGE POWER LINES OR CIRCUITS
Locate an outside antenna system well away from power lines and electric light or power circuits so it will never touch these power sources should it ever fall. When installing antenna, absolutely never touch power lines, circuits or other power sources as this could be fatal.

USING THE UNIT

Before unit is brought out of storage or moved to a new location, refer again to the INSTALLATION section of these safeguards.

1 KEEP UNIT WELL AWAY FROM WATER OR MOISTURE, such as vases, sinks, tubs, etc.

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

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

4 WHEN UNIT IS PLUGGED IN
- DO NOT OPERATE IF:
- liquid has spilled into unit.
- unit was dropped or otherwise damaged.
- unit emits smoke, malodors, or noises.
Immediately unplug unit, and have it inspected by a service technician to avoid potential fire and shock hazards.
- Never drop or push any object through openings in unit. Touching internal parts may cause electric shock or fire hazard. Do not put any foreign object on the disc tray.
- Keep magnetic objects, such as speakers, away from unit to avoid electrical interference.

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

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

SERVICE

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

2 REPLACEMENT OF PARTS
Make sure the service technician uses only parts specified by the manufacturer, or have equal safety characteristics as original parts. The use of unauthorized substitutes may result in fire, electric shock, or other hazards.

3 SAFETY CHECK AFTER SERVICING
After unit is serviced or repaired, request that a thorough safety check be done as described in the manufacturer's service literature to insure video unit is in safe operating condition.

Safety Precautions/Mesures de sécurité

Warning: To prevent fire or shock hazard, do not expose this equipment to rain or moisture.
Caution: To prevent electric shock, match wide blade of plug to wide slot, fully insert.
Avertissement: Afin de prévenir tout risque d'incendie ou de chocs électriques, ne pas exposer cet appareil à la pluie ou à une humidité excessive.
Attention: Pour éviter les chocs électriques, introduire la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu'au fond.

This video recorder, equipped with the HQ (High Quality) System, is compatible with existing VHS equipment. Only use those tapes with the VHS mark. It is recommended that only cassette tapes that have been tested and inspected for use in 2, 4, 6, and 8 hour VCR machines be used.
This television receiver provides display of television closed captioning in accordance with §15.119 of the FCC rules.

FCC WARNING: Any unauthorized changes or modifications to this equipment would void the user's authority to operate.

CAUTION:
UNIT IS A CLASS I LASER PRODUCT.
HOWEVER THIS UNIT USES A VISIBLE LASER BEAM WHICH COULD CAUSE HAZARDOUS RADIATION EXPOSURE IF DIRECTED. BE SURE TO OPERATE THE UNIT CORRECTLY AS INSTRUCTED.
WHEN THIS UNIT IS PLUGGED TO THE WALL OUTLET, DO NOT PLACE YOUR EYES CLOSE TO THE OPENING OF THE DISC TRAY AND OTHER OPENINGS TO LOOK INTO THE INSIDE OF THIS UNIT.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.
DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.

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

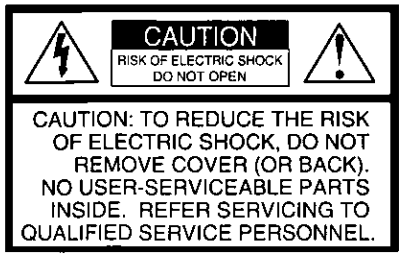
ATTENTION:
RAYONNEMENT LASER EN CAS D'OUVERTURE.
NE PAS REGARDER DANS LE FAISCEAU.

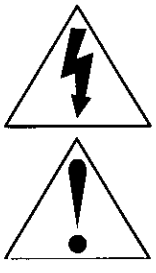
(Inside of product)

FCC NOTE:

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

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





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

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

Region Management Information

Region Management Information: This unit is designed and manufactured to respond to the Region Management Information that is recorded on a DVD disc. If the Region number described on the DVD disc does not correspond to the Region number of this unit, this unit cannot play this disc.

The Region number for this unit is 1.

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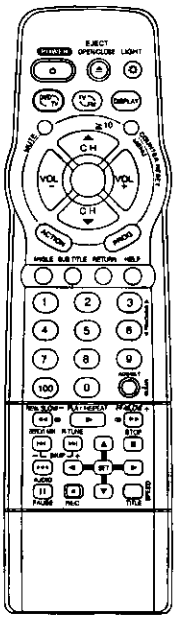
Congratulations

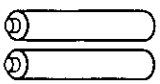
on your purchase of one of the most sophisticated and reliable products on the market today. Used properly, it will bring you and your family years of enjoyment. Please fill in the information below. The serial number is on the tag located on the back of your unit.

Date of Purchase _____
Dealer Purchased From _____
Dealer Address _____
Dealer Phone No. _____
Model No. _____
Serial No. _____

Accessories



☐ Remote Control
VSQS1613

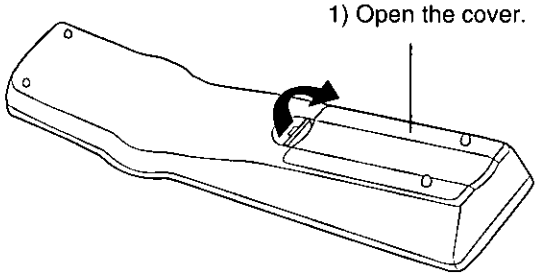


☐ Batteries
2 "AA"

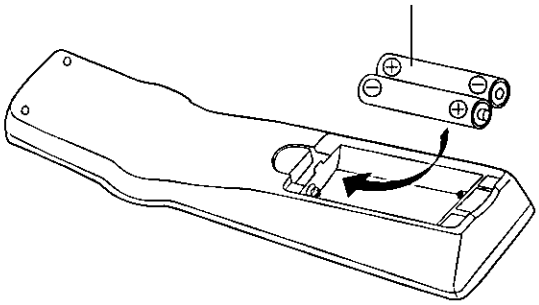
To order accessories, call toll free 1-800-332-5368.

Loading the Batteries

1) Open the cover.



2) Insert batteries as marked.



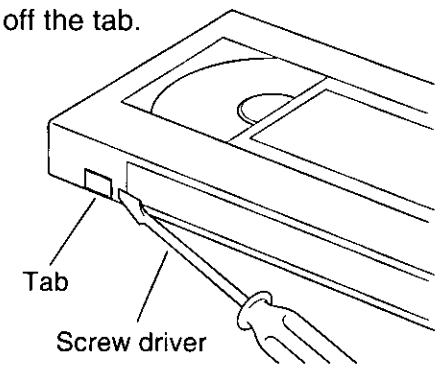
3) Close the cover.

☐ **Battery replacement caution**

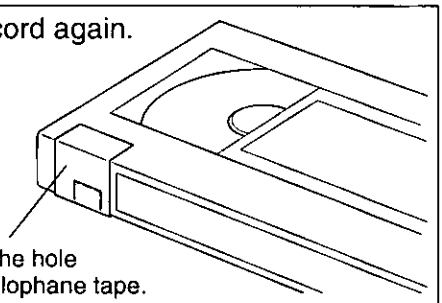
- Do not mix old and new batteries.
- Do not mix alkaline with manganese batteries.

Prevent Accidental Tape Erasure

Break off the tab.



To record again.



Record/Playback Time

Only use tapes with the VHS mark in this unit.

Tape Speed Setting	Type of Video Cassette		
	T60	T120	T160
SP (Standard Play)	1 Hour	2 Hours	2 Hours 40 Minutes
LP (Long Play)	2 Hours	4 Hours	5 Hours 20 Minutes
SLP (Super Long Play)	3 Hours	6 Hours	8 Hours

Disc formats supported by this unit

The unit can play back discs bearing any of the following marks:

DVD
3" (8 cm) disc/5" (12 cm) disc

Video CD
3" (8 cm) disc/5" (12 cm) disc

CD
3" (8 cm) disc/5" (12 cm) disc

Discs which cannot be played with this unit

- DVD with Region No. other than "1" or "ALL"
- DVD of PAL system
- DVD-ROM
- DVD-R/DVD-RAM
- CD-ROM
- CDV
- CD-G
- CD-RW
- **Do not try to play Photo CD or CD-R.**

Definition of terms

Angle
Some DVD discs feature scenes simultaneously shot from different angles. The ANGLE button can be used to view the scene from different angles.
(ANGLE indicator lights on the unit when a scene recorded at different angles is detected.)

Chapter number
Titles are subdivided into numbered sections. You can quickly search for a favorite scene using these numbers.

DVD
A high-density optical disc on which high-quality pictures and sound have been digitally recorded. DVD incorporates new video compression technology (MPEG II) and high-density recording technology which allow entire movies to be recorded with incredible playback quality.

Playback control
With Video CD (version 2.0), scenes or information may be selected for viewing or listening from a interactive menu that appears on the TV screen.

Subtitles
Written dialogue which appears at the bottom of the screen.

Time number
The elapsed play time from the start of a disc or title. Use to quickly find scenes. (May not work with some discs.)

Title number
For DVD discs with two or more titles, the title is numbered as title 1, title 2, etc.

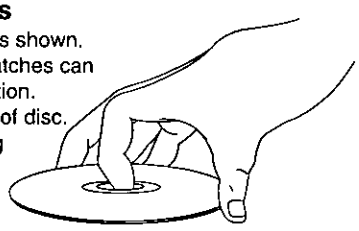
Track number
Numbers assigned to tracks on Video CDs and CDs to allow specific tracks to be quickly located.

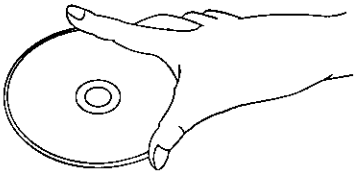
Video CD
CD containing picture and sound with same quality level as video tape. This unit also supports Video CDs with playback control (version 2.0).

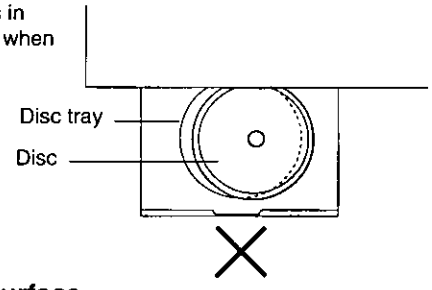
Disc handling

Handling precautions

- Only hold disc by edges as shown. Fingerprints, dirt, and scratches can cause skipping and distortion.
- Do not write on label side of disc.
- Never use record cleaning sprays, benzine, thinner, static electricity prevention liquids, or any other solvent.
- Be careful not to drop or bend disc.
- Do not place more than 1 disc on disc tray.
- Do not try to close disc tray when disc is not properly placed.
- Always store discs in their proper cases when not in use.

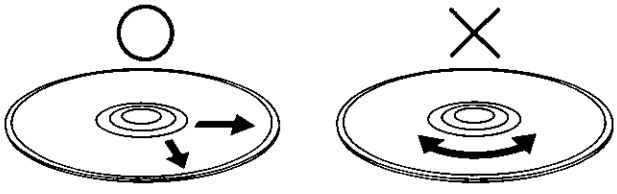






To clean disc surface

With a soft, damp (water only) cloth, gently wipe from the center hole to the outer edge as shown below. (Wiping in a circular pattern will scratch the surface.)



If disc is brought from a cold to a warm environment, moisture may form on the disc

Wipe away moisture with a soft, dry, lint-free cloth before using disc. (See above.)

Improper disc storage

Discs could be damaged if stored or left in areas:

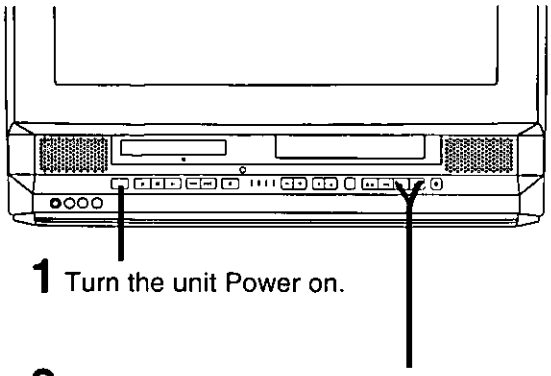
- exposed to direct sunlight.
- that are humid or dusty.
- near heat (i.e heater, regulator, etc.).

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

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

Reset all unit Memory Functions

Use when moving unit to a new location, or if a mistake was made in the One Time Setup section.
• Make sure a tape is not inserted in the unit.



1 Turn the unit Power on.

2 Press and hold both FF and PLAY on the unit for more than 5 seconds.
• The power will shut off.

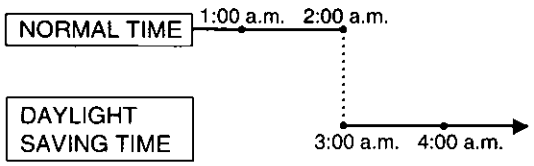
3 Do "One Time Setup" Steps on page 12.

DST. (Daylight Saving Time)

Unit auto adjusts clock for DST (Daylight Saving Time).

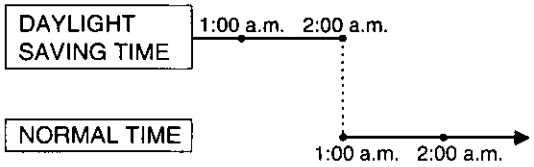
Spring (First Sunday in April)

DST:ON ➜ Sets clock ahead one hour.



Autumn (Last Sunday in October)

DST:ON ➜ Turns clock back one hour.



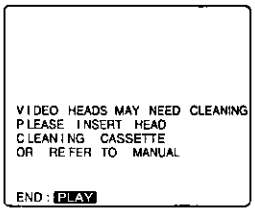
• If your area does not observe Daylight Saving Time, select DST:OFF (See page 13.)
• Keep these time changes in mind when programming the unit for timer recordings.

Head Cleaning

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

Head Clog Sensor

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



• **Use "dry" type head cleaning cassette only.** (Part No. NV-TCL30PT is recommended.)
• Follow cleaning tape carefully. Excessive use of tape can shorten head life.
• If head clog symptoms persist, contact your nearest Factory Service Center or authorized Service Center. (See Back Cover.)

Specifications

Display
Picture Tube: 27 inch measured diagonal
100° deflection Picture Tube

VCR
Video Recording System: 4 rotary heads helical scanning system
Audio Track: 1 track (Normal)
2 channel (Hi-Fi Audio Sound)

Tuner
Broadcast Channels: VHF 2~13, UHF 14~69
CABLE Channels: Midband A through I (14~22)
Superband J through W (23~36)
Hyperband AA~EEE (37~64)
Lowband A-5~A-1 (95~99)
Special CABLE channel 5A (01)
Ultraband 65~94, 100~125

FM Radio
Band range: 87.5~108.1 MHz

General
Power Source: 120V AC, 60 Hz
Power Consumption: Approx. 170 watts (Power on)
Approx. 5.5 watts (Power off)
Television System: EIA Standard NTSC color
Speaker: 2 pieces
Operating Temperature: 5°C~35°C (41°F~95°F)
Operating Humidity: 10%~75%
Weight: 40.5 kg (89.1 lbs.)
Dimensions: 688 (W) x 653 (H) x 550 (D) mm
27-1/16" (W) x 25-11/16" (H)
x 21-5/8" (D)

Discs played
(1) DVD-VIDEO disc: 5" (12 cm) single-sided, single-layer
5" (12 cm) single-sided, double-layer
5" (12 cm) double-sided, double-layer (one layer per side)
3" (8 cm) single-sided, single-layer
3" (8 cm) single-sided, double-layer
3" (8 cm) double-sided, double-layer (one layer per side)
(2) Compact disc (CD-DA, VIDEO CD): 5" (12 cm) disc 3" (8 cm) disc

Digital audio output:
Optical digital output: Optical connector
Coaxial digital output: Pin jack
Pickup: Wave length: 655nm
Laser power: CLASS II

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

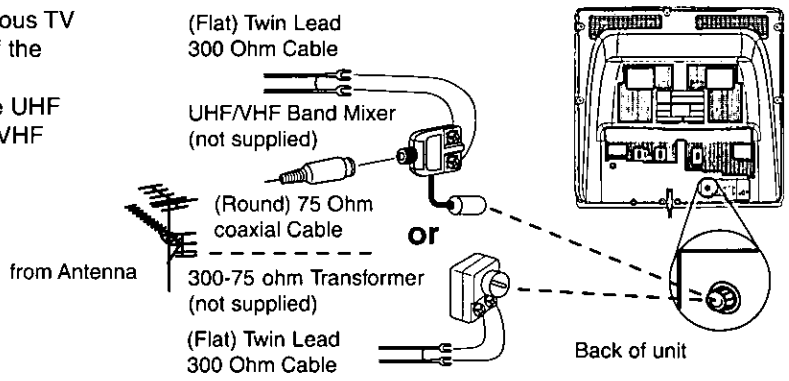
For assistance, call 1-800-211-PANA(7262)

Connections

Outdoor Antenna Connections

Unhook the antenna from your previous TV or VCR and connect it to the back of the unit as shown in the diagram.
If your antenna system has separate UHF and VHF lead-ins, you need a UHF/VHF Band Mixer (not supplied.)

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

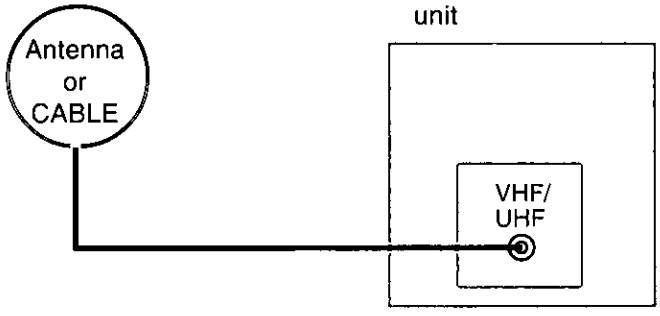


DSS/Cable box Connections

■ Without a Cable Box

You can;
- record or view unscrambled channels.

You cannot;
- record or view scrambled channels.
- view a channel other than the one selected for any type of recording.



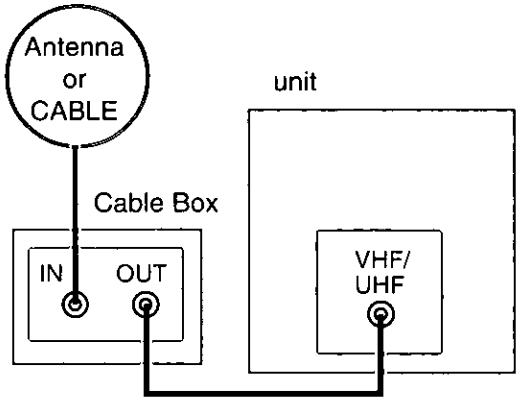
■ With a Cable Box

You can;
- record or view any channel including scrambled channels.

NOTE: Channel selection must be made at the cable box.

You cannot;
- view a channel other than the one selected for any type of recording.
- do a Timer recording of a channel unless you select it at the cable box.

Note to CABLE System Installer
This reminder is provided to call the CABLE (Cable TV) System Installers attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.



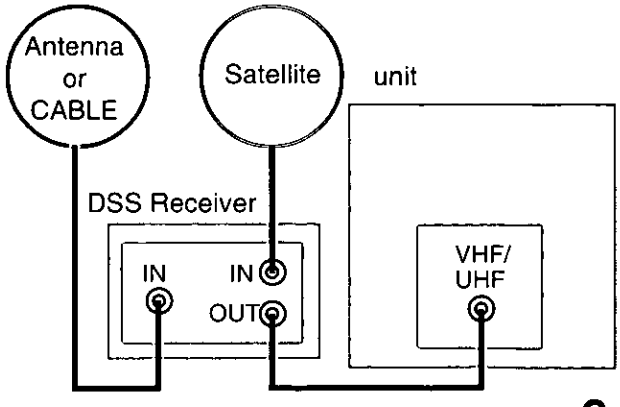
■ With a DSS Receiver

You can;
- record or view any channel including scrambled channels.

NOTE: Channel selection must be made at the DSS Receiver.

You cannot;
- view a channel other than the one selected for any type of recording.
- do a Timer recording of a channel unless you select it at the DSS box.

NOTE: The DSS receiver must be turned off to view programs from a cable box or antenna. See the DSS manual for details.



Audio connections

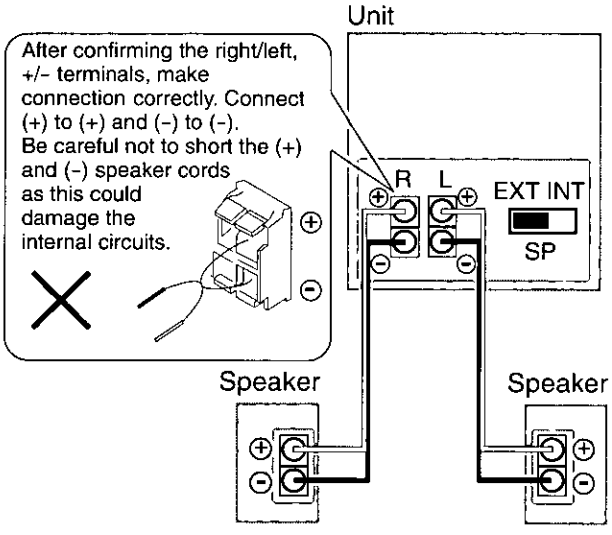
■ Unit → Speaker

At first, be sure to slide the SPEAKER Switch to "EXT."

The unit speaker(s) can be turned off to enjoy external audio sound.

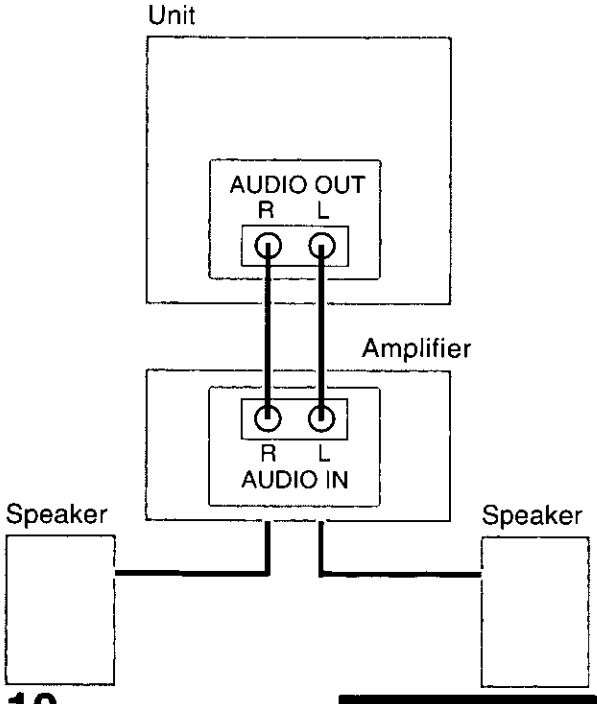
Please note:

- Make sure connected external speakers are as follows :
  Impedance: 8 Ω Audio Input: over 3 W



■ Unit → Amplifier → Speaker

Do the "Speaker ON/OFF system" steps on page 35, and select "OFF."



Check list before you begin.

- ☐ Turn down the volume, then turn this unit, as well as other equipment to be connected, off before proceeding with connection.
- ☐ Do not block ventilation holes of any of the equipment and arrange them so that air can circulate freely.
- ☐ Read through the instructions before connecting other equipment.
- ☐ Ensure that you observe the color coding when connecting audio and video cables.

Enjoying digital audio output from the digital audio output connector

Notes on audio output from the optical/ coaxial digital audio output connector

Disc	Sound recording format	Optical/coaxial digital audio output from connector
DVD	Dolby Digital (AC-3)	Dolby Digital bitstream (2-5.1 ch) or PCM (2ch) (48 kHz/16 bit)*1
	Linear PCM (48/96 kHz 16/20/24 bit)	Linear PCM (2ch) (48 kHz sampling/16 bit only)*2 or no output*1
	dts	Bitstream or no output*1
Video CD	MPEG 1	PCM (44.1 kHz sampling)
CD	Linear PCM	Linear PCM (44.1 kHz sampling)

*1 The type of audio output from the connector can be selected by the DVD initial settings. (See page 52.)

*2 Sound having 96 kHz sampling is converted into 48 kHz sampling when it is output from the unit's optical/coaxial digital audio output connector.

For your reference:

- Dolby Digital (AC-3) is a digital sound compression technique developed by the Dolby Laboratories Licensing Corporation. Supporting 5.1-channel surround sound, as well as stereo (2-channel) sound, this technique enables a large quantity of sound data to be efficiently recorded on a disc.
- Linear PCM is a signal recording format used in CDs. While CDs are recorded in 44.1 kHz/16 bit, DVDs are recorded in 48 kHz/16 bit up to 96 kHz/ 24 bit.
- If you have a Dolby Pro Logic Surround decoder, you will obtain the full benefit of Pro Logic from the same DVD movies that provide full 5.1 channel Dolby Digital soundtracks, as well as from titles with the Dolby Surround mark.

Manufactured under license from Dolby Laboratories. "Dolby", "AC-3", "Pro Logic" and the double-D symbol are trademarks of Dolby Laboratories.
Confidential Unpublished Works. © 1992-1997 Dolby Laboratories, Inc. All rights reserved.

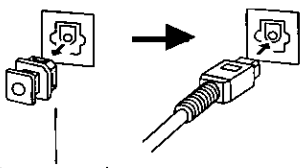
For assistance, call 1-800-211-PANA(7262)

■ Unit → Decoder with Dolby Digital (AC-3) → Amplifier → Speaker
or
dts (digital theater systems)

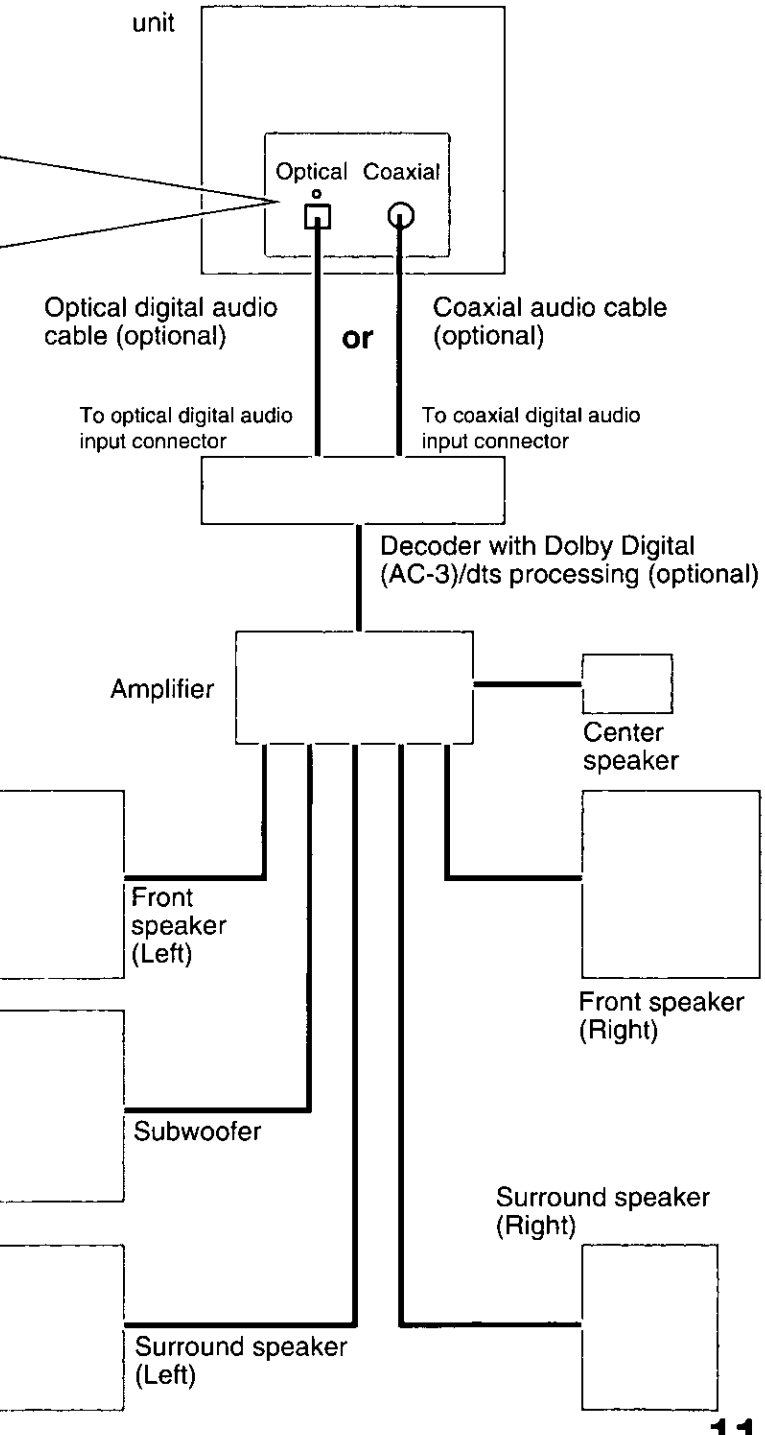
When DVDs recorded in Dolby Digital or dts are played, Dolby Digital bitstream or dts bitstream is output from the unit OPTICAL digital audio output connector or COAXIAL digital audio output connector. When the unit is connected to a Dolby Digital decoder or dts decoder, you can enjoy theater-quality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

Notes on connecting an optical digital audio cable (optional)

- Remove dust protection cap from optical digital audio output. Firmly connect the cable to the connector.
- Always reattach the dust protection cap when connector is not in use.



Dust protection cap



Caution for optical/coaxial digital audio output connector:

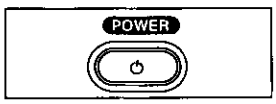
- **When connecting an amplifier (with an optical/coaxial digital input connector) which does not contain the Dolby Digital (AC-3) or dts decoder, be sure to select "PCM" at "Dolby Digital" and "OFF" at "dts" of the DVD initial setting "DIGITAL AUDIO OUTPUT" (See page 52).**
- **Otherwise any attempt to play DVDs may cause such a high level of noise that it may be harmful to your ears and damage your speakers.**
- **When a dts decoder is connected, please select "Bitstream" at "dts" of the DVD initial setting "DIGITAL AUDIO OUTPUT". If "OFF" is selected, there will be no sound (See page 52).**
- Video CDs and CDs can be played as normal.

Note:

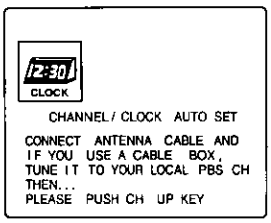
- Some dts decoders which do not support DVD-dts interface may not work properly with the unit.

One Time Setup

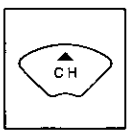
When the unit is turned on the first time, setup mode is entered automatically.

1 

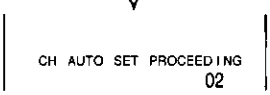
Press POWER on the remote or unit.

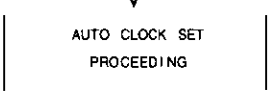
2 

Start Channel Auto Set and Clock Auto Set.

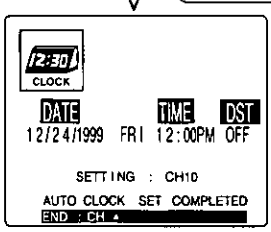


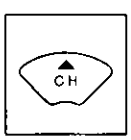
Press CH ▲.





Case 1 (Setup completed)

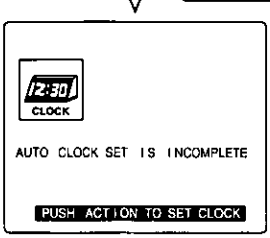




Press CH ▲ to exit.

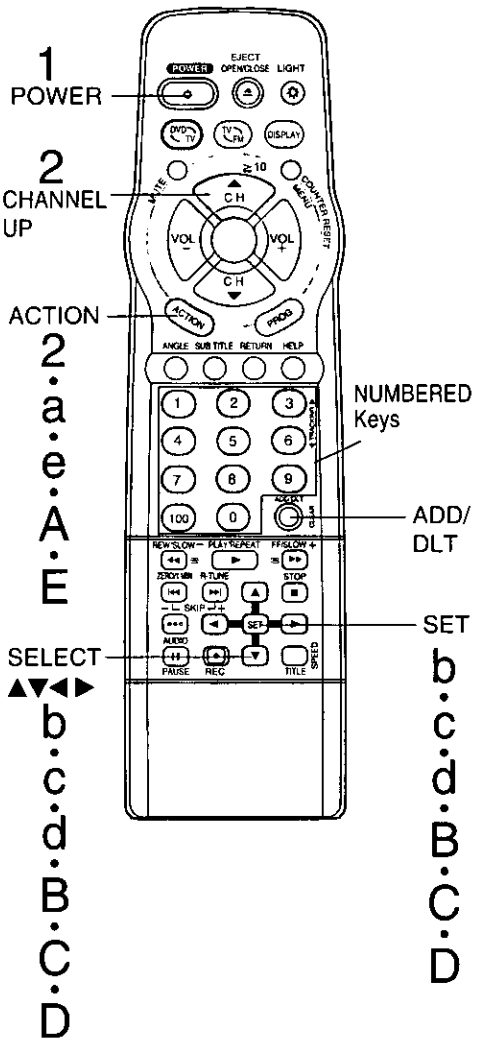
- If the displayed time and DST are not correct, please do "To Set or Reset the Clock" steps on the next page and select "MANUAL."

Case 2 (Setup incomplete)



Set the clock manually.

Press ACTION and do "To Set or Reset the Clock" step D on the next page.



IMPORTANT NOTE FOR AUTO CLOCK SET

- Auto clock set is performed the first time when the unit is turned off each day. If used, a cable box must be left on and tuned to the PBS channel at the time the unit power is turned off if you want auto clock set to be done.
- If using, a DSS receiver, it must be turned off for auto clock set.
- If Cable Box or DSS receiver is connected to the unit via Audio/Video Jacks, an RF coaxial cable must also be connected for auto clock set and channel auto set features.
- If, for any reason, the time is changed manually, automatic time correction will not occur.

For assistance, call 1-800-211-PANA(7262)

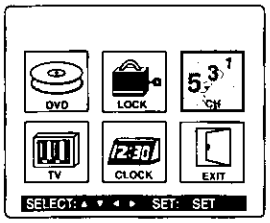
To Replace Channels in Memory

- It is necessary to enter TV mode by pressing DVD+ TV before selecting "CH" on the MAIN MENU.

a

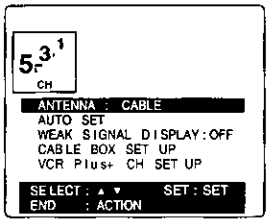
Display MAIN MENU.
Press ACTION.

b



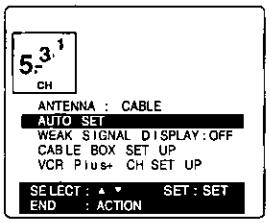
Display SET UP CH screen.
1) Press ▲▼◀▶ to select "CH."
2) Press SET to display.

c



Select ANTENNA.
1) Press ▲▼ to select.
2) Press SET to select your antenna system ("TV" or "CABLE").

d



Select AUTO SET.
1) Press ▲▼ to select.
2) Press SET.

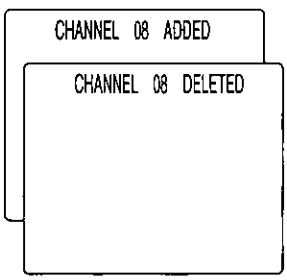
e

End setup.
Press ACTION twice.

Add or Delete a Channel

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

To delete channel:
Select channel with CH ▲▼ or NUMBERED keys and press ADD/DLT.

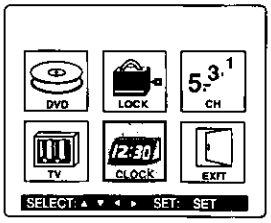


To Set or Reset the Clock

A

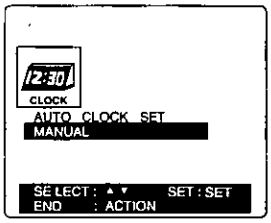
Display MAIN MENU.
Press ACTION.

B



Display SET CLOCK screen.
1) Press ▲▼◀▶ to select "CLOCK."
2) Press SET.

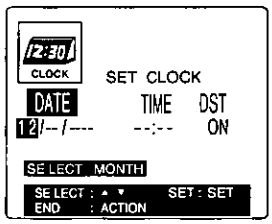
C



Display SET CLOCK screen.
1) Press ▲▼ to select "MANUAL."
2) Press SET.

- For Auto Clock Set, select "AUTO CLOCK SET" then press SET to set and CH ▲ to start.

D

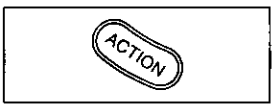


Set the clock manually.
1) Press ▲▼ to select the month.
2) Press SET.

- Likewise set date, year, time, and DST. (Daylight Saving Time.)

To Make Corrections,
repeatedly press ◀▶ to move to error, then correct.

E



End setup.
Press ACTION twice to start the clock and exit this mode.

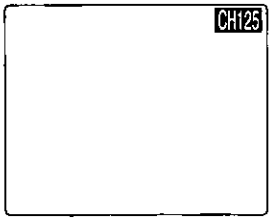
Notes

- This unit calendar is accurately maintained up to Dec. 31, 2089, 11:59 PM.
- Channel auto set selects normal TV or Cable channels depending on your unit hookup.

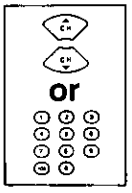
TV Operation

1

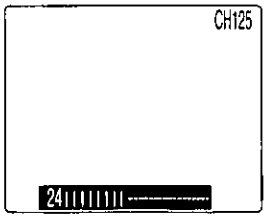
Press POWER on the remote or unit.

2 

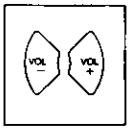
Select a channel.



Using CH ▲▼ or NUMBERED keys.

3 

Adjust volume.



Press VOL + −.

■ Using the 100 key

When selecting CABLE channels 100 to 125 with the NUMBERED keys, first press the 100 key, and then enter the remaining two digits.

■ Rapid Tune

Press R-TUNE to display the last channel you were watching.

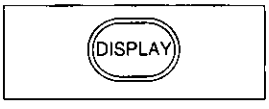
■ Audio Mute

Press MUTE to instantly mute the sound.
Press again, to restore the previous sound level.

■ Phones

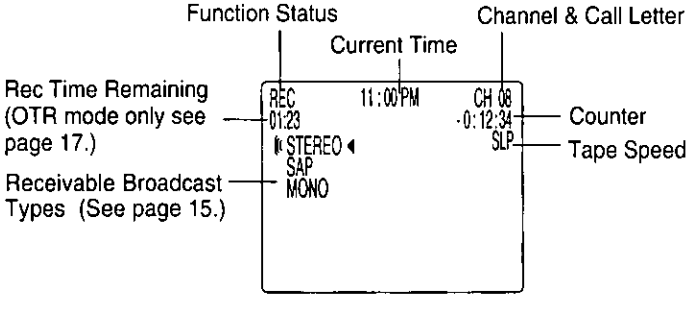
Connect an earphone (not supplied) or headphones (not supplied) to the Phones Jack.

VCR Status & Clock Display



To display or remove the overlay.

Press DISPLAY.

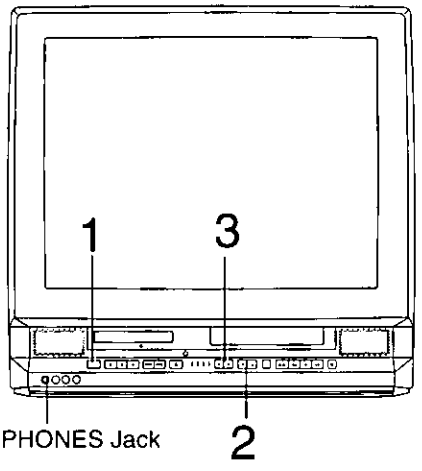


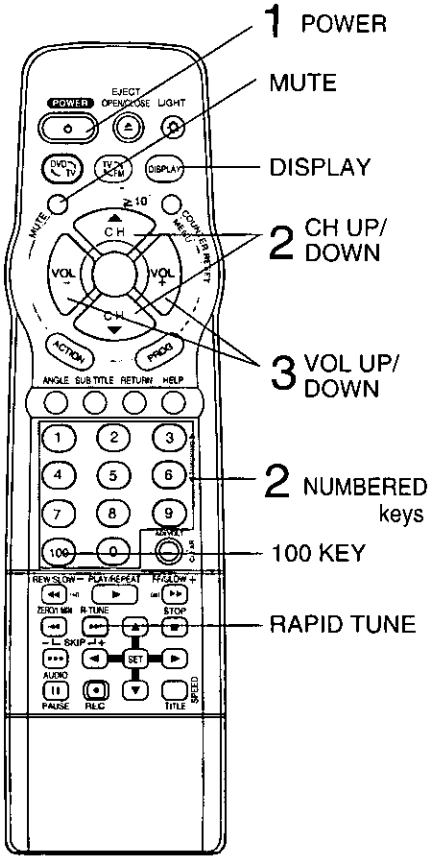
Black Screen Display

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

Check list before you begin.

- ☐ All connections are made (See page 9.)
- ☐ Your unit is plugged in.





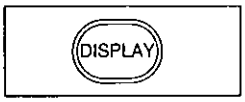
For assistance, call 1-800-211-PANA(7262)

MTS Broadcast/TV Stereo System

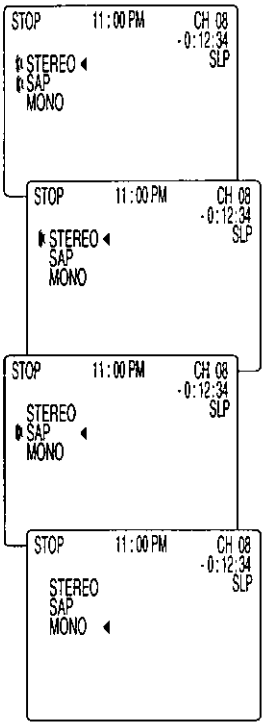
Receivable Broadcast Types

The following are possible broadcast types with their accompanying on-screen displays. The signal being received is indicated with an "♪" mark while the selected audio mode is indicated with an arrow. To change the audio mode for these broadcasts, follow the "Select Audio Mode for TV Viewing" section (below.)

Equipped with dbx®-TV Noise Reduction for true MTS reproduction.
dbx®-TV Noise Reduction is required for good stereo separation and audio fidelity.
dbx® is a registered trademark, and is licensed by dbx® Technology Licensing.



Display the broadcast signal being received.
Press DISPLAY.

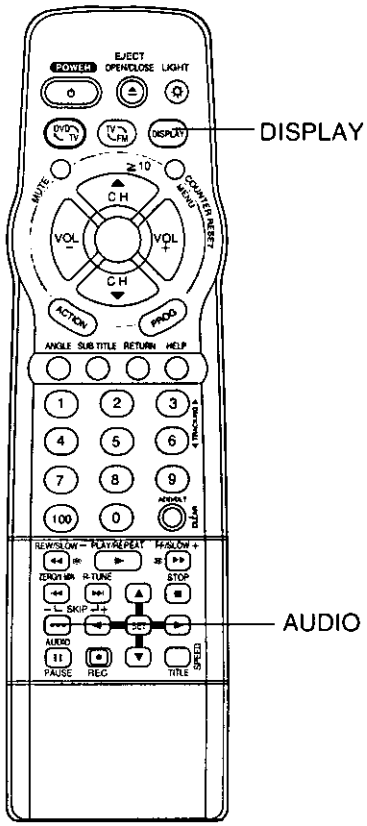


MTS Stereo and SAP broadcast
Multi-channel Television Sound Stereo (main language) and Secondary Audio Program (sub language) broadcasts are both being received simultaneously. Select the STEREO or SAP audio mode.

MTS Stereo broadcast
Multi-channel Television Sound Stereo broadcast. Select STEREO audio mode.
- If stereo broadcast is weak and the display flickers, select MONO audio mode for possibly better results.

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

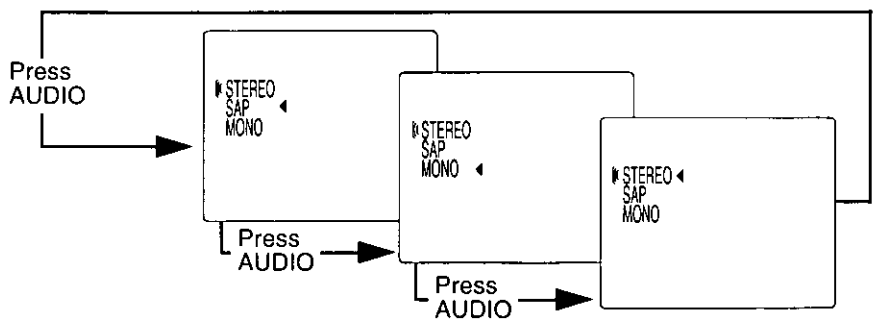
MONO broadcast
Normal monaural sound broadcast.



Select Audio Mode for TV Viewing

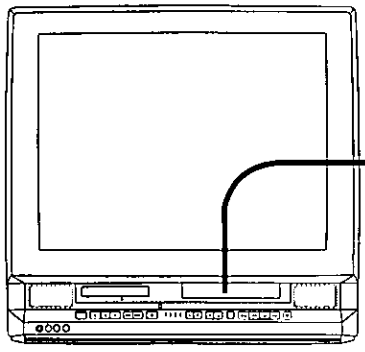
Press AUDIO to select the desired audio mode as described above.
(Arrow shows selection.)
- Each press of AUDIO will change the audio mode as shown below.
- "SAP" is selected with first press of AUDIO.

< Example >



Basic Operation

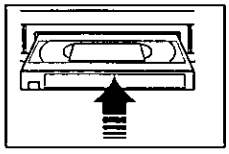
Playback a Tape



Check list before you begin.

- ☐ All connections are made (See page 9.)
- ☐ Your unit is plugged in.

1 Insert a cassette.

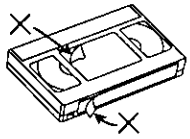


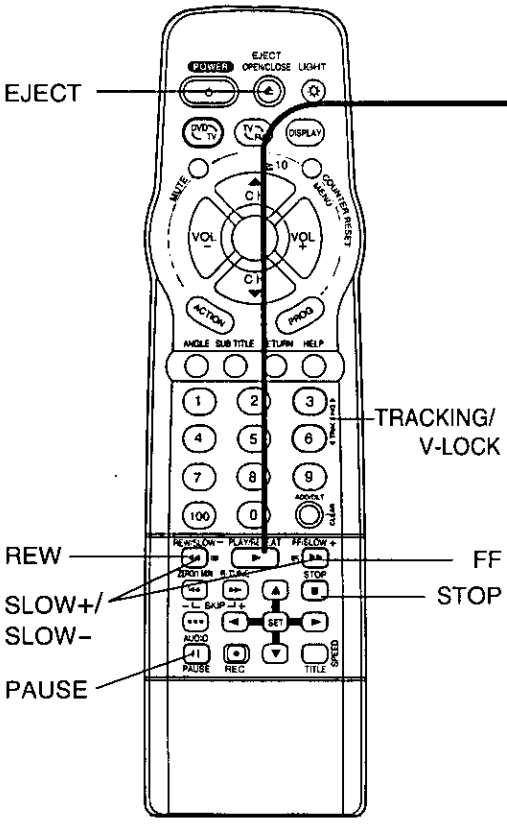
- The unit power comes on automatically.

Note

To prevent tape jam

Inspect your cassette tapes and remove any loose or peeling labels.





2 Press PLAY.

- Playback begins if cassette has no record tab.

■ **To Find a Particular Scene**
Forward Search → Press FF
Reverse Search → Press REW

■ **For viewing Still (Freeze) picture →**
Press PAUSE (To release, press PLAY)

■ **For viewing Slow Motion →**
Press SLOW+ (increases speed) or SLOW– (decreases speed) in the still mode (To release, press PLAY)

■ **For viewing Frame by Frame Advance →**
Press PAUSE in the still mode (To release, press PLAY)

Note

After the unit is in Still or Slow mode for 3 minutes, it will switch to Stop mode automatically to protect the tape and the video head.

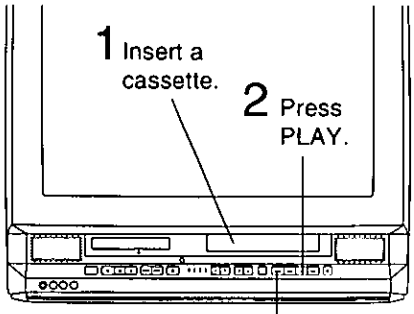
■ **To stop →** Press STOP

■ **To rewind tape →** Press REW in stop mode

■ **To fast forward tape →** Press FF in stop mode

■ **To eject tape →** Press EJECT on the remote or STOP/EJECT on the unit

You can operate on the unit



■ Press to stop and/or eject tape.

Features for a Quality Picture

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

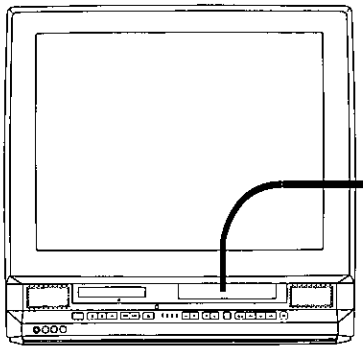
Manual Tracking Control (to reduce picture noise)
Use during Playback and Slow Motion mode to reduce picture noise. Press the 3 or 6 NUMBERED key on the remote control or CH▲▼ on the unit until the picture clears up. To return to Auto Tracking, press POWER off, then on again a few seconds later.

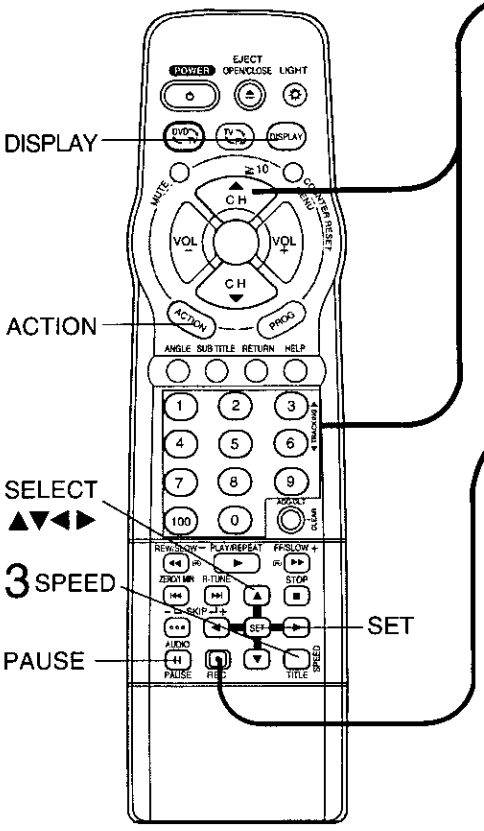
V-Lock Control
In Still mode, the 3 or 6 NUMBERED key on the remote control or CH ▲▼ on the unit operate as a V-Lock control to reduce jitter.

PanaBlack™ Picture Tube
This unit uses a PanaBlack™ picture tube for better color reproduction and picture contrast.

For assistance, call 1-800-211-PANA(7262)

Record On a Tape

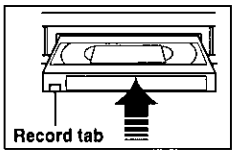




Check list before you begin.

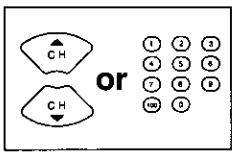
- ☐ All connections are made (See page 9.)
- ☐ Your unit is plugged in.
- ☐ Cassette with record tab in place.

1 Insert a cassette.



- The unit power comes on automatically.

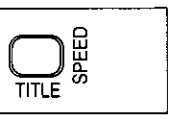
2 Select Channel.



Press CH ▲▼, or NUMBERED keys.

- To select "LINE," see bottom of this page.

3 Select Recording speed (see page 6.)



Press SPEED.
SP = Standard Play
LP = Long Play
SLP = Super Long Play

- Selected speed is displayed.

4 Start Recording.

Press REC.

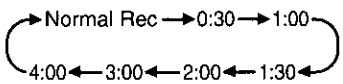
- To edit out unwanted portions, press PAUSE to pause and resume recording.
- You can not view another channel during recording.

■ **To stop** → Press STOP

■ **One Touch Recording (OTR)**

Press REC repeatedly to set the recording length (30 min - 4 hours.)

- The unit stops recording at a preset time.
- PROG TIMER indicator lights on the unit.



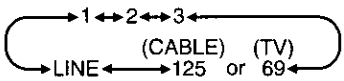
Notes

• It is not possible to record from DVD/ Video CD/CD to VHS tape using this unit.

- After the unit has been in Rec Pause mode for 5 minutes, it will stop automatically to protect the tape and video head.
- The remaining recording time of an OTR can be displayed by pressing DISPLAY.

Selecting Input Mode

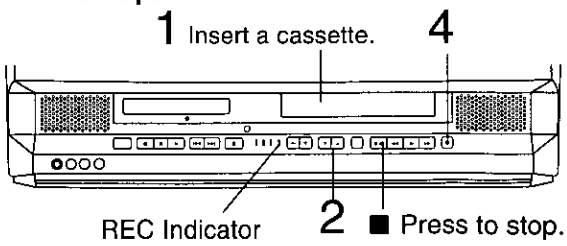
Method 1:
Press CH▲▼. The display will change as follows.



Method 2:

a Press ACTION for MAIN MENU.
b Press ▲▼◀▶ to select "TV", then press SET for SET UP TV screen.
c Press ▲▼ to select "INPUT SELECT," and then press SET to select "TUNER" or "LINE."
d Press ACTION twice to exit this mode.

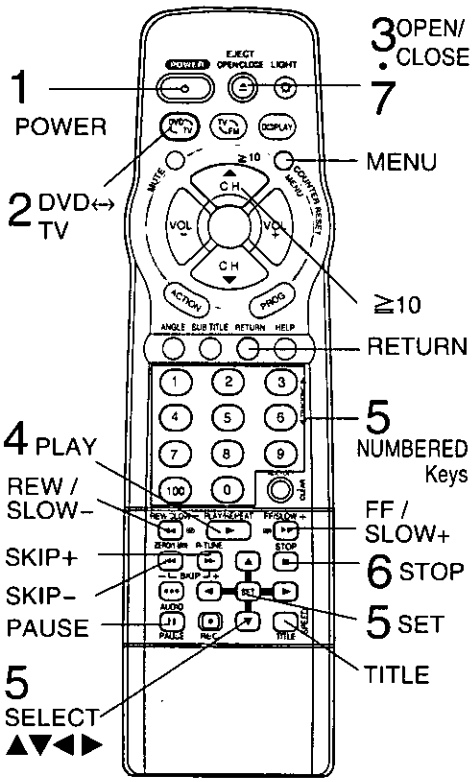
You can operate on the unit



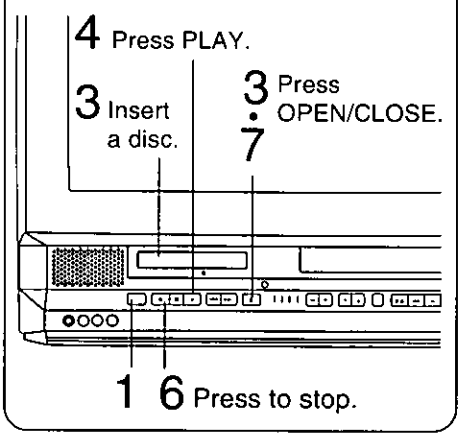
Basic DVD Operation

Check list before you begin.

- ☐ All connections are made. (See page 9.)
- ☐ Your unit is plugged in.
- ☐ Switch on the stereo system's power if the unit has been connected to an audio Amplifier.



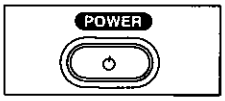
You can operate on the unit



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

** Video CD with playback control...
Particular scenes or information can be interactively selected from a menu that appears on the screen.

1 Press POWER on the remote or unit.

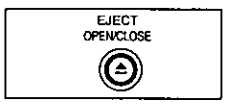


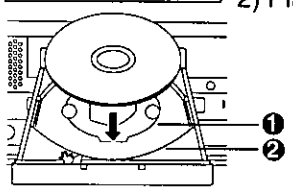
2 Select DVD mode.

Press DVD↔TV.

3 Insert a disc.

1) Press OPEN/CLOSE.
2) Place disc into disc tray.

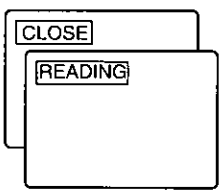




- Hold disc by its edges only (page 7) with printed side up and use guides to place into tray. Use ❶ 3"(8 cm) or ❷ 5" (12 cm) disc.

4 Start play.

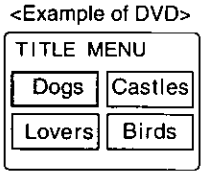
Press PLAY.
The disc tray closes automatically.



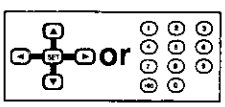
- Or, close the tray by pressing OPEN/CLOSE.
- Reading time differs depending on discs.

If an interactive DVD* or a Video CD with playback control is used and a TITLE MENU appears, go to step 5.**

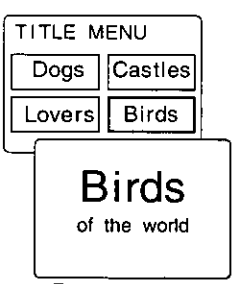
<Example of DVD>



5 Select the desired item.



1) Press ▲▼◀▶ or NUMBERED key(s) as shown below.
2) Press SET to play.



<Example of DVD>

Using NUMBERED key(s) starts play automatically.
<Example>
1 digit number 1 ••• 1
2 digit number 12 ••• ≧10→1→2
3 digit number 123 •••100→1→2→3

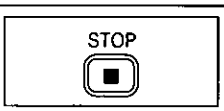
Press SKIP ▶▶| or |◀◀ to go to next or previous menu screen.

- SKIP function not available with all discs. Please refer to disc jacket for operation information.

To return to menu (play stops)
Press TITLE, MENU, or RETURN. (DVD)
Press RETURN. (Video CD)

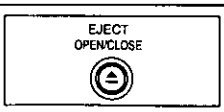
6 Stop play.

Press STOP.



7 Eject the disc.

Press OPEN/CLOSE.



For assistance, call 1-800-211-PANA(7262)

■ To Find a Particular Scene

Rapid Advance →

Press FF in play mode

Rapid Reverse →

Press REW in play mode

(To release, press PLAY)

- Sounds are heard during rapid advance at speed 1. (Noise <static> may be heard on DVDs recorded in LPCM format.)
- Starting rapid advance (reverse) during play started from menu on Video CDs may recall menu.
- The speed of advance (reverse), slow at first, increases with each additional press of the button up to 5 levels.

■ To Skip a Chapter/Track

Skipping Ahead →

Press SKIP ▶▶I during play

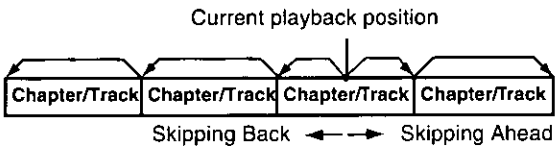
Each press skips a chapter (DVD) or track (Video CD/CD).

Skipping Back →

Press I◀◀ SKIP during play

Pressing once midway through a chapter/track returns to start of that chapter/track. Each additional press skips back one chapter/track.

- Pressing SKIP ▶▶I or I◀◀ during play started from menu on Video CDs may recall menu.



■ To view Still Picture (Pause)

Press PAUSE during play

(To release, press PLAY)

- **DVD/Video CD** : The unit will enter still picture mode.
- **CD** :The unit will enter pause mode.

■ To view Frame by Frame Advance (DVD/Video CD)

Each button press advances picture one frame.

Press PAUSE in still mode

(To resume normal play, press PLAY)

- Hold button down for consecutive frame advance.
- Whether pictures are advanced by "frame" or "field" is selected automatically.

■ To view Slow Motion (DVD/Video CD)

Press SLOW+ or SLOW− in still mode

(To release, press PLAY)

- Slow motion speed, slow at first, is increased with each additional press of the button up to 5 levels.
- For Video CDs, reverse slow motion is not available.

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

RESUME function

The unit memorizes the point where STOP is pressed (▶ flashes on screen).
Press PLAY to resume play from this point.
Pressing STOP again or opening the tray cancels RESUME.
It is not canceled when power is turned off and on.

- RESUME works only with discs for which elapsed play time is displayed during play.

Auto-Power Off function

Power turns off after unit has been in stop mode (DVD) for about 5 minutes.

Enjoy Video CDs (only) with playback control without using menus <Video CD only>

1. Do steps 1-4 (previous page). When menu appears, press STOP.
2. Press NUMBERED key(s) to select desired track (play begins).
   - Check disc for track numbers.
   - Press "1" to start at beginning of disc.

To resume menu use

Press STOP, and then MENU. Now, go to step 5 (previous page).

Notes

- Please read the disc jacket for operation information.
- Remove disc and press unit POWER off when not in use.
- Disc continues to rotate with menu displayed even after play is done. Press STOP to clear menu display when finished with menu.
- If a single sided disc is placed in upside down, "PLEASE CHECK THE TYPE OF DISCS, AND STAIN OR SCRATCH OF A DISC" is displayed.

Timer Recording

You can set up to 8 programs to be recorded while you are away.

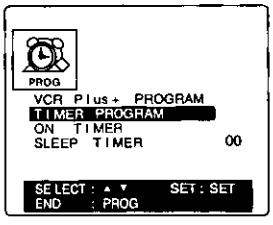
Check list before you begin.

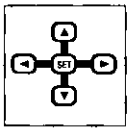
- ☐ All connections are made (See page 9.)
- ☐ Your unit is plugged in.
- ☐ The clock is set to correct time.
- ☐ The tape is long enough.
- ☐ The record tab is in place.

1 Display PROGRAM screen.

Press PROG.

2 Select TIMER PROGRAM.

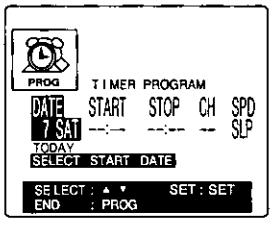


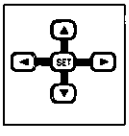


1) Press ▲▼ to select.
2) Press SET to display.

- If a program is already in memory, press ▲▼, and SET to select an unused program number.

3 Set the recording DATE.

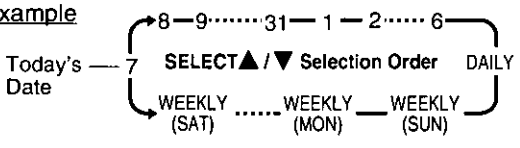




1) Press ▲▼ to select.
2) Press SET (or ◀) to set.

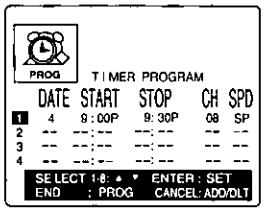
- 1~31 = One time
- DAILY = MON~FRI
- WEEKLY SUN~SAT = Same time once a week

Example



Repeat step 3 to set:
- start time, stop time
- Channel (or LINE for outside source)
- Speed (SP, LP, SLP)

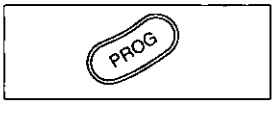
4 End the program.



Press PROG.

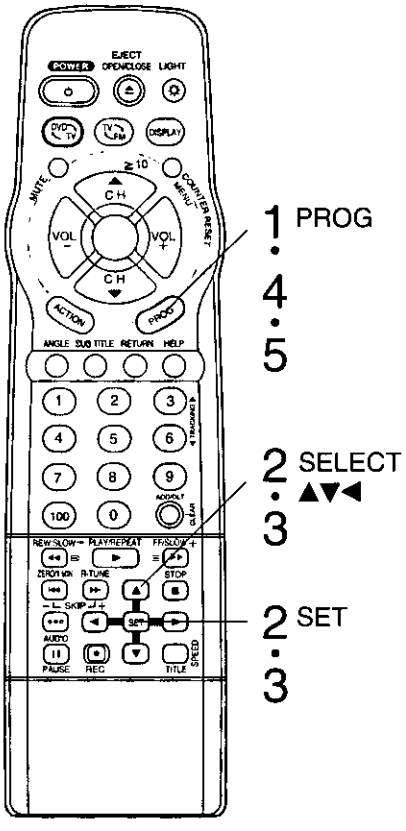
To Enter More Programs
Press ▲▼ and SET to select and set a blank program number, and then repeat steps 3 and 4.

5 Exit this mode.



Press PROG twice.

- If you're using a cable box, make sure that it is turned to the desired channel and the power is left on for timer recording.
- PROG TIMER indicator lights on the unit.



Notes

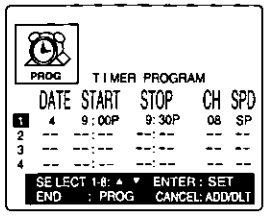
- 2 minutes before Timer recording is performed, "PLEASE PREPARE FOR TIMER REC" appears and/or the PROG TIMER indicator flashes. Be sure a cassette with record tab is loaded and the unit is in Stop mode.
- If the start times of two programs overlap, the lower numbered program will have priority.
- If the start time for a Timer Recording comes up during a normal recording or One Touch Recording (page 17), the Timer Recording will not be performed.
- If there is a power interruption of more than one minute, the recording may not be performed or continue.
- If "INCOMPLETE" appears after all items have been set, check all entries and make necessary corrections.

For assistance, call 1-800-211-PANA(7262)

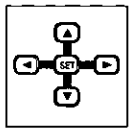
Review, Replace or Clear Program Contents: (Recording is not in progress)

a **Repeat steps 1 and 2 on page 20.**

b

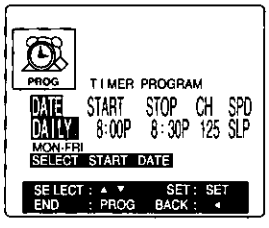


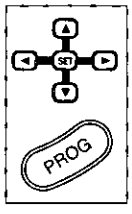
Select the desired program.



Press ▲▼ to select.

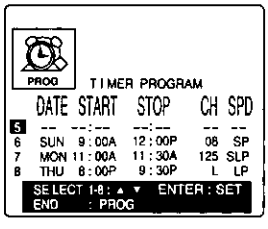
c **To Replace program...**

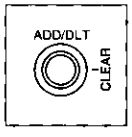




1) Press SET to display.
2) Press ▲▼ to select and SET or ◄ to set new program contents.
3) Press PROG.

To Clear program...



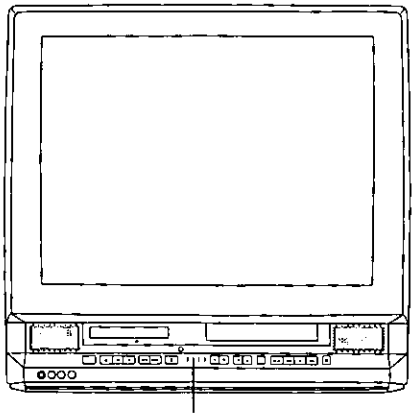


Press ADD/DLT.

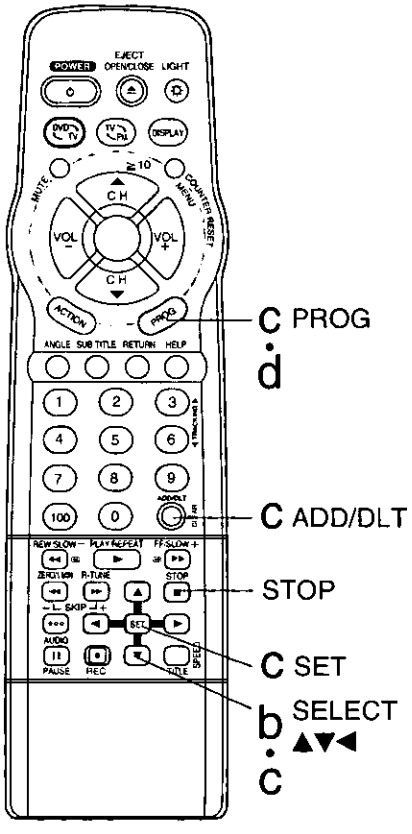
d

Exit this mode.

Press PROG twice.



PROG TIMER indicator



Cancel a Timer Recording: (Recording is in progress)

Hold down STOP for 3 seconds to cancel the Timer Recording.

- Any future daily or weekly recordings will be performed as programmed.

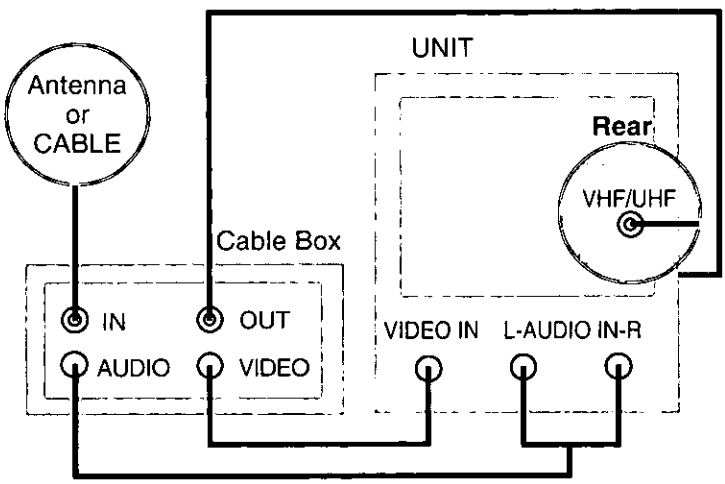
Timer Programming using VCR Plus+ System

VCR Plus+ System is...
a feature that allows you to set most items of a Timer Recording by simply entering a special code number (PlusCode) found in TV GUIDE and selected newspaper TV listings.

Process of Recording
Connection ⇨ **Setup** ⇨ **Programming**

Choose your connection type from the following diagrams

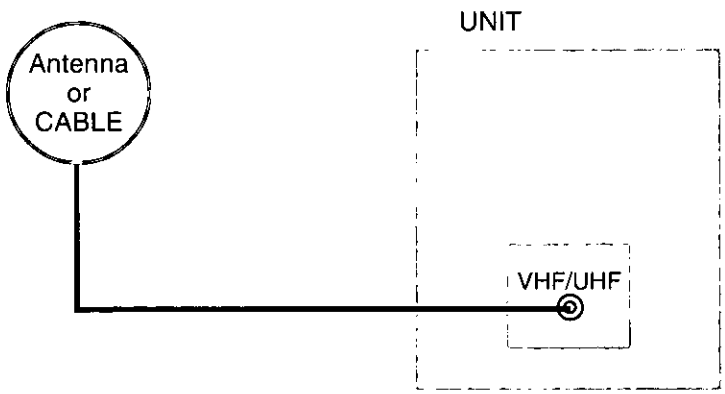
■ CABLE BOX → UNIT



Set up on page 23

Programming on page 25

■ ANTENNA or CABLE → UNIT

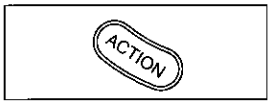


Set up on page 24

For assistance, call 1-800-211-PANA(7262)

Cable Box Setup

1 Display MAIN MENU.

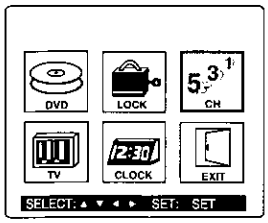


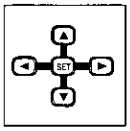
Press ACTION.

Check list before you begin.

☐ It is necessary to enter TV mode by pressing DVD↔TV before selecting "CH" on the MAIN MENU.

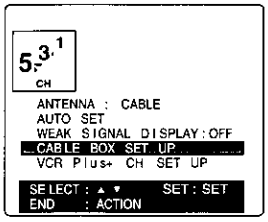
2 Display SET UP CH screen.

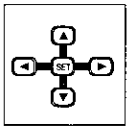




1) Press ▲▼◀▶ to select "CH."
2) Press SET to display.

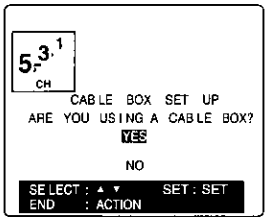
3 Select CABLE BOX SET UP.

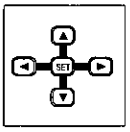




1) Press ▲▼ to select.
2) Press SET to display.

4 Select "YES" or "NO".



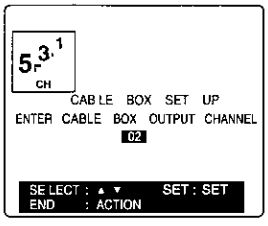


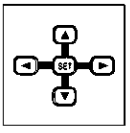
1) Press ▲▼ to select "YES" or "NO."
2) Press SET to set.

If you select...

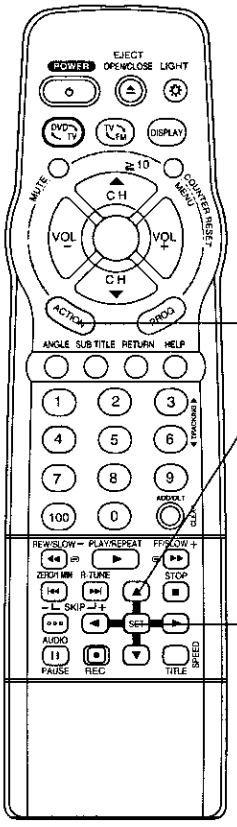
- **"YES" → Step 5.**
- **"NO" → Press ACTION → Go to VCR Plus+ Channel Setup on page 24.**

5 Select Cable Box output channel number.





1) Press ▲▼ to select.
2) Press SET to enter.



- If necessary, refer to your cable box manual.
- If you are using Audio/Video jack connection for your cable box, select and set "VIDEO OUT" as the output channel.

VCR Plus+ and PlusCode are registered trademarks of Gemstar Development Corporation. The VCR Plus+ system is manufactured under license from Gemstar Development Corporation.

VCR Plus+ Channel Setup is...
necessary to program the Unit with local channel information for proper VCR Plus+ operation.

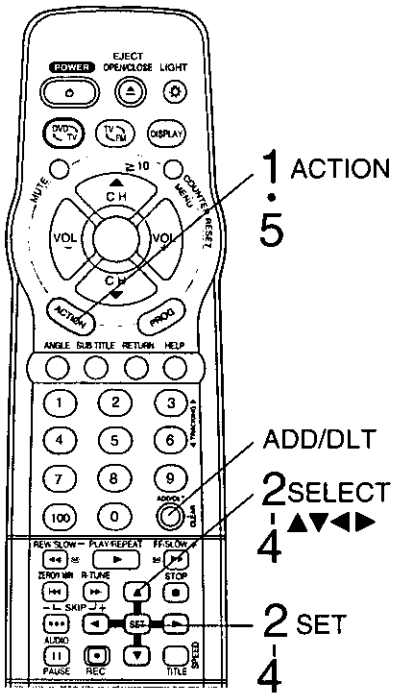
Process of Recording
Connection ⇨ **Setup** ⇨ Programming

VCR Plus+ Channel Setup

At first, do Channel Setup Preparation below right.

Check list before you begin.

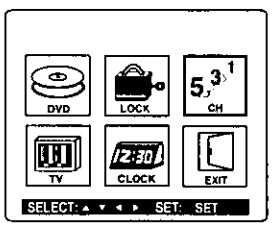
☐ It is necessary to enter TV mode by pressing DVD↔TV before selecting "CH" on the MAIN MENU.

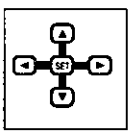


1 Display MAIN MENU.

Press ACTION.

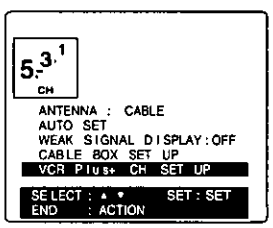
2 Display SET UP CH screen.

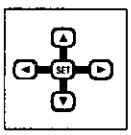




1) Press ▲▼◀▶ to select "CH."
2) Press SET to display.

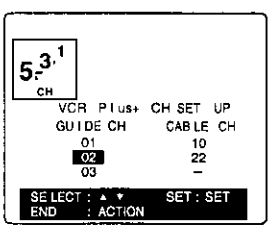
3 Select VCR Plus+ CH SET UP.

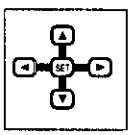




1) Press ▲▼ to select.
2) Press SET to display.

4 Enter VCR Plus+ channel.



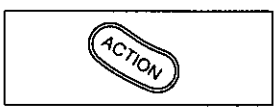


1) Press SET to move cursor to right column.
2) Press ▲▼ to change the CABLE CH number.
3) Press SET to set.
4) Press ▲▼ to scroll up/down the GUIDE CH column.

• Repeat step 4 until list is complete.

To Make Corrections
Press ▲▼ and SET to move to error, then ▲▼ to change, or ADD/DLT to erase number.

5 End the setup.



Press ACTION three times.

Notes

- Make each entry within 5 minutes or the unit will leave this mode.
- Once local channels have been programmed, they will stay in memory, even in the case of a power failure.

Channel Setup Preparations

To complete step 4 left, make a local channel list (see example below.)

You will need the following:

- A normal TV and/or Cable stations line up and the channel numbers your receive them on.
- A list of Guide (VCR Plus+) channel numbers for stations you receive (See TV Guide and selected newspapers.)

1 Make a 3-columns chart. In the left column, write all station names you receive.
2 In the middle column, write each station's Guide (VCR Plus+) number.
3 In the right column, write the channel number your TV receives the station on.

< EXAMPLE ONLY >

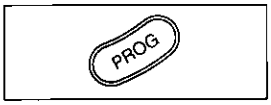
Broadcast or Cable Station Name	Assigned Guide (VCR Plus+) channel no.	Channel no. your TV receives the station on
HBO	33	15
Nickelodeon	38	20
CBS	04	04
FOX	11	

For assistance, call 1-800-211-PANA(7262)

VCR Plus+ System Programming

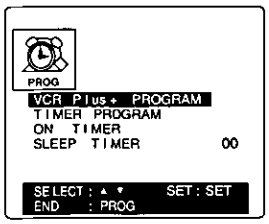
Process of Recording
Connection ⇨ Setup ⇨ **Programming**

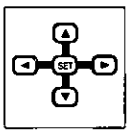
1 Display PROGRAM screen.



Press PROG.

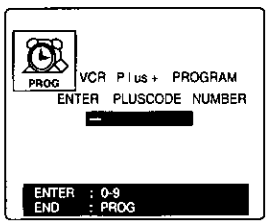
2 Select VCR Plus+ PROGRAM.

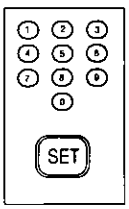




1) Press ▲▼ to select.
2) Press SET to display.

3 Enter PlusCode programming number.

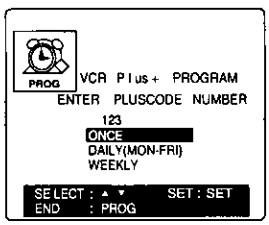


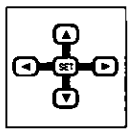


1) Press NUMBERED keys.
2) Press SET when finished.

To Make Corrections
Press ◀ repeatedly to delete the PlusCode programming number.

4 Set Record Frequency.

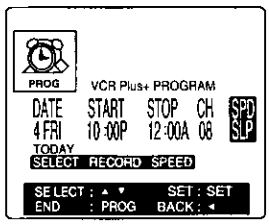


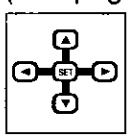


1) Press ▲▼ to select.
2) Press SET.

5 Select Recording speed.

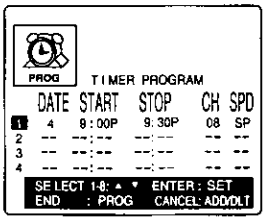
(See page 6.)





1) Press ▲▼ to select.
2) Press SET.

6 End programming.



Press PROG.

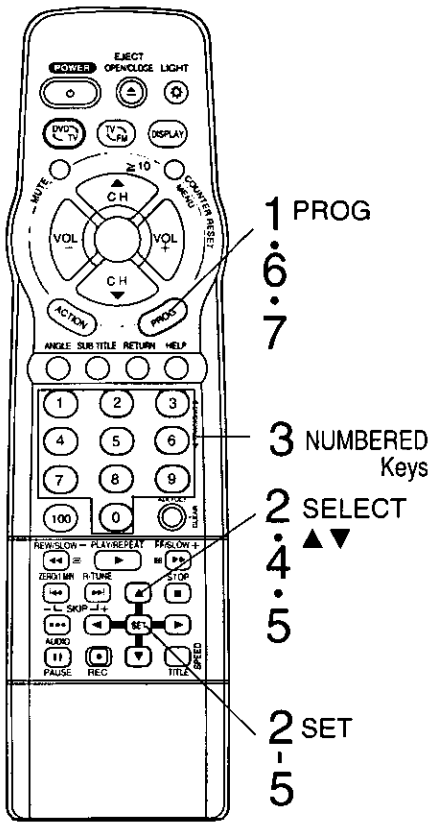
7 Exit this mode.

Press PROG twice.

- PROG TIMER indicator lights on the unit.

Check list before you begin.

- ☐ The clock is set to correct time.
- ☐ VCR Plus+ System Setup is complete (See pages 23, 24.)



Use normal Timer Recording steps if:

- a program PlusCode programming number is not listed.
- program, such as a sporting event, may run over scheduled stop time.

See page 21 to:

- cancel a timer recording in progress.
- replace program contents.
- review or clear program contents once set.

Notes

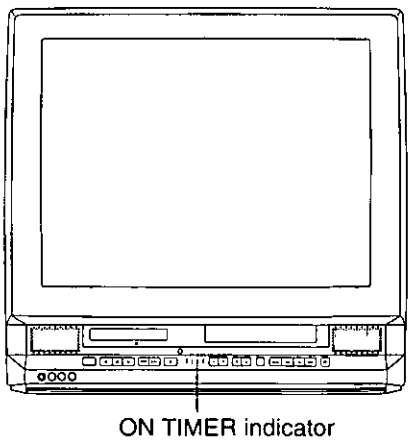
- You can obtain unlisted PlusCode programming numbers by calling 1-900-454-7587. Call costs approximately $.95 per minute.
- Avoid overlapping program times.
- If you're using a cable box, make sure that it is turned to the desired channel and the power is left on for timer recording.

ON-TIMER with Alarm

The unit can be set to automatically power on in one of 4 modes (TV, Playback, FM radio, or DVD.) You can also combine the On-Timer with a one minute alarm that gradually increases in volume.

Check list before you begin.

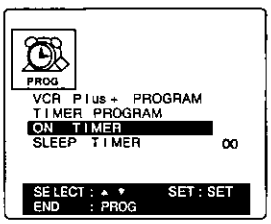
☐ The clock is set to correct time.

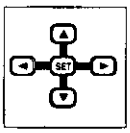


1 Display PROGRAM screen.

Press PROG.

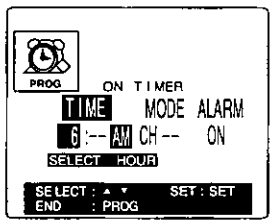
2 Select ON-TIMER.

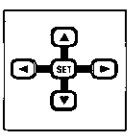




1) Press ▲▼ to select.
2) Press SET to display.

3 Set the ON-TIMER DATE.

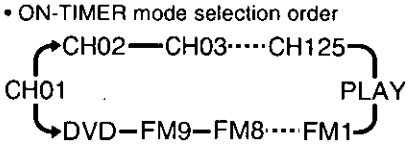




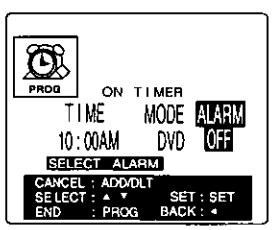
1) Press ▲▼ to select.
2) Press SET to set.

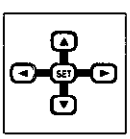
- Make sure a tape is inserted if Playback mode is selected.
- Make sure a disc is inserted if DVD mode is selected.
- See "FM Radio" on pages 30 and 31 for instructions on how to preset FM stations.

• ON-TIMER mode selection order



4 Set Alarm.





Press ▲▼ to select "ON" or "OFF."

When "ON" is selected,
an alarm will gradually increase in volume for one minute or until cancelled by pressing any button (including VOL + −.)

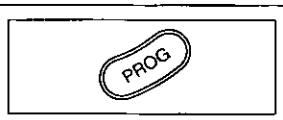
To Make Corrections,
use ▲▼ and SET or ◄ to move back and correct as necessary.

5 Set ON TIMER.

Press PROG.

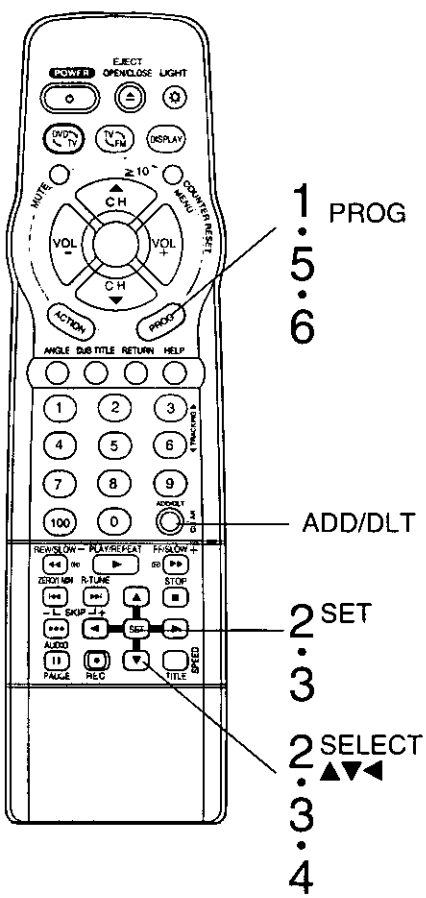
- "ON TIMER SET" is displayed.
- ON TIMER indicator lights on the unit.

6 End setup.



Press PROG.

To cancel ON-TIMER set,
Repeat steps 1 and 2. Then, press ADD/DLT to clear the time in step 3. Now, press PROG to end. "ON TIMER END" appears on-screen for a few seconds.



Note

If no button on the remote or unit (including a button used to turn off the alarm) is pressed within 60 minutes after unit turns itself on, it will turn itself back off.

For assistance, call 1-800-211-PANA(7262)

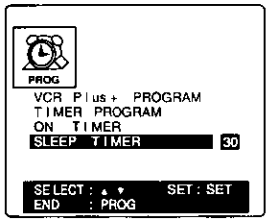
SLEEP TIMER

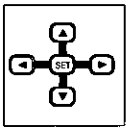
The unit can be set for auto power off.

1 Display PROGRAM screen.

Press PROG.

2 Set SLEEP TIMER.





1) Press ▲▼ to select SLEEP TIMER.
2) Press SET to move cursor to right.
3) Press ▲▼ to select the desired time.

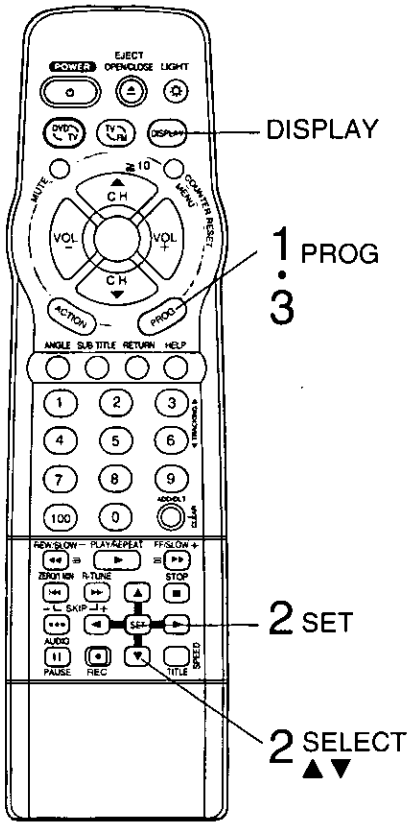
SLEEP TIMER 30 → 60 → 90 → 00

To cancel, press ▲ or ▼ repeatedly until 00 appears.

3 Return to normal screen.

Press PROG.

- Pressing PROG with sleep timer set displays remaining time.



Closed Caption System

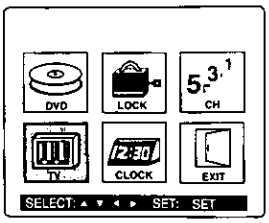
Closed Caption Mode Feature

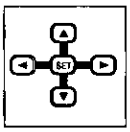
Closed Caption is ...
This multi-use system not only allows the hearing impaired to enjoy selected programs, but also makes useful information from TV stations available to everyone.

1 Display MAIN MENU.

Press ACTION.

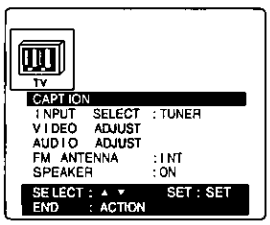
2 Display SET UP TV screen.

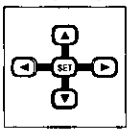




1) Press ▲▼◀▶ to select "TV".
2) Press SET to display.

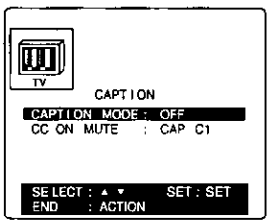
3 Display CAPTION screen.

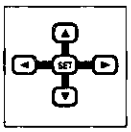




1) Press ▲▼ to select.
2) Press SET to display.

4 Select CAPTION MODE.

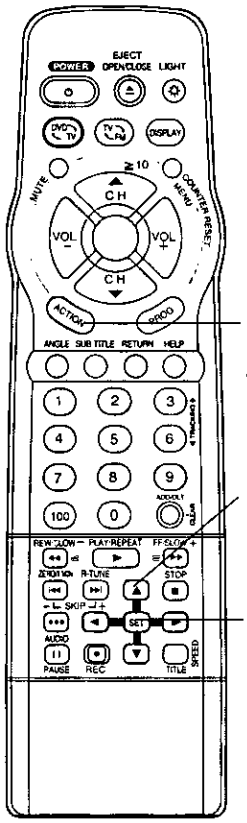




1) Press ▲▼ to select.
2) Press SET repeatedly to select caption mode.

5 Return to the normal screen.

Press ACTION three times.



Recording and Playing Back a Closed Caption/ Text Program

Record:
Record normally. Closed Caption/Text signal, if present, is recorded automatically.

Playback:
Start playback. Do above steps to select desired caption mode.

Closed Caption Modes From which to Choose

Caption Mode: CAP C1 or C2
A narration of selected TV programs is displayed.
Check TV program listings for C. C. (Closed Caption) broadcasts.

Caption Mode: TEXT C1 or C2
The lower half of the screen will be blocked out. When the TV station broadcasts information, such as program listings, it will appear in this space.

Caption Mode: OFF
Closed Caption /Text narration will not be displayed.

NOTE:
The closed caption or text signal may be broadcast over C1, C2, or both. Also, text contents can vary so you may wish to try different settings.

Note

When a disc supporting the closed caption is used, the subtitle and closed caption may overlap. In this case, turn the subtitle or closed caption mode off. (See page 46.)

For assistance, call 1-800-211-PANA(7262)

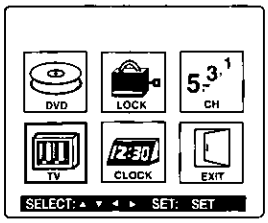
Caption On Mute Feature

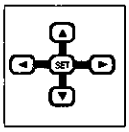
Closed Caption narration, if available, is displayed when MUTE button is pressed for silence.

1 Display MAIN MENU.

Press ACTION.

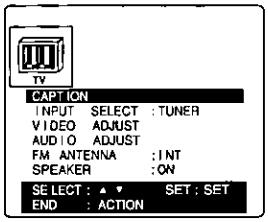
2 Display SET UP TV screen.

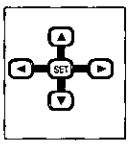




1) Press ▲▼◀▶ to select "TV".
2) Press SET to display.

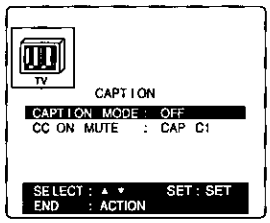
3 Display CAPTION screen.

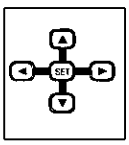




1) Press ▲▼ to select.
2) Press SET to display.

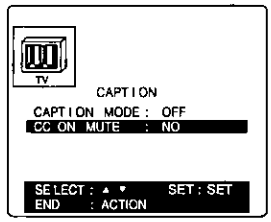
4 Select CAPTION MODE.

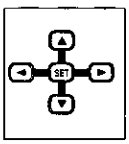




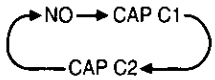
1) Press ▲▼ to select.
2) Press SET repeatedly to select "OFF."

5 Select CC ON MUTE.





1) Press ▲▼ to select.
2) Press SET repeatedly to select desired caption mode.

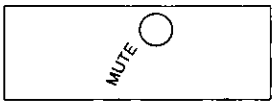


- Each press of SET will change the display as shown at left.
- The caption may be broadcast over CAP C1 or C2.

6 Return to the normal screen.

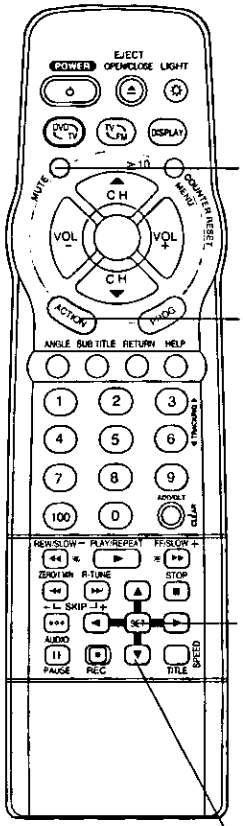
Press ACTION three times.

7 Mute sound, display closed captioning.



Press MUTE to mute the sound.

- To cancel, press MUTE again.



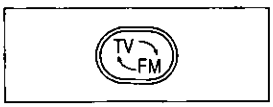
Note

When a disc supporting the closed caption is used, the subtitle and the closed caption may overlap. In this case, turn the subtitle or caption on mute mode off. (See page 46.)

FM Radio

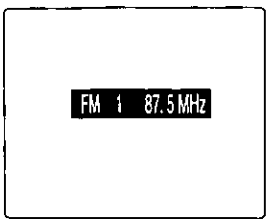
FM Radio Setup

- It is necessary to enter TV mode by pressing DVD↔TV when DVD mode is selected.

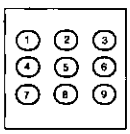
1 

Display FM radio mode.

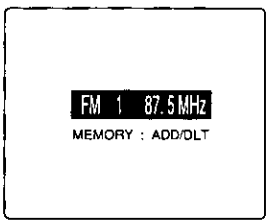
Press TV/FM on the remote or unit.

2 

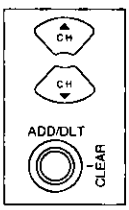
Select the FM number.



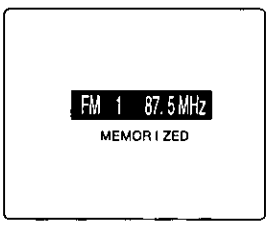
Press a NUMBERED key(1~9.)

3 

Set the radio station.



1) Press CH ▲▼ to select the desired station. (Each press changes frequency 200 KHz.)
2) Press ADD/DLT to set.



Quick Station Scan

Hold down CH ▲ or ▼ for more than 1 second, then release to scan for FM stations in your area.

- To cancel, press CH ▲ or ▼ while in search mode.

To Make Corrections,
select station with a NUMBERED key, then do step **3** again.

To exit FM mode, press TV/FM on the remote or unit.

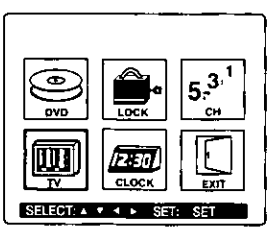
FM ANTENNA Setup

Make sure FM tuning is done correctly (See FM radio setup.)

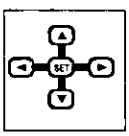
a

Display MAIN MENU.

Press ACTION in FM mode.

b 

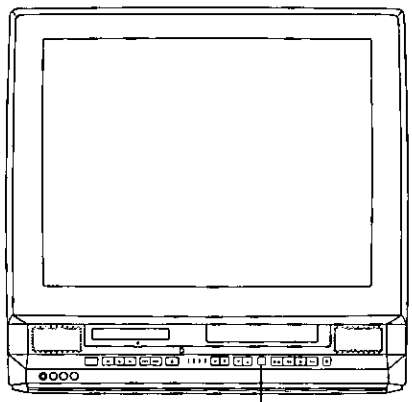
Display SET UP TV screen.



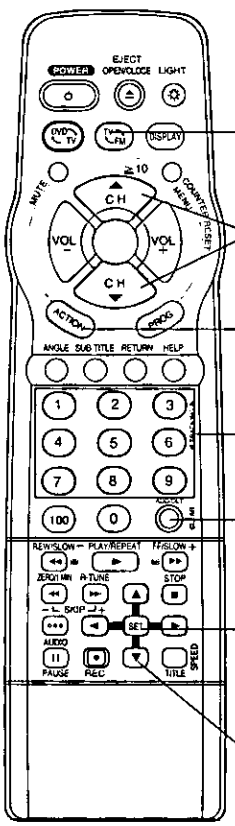
1) Press ▲▼◄► to select "TV".
2) Press SET to display.

FM Radio is ...

The unit has an FM radio with built-in antenna, 9 station preset and a band range of 87.5 ~ 108.1 MHz. You can even set the On-Timer (page 26) to wake up to your favorite radio station.



1 TV/FM

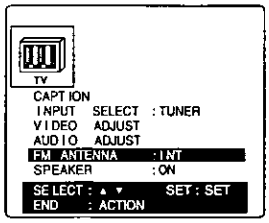


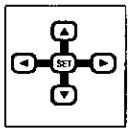
1 TV↔FM
3 CHANNEL ▲▼
a ACTION
2 NUMBERED Key
3 ADD/DLT
b SET
b SELECT ▲▼◄►

Continued on the next page...

For assistance, call 1-800-211-PANA(7262)

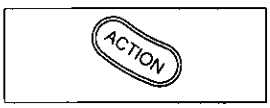
C Select FM ANTENNA.



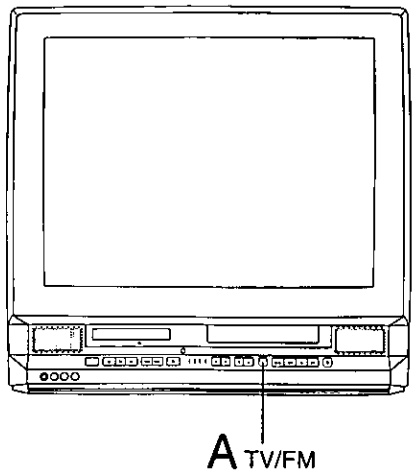


1) Press ▲▼ to select.
2) Press SET to select "INT (INTERNAL)" or "EXT (EXTERNAL)" whichever sounds the best.

d End setup.



Press ACTION twice to exit.

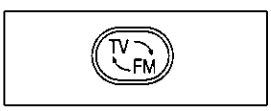


A TV/FM

Using FM Radio

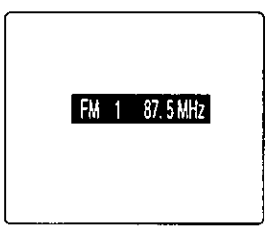
• It is necessary to enter TV mode by pressing DVD↔TV when DVD mode is selected.

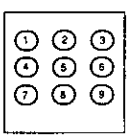
A Display FM radio mode.



Press TV/FM on the remote or unit.

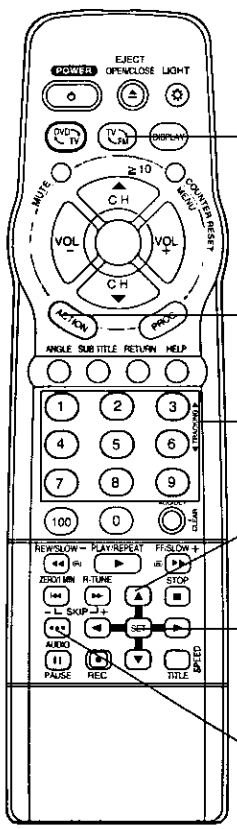
B Select the FM number.





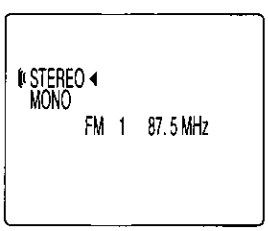
Press a NUMBERED key (1~9) to select a preset station (see steps **2** and **3** on the previous page.)

To cancel, press TV/FM on the remote or unit.



A TV↔FM
d ACTION
B NUMBERED Key
C SELECT ▲▼
C SET
AUDIO

To select Audio Mode for FM Radio



Select "STEREO" or "MONO."

Press AUDIO repeatedly in FM Radio mode.

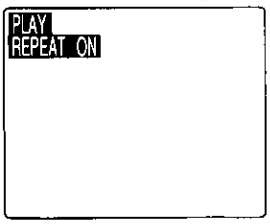
Notes

- FM radio cannot be recorded on a Video cassette.
- You may get better reception by repositioning the unit.
- You cannot select FM Radio mode during playback or record, or while MAIN MENU or PROGRAM screen is displayed.

Tape Operation

Repeat Play

Set to see a recording over and over.



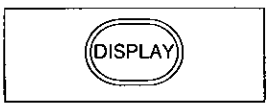
To turn "ON."
In play mode, press PLAY/REPEAT repeatedly to select "REPEAT ON."

To turn "OFF."
Repeat above to select "REPEAT OFF."

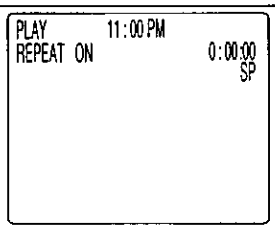
- Playback repeats when tape end is reached or unrecorded portion over 30 seconds is detected.

Zero Search

To quickly return to a specific tape counter location.

1 

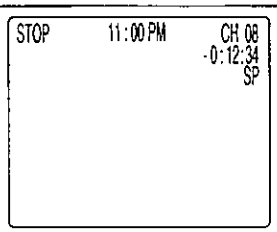
Display the Counter.
Press DISPLAY during playback.

2 

Reset to "0:00:00."

Press COUNTER RESET at the desired position.

3 **Continue playback, rewind, or fast forward.**

4 

Return to "0:00:00."

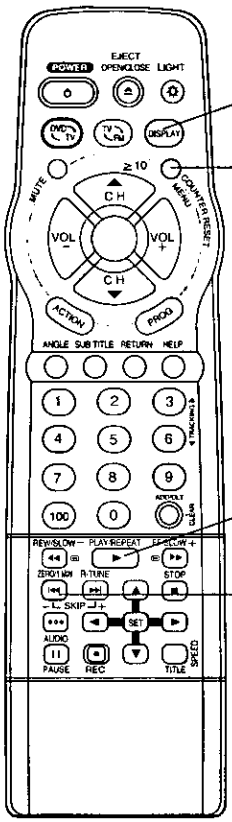
Press ZERO/1 MIN in Stop mode.

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

Auto Operation Functions

- **Auto Shut Off**
  No broadcast signal in TV or Playback mode for 5 minutes → Power turns off automatically
  - This feature is deactivated if any button is pressed during the above mode.
- **Auto Playback**
  Insert a tape in Power off mode → Power turns on automatically
  - Playback begins automatically if a tape has no record tab.
- **Auto Rewind**
  A tape reaches its end → Rewind begins → Stop automatically
- **Playback Auto Eject (Repeat Play is "OFF")**
  A tape has no record tab reaches its end → Rewind begins → Ejects automatically
- **Memory Rewind off**
  Press POWER in REW mode → Rewind is completed → Power turns off automatically

Your unit is equipped with several time saving features as well as convenient automatic functions which make tape operation easier than ever.



One Minute Skip

The unit fast forwards over 60 seconds of recorded tape.

Skip over 1 minute.
Press ZERO/1 MIN in Play mode.

For assistance, call 1-800-211-PANA(7262)

Special VCR Features

Weak Signal Display ON/OFF

When "ON" is selected, picture is displayed even when broadcast signal is weak or nonexistent.

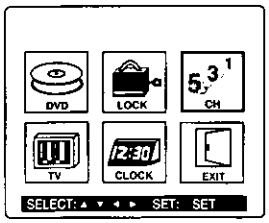
Check list before you begin.

☐ It is necessary to enter TV mode by pressing DVD↔TV before selecting "CH" on the MAIN MENU.

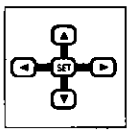
1

Display MAIN MENU.

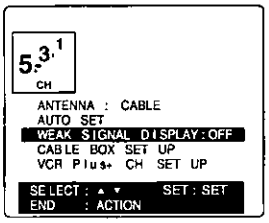
Press ACTION.

2 

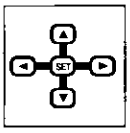
Display SET UP CH screen.



1) Press ▲▼◀▶ to select "CH".
2) Press SET to display.

3 

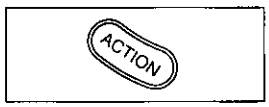
Select WEAK SIGNAL DISPLAY.



1) Press ▲▼ to select.
2) Press SET to set "ON" or "OFF".

Notes

- "ON" = Picture is displayed regardless of signal condition, and may not always be clearly visible.
  "OFF" = Screen turns solid black when signal is absent or weak.
- If unit is connected to equipment which has black back feature, selecting "ON" will have no affect on the other equipment.

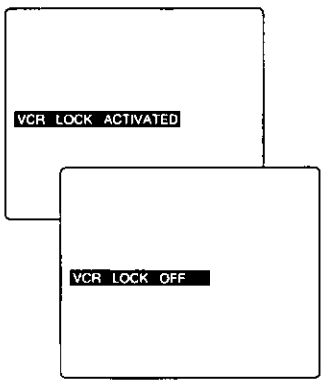
4 

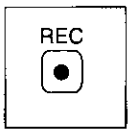
Return to the normal screen.

Press ACTION twice.

VCR Lock

All operations are prohibited except Timer recording and tape eject. Useful for families with small children.





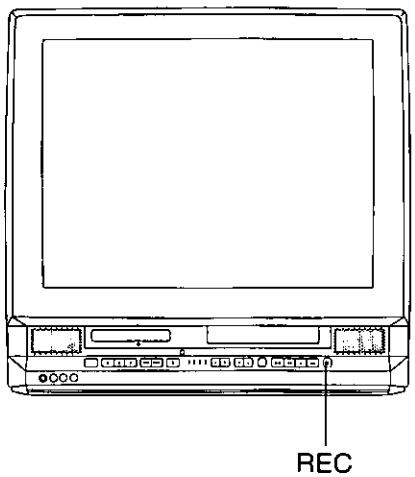
To turn "ON."

In Stop mode, hold down REC on the unit without a cassette inserted for 7 seconds.

To turn "OFF."

Repeat above.

- VCR Lock is cancelled automatically after about 24 hours if clock is set.



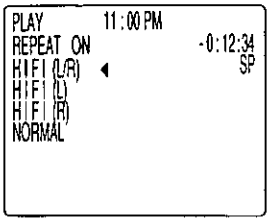
Audio Features

Select Audio Mode for Playback

Select the type of sound track you desire for playback.

1 **Playback the tape.**
See the "Playback a Tape" section on page 16.

2



Select desired mode.

Press AUDIO repeatedly (each press within 5 seconds.)

- Please select "HIFI (L/R)", "HIFI (L)" or "HIFI (R)" to listen to stereo recordings in stereo sound. Select "NORMAL" for monaural sound.

- This screen appears when you press AUDIO during playback.

With the proper audio mode setting, your unit can:

- record and playback MTS stereo broadcast (main language) in stereo Hi-Fi. Stereo sound is recorded on the left and right audio tracks and on the video portion of a tape.
- record and playback monaural broadcast (main language) or SAP (Second Audio Program, usually in a second language) on the Hi-Fi tracks for better quality monaural sound.
- playback non-Hi-Fi tapes in monaural.

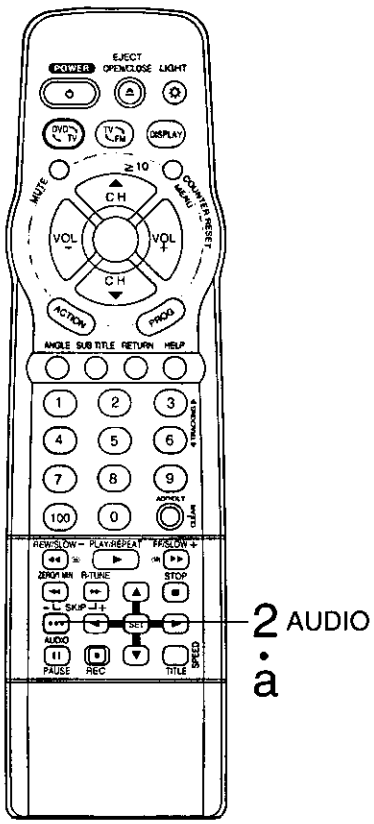
Select Audio Mode for Recording

Select the type of broadcast you wish to record.

a

Press AUDIO to select the desired audio mode. (See page 15.)

- Your recording is always performed according to the audio mode you selected.



b **Do a recording.**
See the "Record On a Tape" section on page 17.

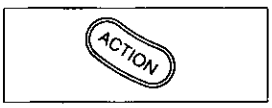
Notes

- When purchasing or renting prerecorded tapes, remember that only those recorded in Hi-Fi stereo will playback with true stereo sound. Standard stereo tapes will playback with monaural sound.
- In order to listen to Hi-Fi stereo playback, the unit AUDIO (L/R) jacks must be connected to a stereo amp and speakers.
- There may be a difference in audio level between Hi-Fi and normal audio playback.

For assistance, call 1-800-211-PANA(7262)

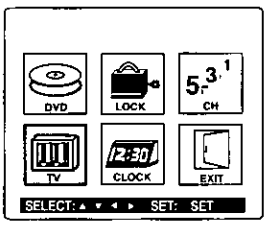
Speaker ON/OFF System

Allows you to turn off the speaker of the unit when it is connected to external audio equipment. (See page 10.)

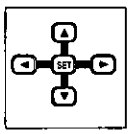
1 

Display MAIN MENU.

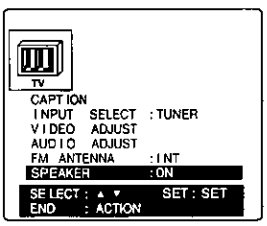
Press ACTION.

2 

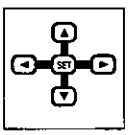
Display SET UP TV screen.



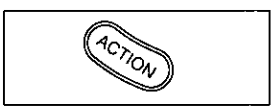
1) Press ▲▼◀▶ to select "TV".
2) Press SET to display.

3 

Select SPEAKER.



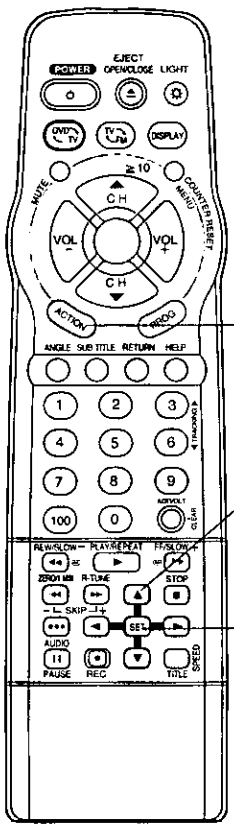
1) Press ▲▼ to select.
2) Press SET to set "ON" or "OFF."

4 

End setup.

Press ACTION twice.

- In SPEAKER OFF condition, the MUTE button and VOL + - do not function.



1 ACTION
•
4

2 SELECT
• ▲▼◀▶
3

2 SET
•
3

V-Chip Feature

V-Chip Feature is...
The unit has built-in V-Chip Control which allows you to block unwanted TV usage based on Motion Picture and TV Parental Guide ratings.

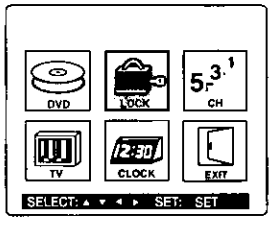
Process of V-Chip Feature
Enter Code ⇨ **Setup** ⇨ **Blocking**

Enter Secret Code

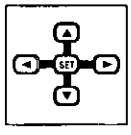
A 4-digit code must be entered to view a blocked program or change rating settings.

1

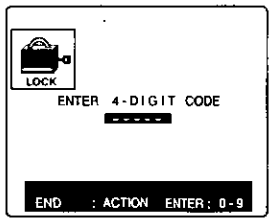
Display MAIN MENU.
Press ACTION.

2 

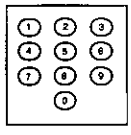
Display LOCK screen.



1) Press ▲▼◀▶ to select "LOCK."
2) Press SET to display.

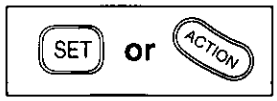
3 

Enter your secret code.



1) Press NUMBERED keys.
2) Enter same secret code again for confirmation.
   • Step 2) not necessary when changing rating or secret code.

To Make Corrections
Press ◀ repeatedly to move the cursor and NUMBERED keys to make the correction.

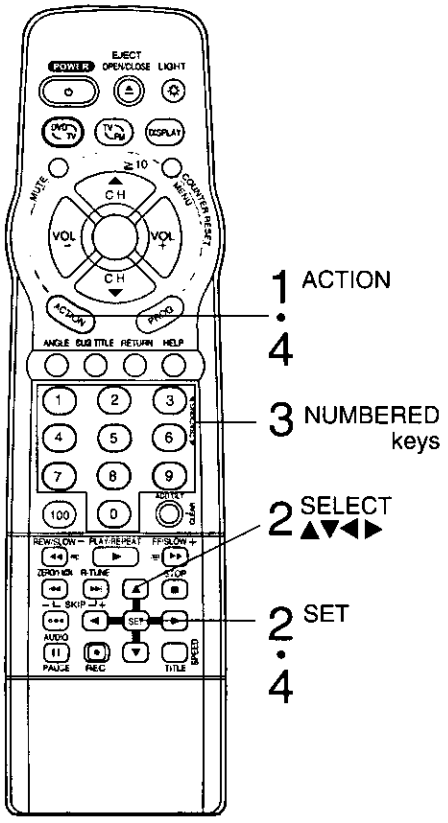
4 

Display LOCK menu for rating screen.

Press SET and go to:
page 37 (MOTION PICT. Ratings)
or page 38 (TV PARENTAL Ratings)

Or,

to exit, press ACTION twice.



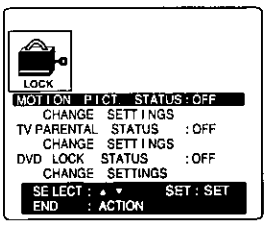
Change your secret code
• You will need your current code.
Enter your secret code with using NUMBERED keys after step 2 on this page, and press ADD/DLT to clear current code. Repeat steps 3 and 4 to enter new code.

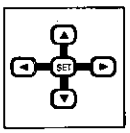
Notes
- Take care that you are not observed entering the secret code.
- Do not forget your secret code.
- Once the rating is locked, the setting cannot played back unless the correct secret code is entered.

Setup Motion PICT. (Picture) Ratings

If LOCK menu is not displayed, do "Enter Secret Code" steps on page 36.

1 Select MOTION PICT. STATUS.



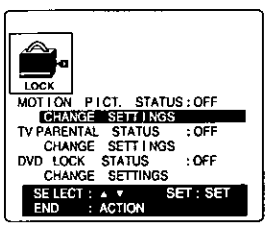


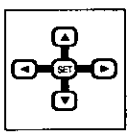
1) Press ▲▼ to select.
2) Press SET to set "ON" or "OFF."

If you select MOTION PICT. STATUS:

- **"ON" → V-Chip Control is activated.**
- **"OFF" → V-Chip Control is deactivated.**

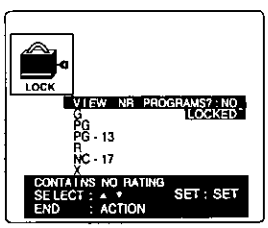
2 Select CHANGE SETTINGS.

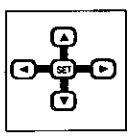




1) Press ▲▼ to select.
2) Press SET to display.

3 Select VIEW NR PROGRAMS?

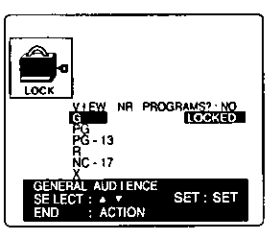


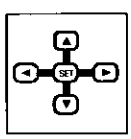


1) Press ▲▼ to select.
2) Press SET to set "YES" or "NO."

NR (Not Rated) PROGRAMS
Some movies, such as old movies or foreign movies usually have no ratings.

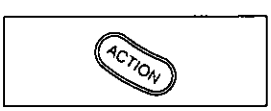
4 Select ratings to be blocked. (See right.)



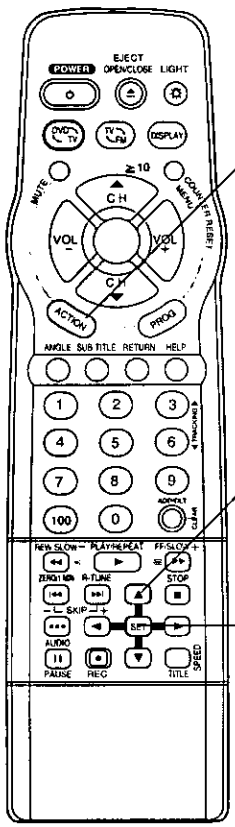


1) Press ▲▼ to select.
2) Press SET to set.

5 Redisplay LOCK menu to continue setup.



Press ACTION and go to page 38 (TV PARENTAL Ratings)
Or,
to exit, press ACTION three times.



MOTION PICTURE RATINGS

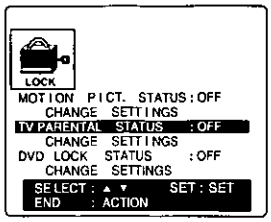
G	GENERAL AUDIENCE: All ages admitted.
PG	PARENTAL GUIDANCE: Some material may not be suitable for children.
PG-13	PARENTS CAUTIONED: Some material may be inappropriate for children under 13.
R	RESTRICTED: Under 17 requires accompanying parent or adult children.
NC-17	OVER AGE 17 ONLY: No one 17 and under admitted.
X	ADULTS ONLY:

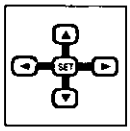
Setup TV PARENTAL Ratings

Process of V-Chip Control Feature
Enter Code ⇨ **Setup** ⇨ Blocking

If LOCK menu is not displayed, do "Enter Secret Code" steps on page 36.

1 Select TV PARENTAL STATUS.

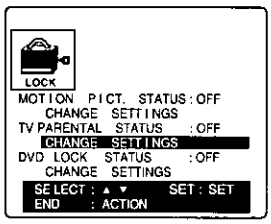


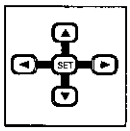


1) Press ▲▼ to select.
2) Press SET to set "ON" or "OFF."

If you select TV PARENTAL STATUS:
- **"ON" → V-Chip Control is activated.**
- **"OFF" → V-Chip Control is deactivated.**

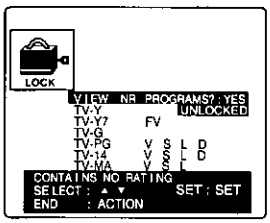
2 Select CHANGE SETTINGS.

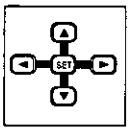




1) Press ▲▼ to select.
2) Press SET to display.

3 Select VIEW NR PROGRAMS?

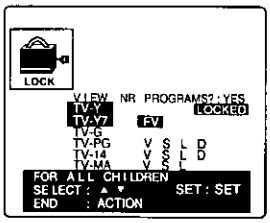


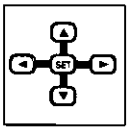


1) Press ▲▼ to select.
2) Press SET to set "YES" or "NO."

NR (Not Rated) PROGRAMS
Some TV shows, such as news, sports, weather, bulletins, emergency information usually have no ratings.

4 Select ratings to be blocked. (See next page.)



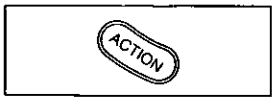


1) Repeatedly Press ▲▼◀ ▶ to select.
2) Press SET to set.

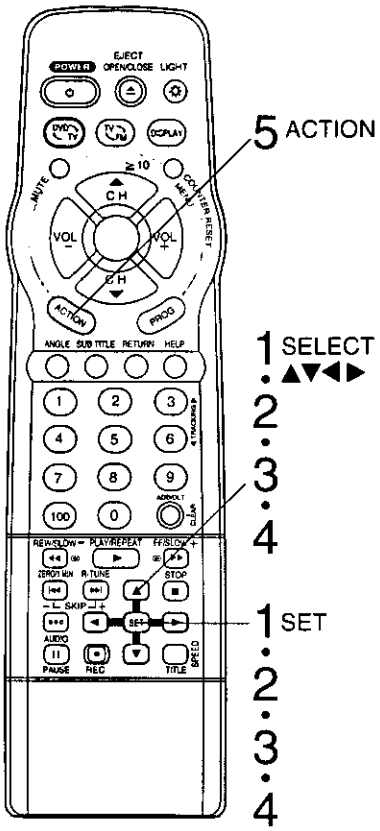
Note
You may select from standard TV ratings (chart 1), or customize to a specific content rating (chart 2.)

- Ratings highlighted in RED will be blocked, and those highlighted in GREEN will not be blocked.

5 Exit this mode.



Press ACTION three times.



TV PARENTAL GUIDE RATINGS: Chart 1

TV-Y	FOR ALL CHILDREN: Content specifically geared to young viewers ages 2-6.
TV-Y7	FOR AGE 7 AND OLDER: May contain mild physical or comedic violence which may frighten children under 7.
TV-G	GENERAL AUDIENCE: Contains little or no violence, strong language, or sexual dialogue or situations.
TV-PG	PARENTAL GUIDANCE: May contain infrequent coarse language, limited violence, some suggestive sexual dialogue and situations.
TV-14	PARENTS CAUTIONED: May contain sophisticated themes, sexual situations, strong language, and more intense violence.
TV-MA	MATURE AUDIENCE: May contain mature themes, profane language, graphic violence, and sexual situations.

TV PARENTAL GUIDE RATINGS: Chart 2

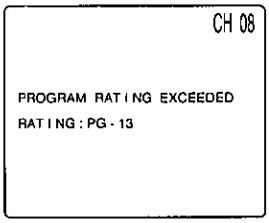
FV	Fantasy Violence
V	Violence
S	Sexual Situations
L	Adult Language
D	Sexually Suggestive Dialogue

Process of V-Chip Control Feature

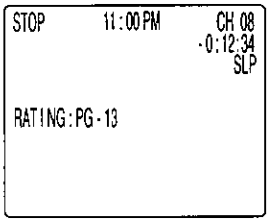
Enter Code ⇨ Setup ⇨ **Blocking**

Blocking Message

<When V-Chip Control is activated>



- If V-Chip Control is activated, and a program or movie exceeds the ratings you have set, a message will appear and sound is muted.



- If DISPLAY is pressed, even when V-Chip control is deactivated, rating is displayed on-screen.

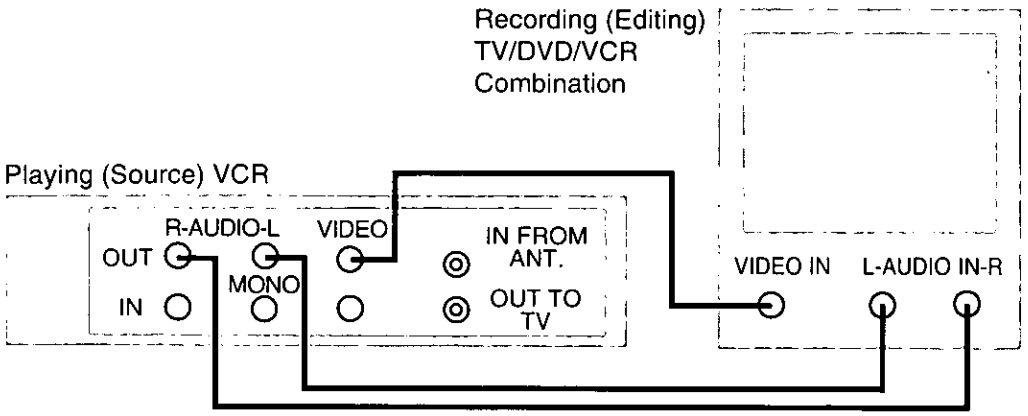
To Continue Viewing a Blocked Program

After entering your 4 digit secret code, go to step 1 on both pages 37 and 38 and select "OFF" to deactivate V-Chip Control.

- The previous MOTION PICT. and TV PARENTAL settings will be restored.

Copy Your Tapes (Dubbing)

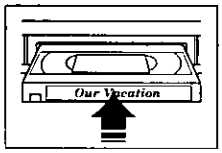
Connections you'll need to make.



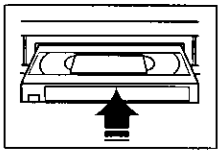
Playback (Source) VCR

Recording (Editing) TV/DVD/VCR Combination

1



Insert pre-recorded tape.



Insert blank tape with record tab.

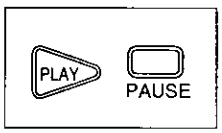
- Dubbing tapes protected with Copy Guard will have poor quality results.

2

Select "LINE" mode.

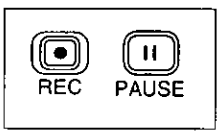
See "Selecting Input Mode" section on page 17.

3



Put in Standby mode.

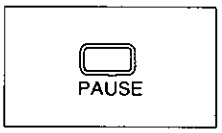
Press PLAY then PAUSE at starting point.



Put in Standby mode.

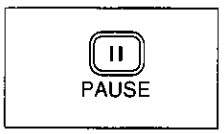
Press REC, then PAUSE immediately.

4



Start dubbing.

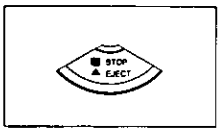
Press PAUSE.



Start dubbing.

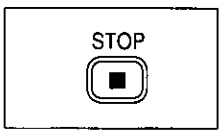
Press PAUSE.

5



Stop dubbing.

Press STOP/ EJECT.



Stop dubbing.

Press STOP/EJECT.

Notes

- Unauthorized exchanging and/or copying of copyrighted recordings may be copyright infringement.
- Please note that some discs cannot be dubbed on this unit.
  Also, it is not possible to dub DVD/Video CD/CD to VHS tape using this unit.

For assistance, call 1-800-211-PANA(7262)

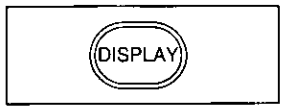
DVD Operation using On-Screen Displays

When DISPLAY is pressed, On-Screen Displays show disc information (title/chapter/track number, elapsed playing time, audio/subtitle language, and angle) and unit information (repeat play, play mode, Karaoke vocal ON/OFF, etc.).

Check list before you begin.

☐ It is necessary, press DVD↔TV to enter DVD mode.

1 Display On-Screen Displays.



Press DISPLAY in play or stop mode.

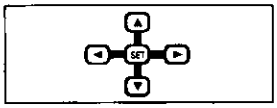
- Each time DISPLAY is pressed, On-Screen Display changes as shown below (refer to 42 or 43 page.)

→ Selected disc information
↓
Selected unit information
↓
Normal Screen

Note

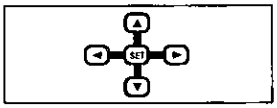
DISPLAY button does not function while DVD TITLE MENU is displayed.

2 Select the desired item.



1) Press ▲▼ (or ◀▶) to select.
2) Press SET to set.

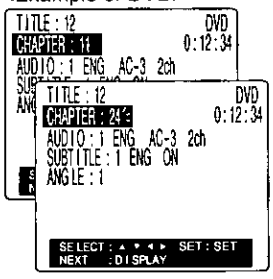
3 Select the desired setting.



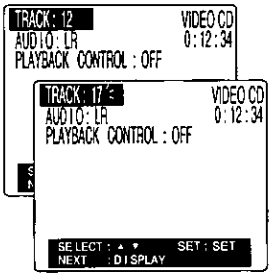
1) Press ▲▼ to select.
2) Press SET to set.

- For some functions the setting will be registered immediately without pressing SET.
- When numbers are displayed (e.g. title, number), the NUMBERED keys are also available.

<Example of DVD>



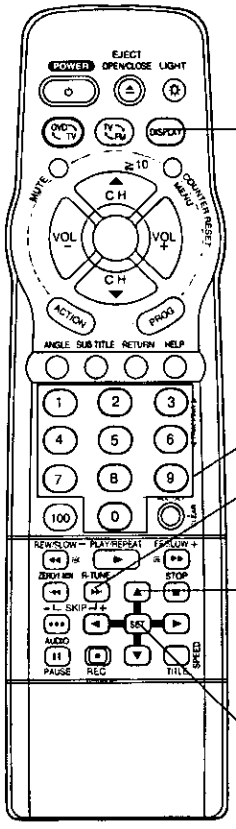
<Example of Video CD>



To make corrections,
repeatedly press ▲▼ and SET to move to error, then correct.

- Pressing ◀ is effective for elasping time instead of the above buttons. Press ◀ repeatedly to delete the error, then correct.

To return to the normal screen,
press RETURN or DISPLAY repeatedly.



Note

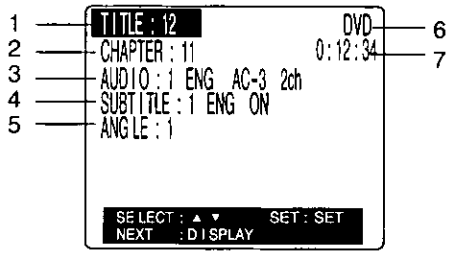
When DISPLAY button is pressed during playback of a Video CD with Playback control, the NUMBERED keys are not available on the displayed screen. In this case, press DISPLAY again to remove the displayed screen.

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

Advanced Operation

Detailed descriptions of each On-Screen Display

Disc information screen (For DVD)



1. TITLE No.
   - Change the No. by pressing ▲▼ or the NUMBERED keys, and press SET.

2. Chapter No.
   - Change the No. by pressing ▲▼ or the NUMBERED keys, and press SET.

3. Audio sound track language (No.)

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

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

Audio attribute 1 type, sampling frequency, bit No. of the disc.

LPCM	96KHz or 48KHz	16bit	Linear PCM disc
		20bit	
		24bit	
AC-3	1ch - 5.1ch		Dolby Digital (AC-3) disc
DTS	1ch - 5.1ch		DTS disc

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

Number of recorded vocals [DVD Karaoke only]

VOCAL	VOCAL	ON	Karaoke (1 vocal)
		OFF	
	VOCAL	V1+V2	Karaoke (2 vocals)
		V1	
		V2	
		OFF	

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

4. Subtitles language (No.)

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

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

Subtitles Display ON/OFF

ON	Subtitles is displayed.
OFF	Subtitle is cleared.

- Select "ON" or "OFF" by pressing ▲▼, and press SET.

5. ANGLE No.
   - Change the No. by pressing ▲▼, and press SET.

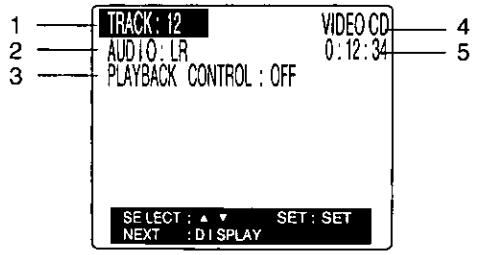
6. Disc currently being played

7. Elapsed playing time
   The screen may be changed by selecting the elapsed time.
   - Change the elapsed time by pressing NUMBERED keys.
   (ex) 01 : 23 : 45 0 → 1 → 2 → 3 → 4 → 5
   - This function does not work with some discs.

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

For assistance, call 1-800-211-PANA(7262)

Disc information screen (For Video CD/CD)



1. Track No.
   - Change the No. by pressing ▲▼ or the NUMBERED keys, and press SET.

2. Audio mode
   - Change the mode by pressing ▲▼, and press SET.

LR	L	R

3. Playback control ON/OFF [Video CD with playback control only]

ON	Video CD menu play is displayed.
OFF	Video CD menu play is cleared.

4. Disc currently being played

Video CD	CD

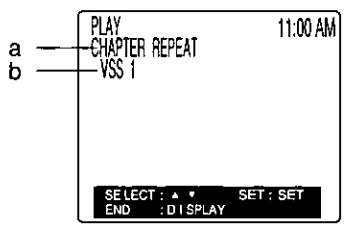
5. Elapsed playing time

Note

Track NO. and the elapsed playing time are not displayed during menu play of Video CDs with playback control.

Disc information screen (For Unit)

- Change the desired mode during play by pressing ▲▼, and press SET.



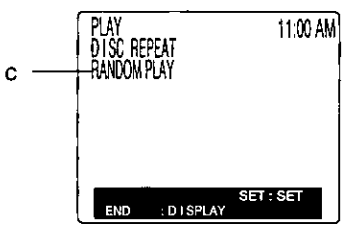
a. Repeat Play (See page 45.)

DVD	CHAPTER REPEAT	TITLE REPEAT	REPEAT OFF
Video CD/CD	TRACK REPEAT	DISC REPEAT	REPEAT OFF

b. Virtual Surround [DVD only] (See page 52.)

OFF	
VSS1	Natural effect
VSS2	Emphasized effect

- When "VSS1" or "VSS2" is selected, a "((" mark is displayed while Dolby Digital(AC-3) DVDs are played back.



c. Play mode [Video CD/CD only] (See pages 44 and 45.)

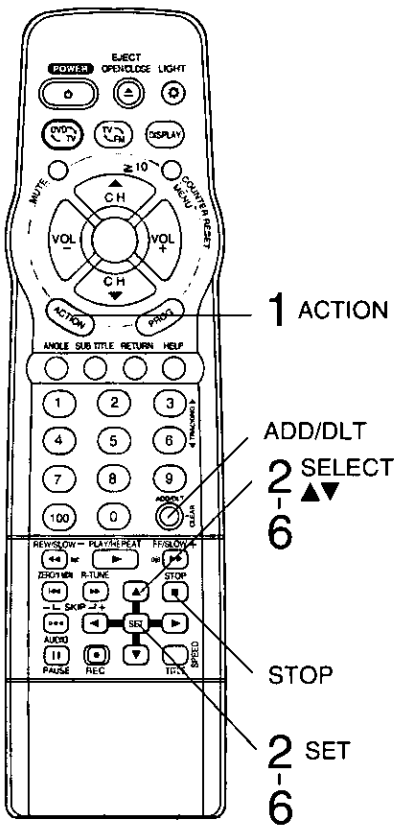
PROGRAM PLAY	program play
RANDOM PLAY	random play
-	normal play

Program Play (Video CD/CD)

You can program specific tracks and order of play.

Check list before you begin.

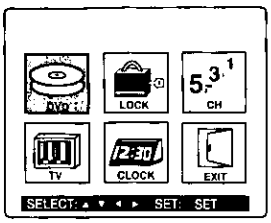
- Video CD or CD is inserted in DVD mode.

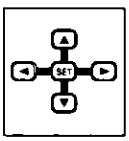


1 Display MAIN MENU.

Press ACTION in stop mode.

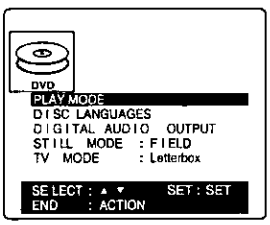
2 Display DVD screen.

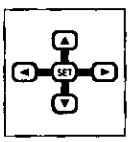




1) Press ▲▼◀▶ to select "DVD."
2) Press SET to display.

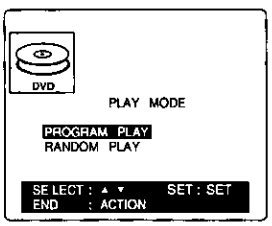
3 Select PLAY MODE.

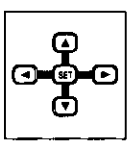




1) Press ▲▼ to select.
2) Press SET to display.

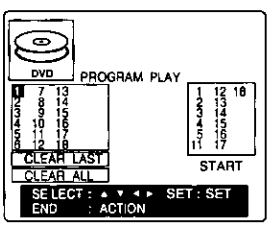
4 Select PROGRAM PLAY.

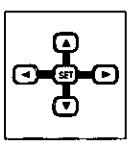




1) Press ▲▼ to select.
2) Press SET to display.

5 Select desired track number. (Track numbers on disc are displayed.)

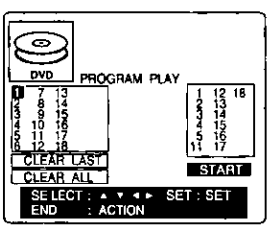


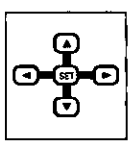


1) Press ▲▼◀▶ to select.
2) Press SET to select.

- Repeat step 5 to select another track.
- The selected track is added on the right side.

6 Start PROGRAM PLAY.





1) Press ▲▼◀▶ to select "START."
2) Press SET.

- Play begins in the programed sequence.
- To cancel, press STOP during play and then press ADD/DLT.

Notes

- Up to 18 tracks can be programmed.
- "◀" or "▶" (depending on disc) indicates additional PROGRAM PLAY screen. Press ▲▼◀▶ for next or previous screen.
- **To clear the last program one by one**
  Press ▲▼◀▶ to move to "CLEAR LAST" and press "SET."
  (Pressing ADD/DLT on remote control also clears last program.)
- **To clear all programs**
  Press ▲▼◀▶ to move to "CLEAR ALL" and press "SET."
  (Programs are also cleared when the power is turned off or the disc is removed.)

PROGRAM REPEAT PLAY

Press PLAY/REPEAT in PROGRAM PLAY mode and ▲▼ to select "PROGRAM REPEAT." To cancel, repeat this to select "REPEAT OFF."

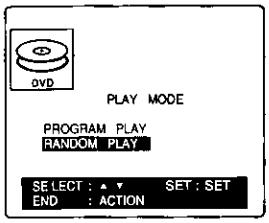
For assistance, call 1-800-211-PANA(7262)

Random Play (Video CD/CD)

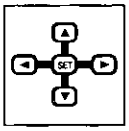
Tracks are played in a random order.

1 **Repeat steps 1 - 3 on the previous page.**

2

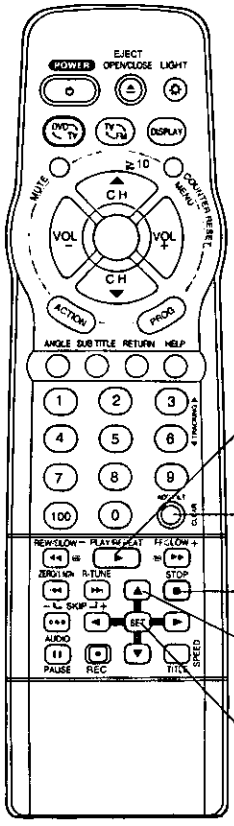


Select RANDOM PLAY.



1) Press ▲▼ to select.
2) Press SET.

- Random play begins.
- To cancel, press STOP during play and then press ADD/DLT.



Repeat Play

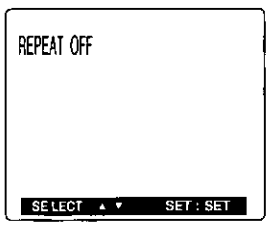
Set to view or listen to a chapter or title (DVD), or a track (Video CD/CD).

a

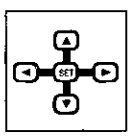
Set Repeat Play.

Press PLAY in play mode.

b



Select Repeat mode.



1) Press ▲▼ to select the desired mode.
2) Press SET to set. (Displays changes as shown below.)

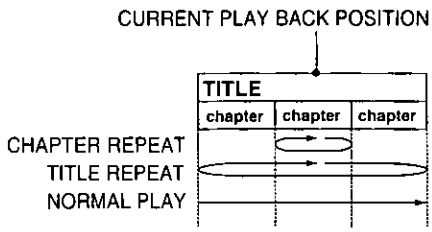
- DVD CHAPTER REPEAT → TITLE REPEAT → REPEAT OFF
- Video CD/CD TRACK REPEAT → DISC REPEAT → REPEAT OFF

To cancel, repeat this operation to select "REPEAT OFF."

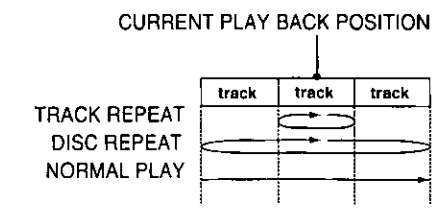
- Repeat play may not work correctly with some DVDs.
- Repeat play works only with discs for which the elapsed playing time appears on-screen display during playback.

For your reference

- **CHAPTER/TITLE REPEAT PLAY (DVD)**

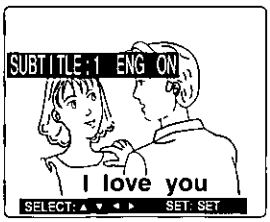


- **TRACK/DISC REPEAT PLAY (Video CD/CD)**



Changing subtitle language (DVD only)

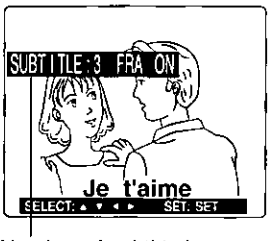
You can select a different subtitle language (if offered) than the one set at the initial settings. (See page 51.)

1 

Display the subtitle screen.

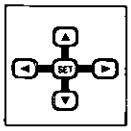
Press SUB TITLE in play mode.

- When no subtitles are offered, "-" will be displayed instead of the language number.

2 

Number of subtitle language being played back.

Set the desired language.

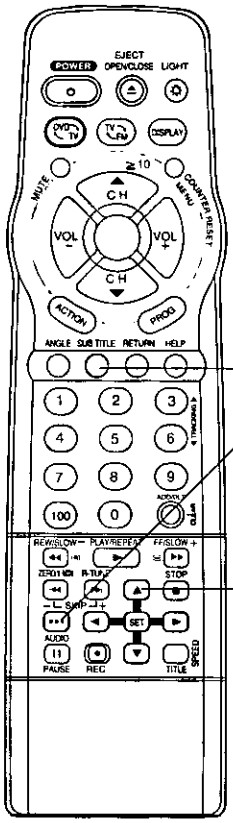


1) Press ▲▼ to select language.
2) Press ▶ (or ◀) to set.
3) Press ▲ (or ▼) to select "ON" or "OFF."

To return to the normal screen, Press SUB TITLE.

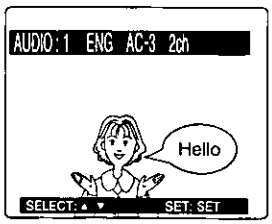
Notes

- Subtitles may not change to the selected language immediately.
- When closed captioning is used along with subtitles, they may overlap. If so, turn one function off. (See pages 28 and 29.)
- If, after several presses of the button the language does not change, language selection is not offered on the disc.
- When power is turned on or disc is removed, subtitles revert to initial setting language. If this language is not recorded on the disc, the disc's priority language will appear.



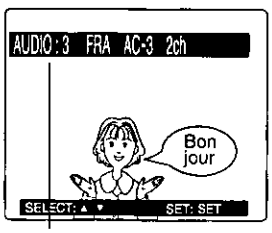
Changing audio soundtrack language (DVD only)

It is possible to change the audio soundtrack language to a different language from the one selected at the initial settings. (If available. See page 51.)
(This operation works only with discs on which multiple audio soundtrack languages are recorded.)

a 

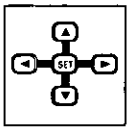
Display the audio screen.

Press AUDIO in play mode.

b 

Number of the audio soundtrack language being played back.

Select the desired language.



Press ▲▼ to select desired language.

To return to the normal screen. Press AUDIO.

Notes

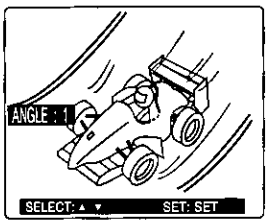
- If, after several presses of the button the language does not change, language selection is not offered on the disc.
- When power is turned on or disc is removed, language reverts to initial setting. If this language is not recorded on the disc, the language recorded will be heard.

For assistance, call 1-800-211-PANA(7262)

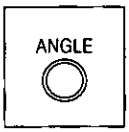
Viewing from another angle (DVD only)

DVDs may contain scenes shot from multiple camera angles allowing the same scene to be viewed at different angles. For these discs, the same scene can be viewed from each of these different angles using the ANGLE button.

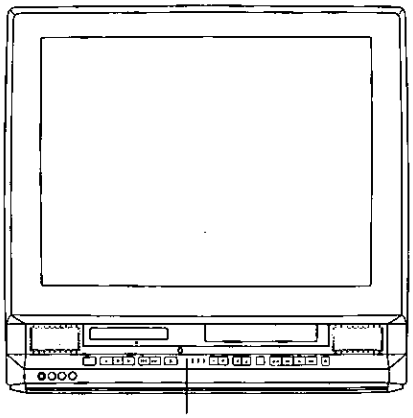
When ⃠ appears on the screen while a button is being operated, it means that the corresponding operation is prohibited by the unit or the disc.

1 

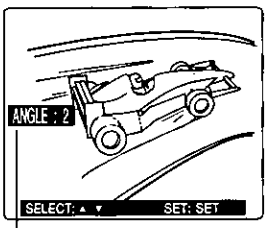
Display the angle screen.



Press ANGLE in play mode.

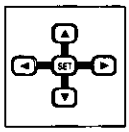


ANGLE indicator

2 

Number of angle being played back.

Select the desired angle.

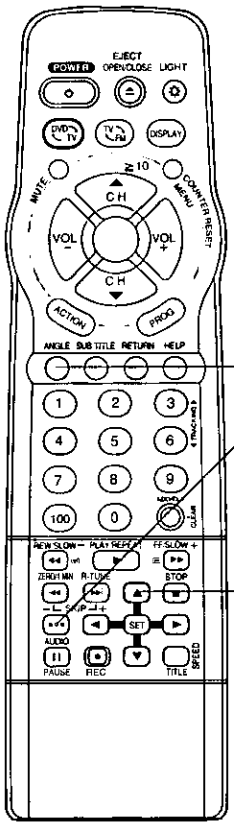


Press ▲▼ to select.

To return to the normal screen, Press ANGLE.

Notes

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



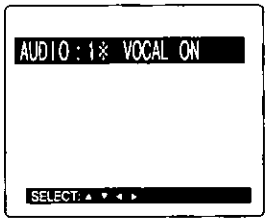
1 ANGLE
a AUDIO
2 SELECT ▲▼◀▶
b

Vocal selection for Karaoke discs (DVD/Video CD)

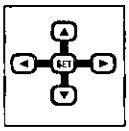
a

Display the audio screen.

Press AUDIO in play mode.

b 

Select the desired setting.



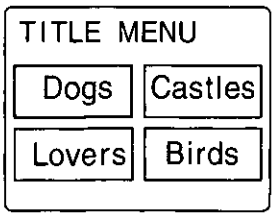
1) Press ▲▼ (or ◀ ▶) to select.
2) Press ▶ (or ◀) to set. (DVD only)

- DVD Karaoke (1 vocal) VOCAL ON ↔ VOCAL OFF
- DVD Karaoke (2 vocals) VOCAL V1 + V2 → VOCAL V1 → VOCAL V2 → VOCAL OFF
- Video CD LR → L → R

Using a title menu (DVD only)

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

1 **Display the title screen.**

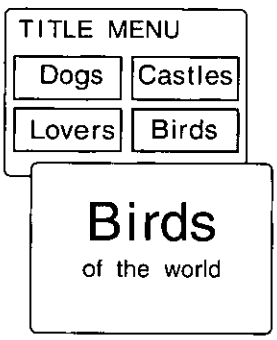


<Example>

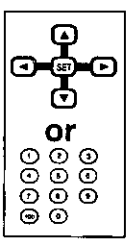
Press TITLE in play mode.

- Pressing TITLE again resumes play from the scene when TITLE was first pressed.

2 **Select the desired title.**



<Example>



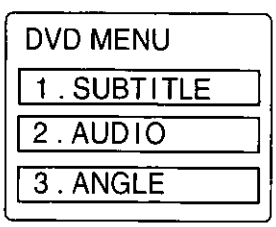
1) Press ▲▼◀▶ or NUMBERED Key(s) to select.
2) Press SET to start playing.

- Step 2) not necessary when using NUMBERED key(s).

Using a DVD menu (DVD only)

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

a **Display the DVD menu.**

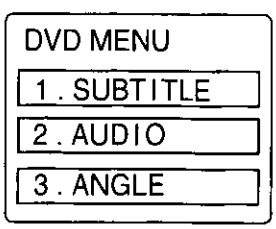


<Example>

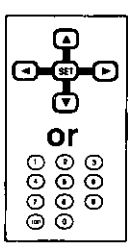
Press MENU in play mode.

- Pressing MENU again resumes play from the scene when MENU was first pressed.

b **Select the desired item.**



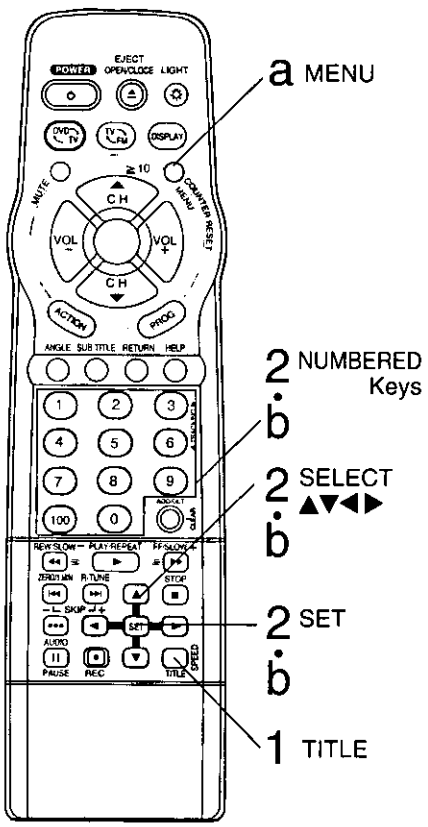
<Example>



1) Press ▲▼◀▶ or NUMBERED Key(s) to select.
2) Press SET to perform.

- Step 2) not necessary when using NUMBERED key(s).

If menu continues onto another screen, repeat step b.



For assistance, call 1-800-211-PANA(7262)

DVD Lock Feature

You can prevent playback of DVDs in a specific rating level which may be unsuitable for children.

- Some DVDs are encoded with a rating level. If the disc rating is higher (stricter) than the one you preset, playback will be prohibited.

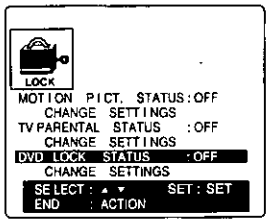
Caution

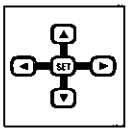
Discs not encoded with rating level will play even if the jacket states it is for mature audiences. For these discs, the DVD Lock Ratings will not work.

Setup DVD Lock Ratings (DVD only)

Enter your secret code to display LOCK menu. (Do "Enter Secret Code" steps on page 36.)

1 Select DVD LOCK STATUS.

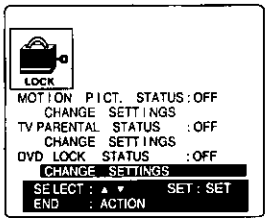


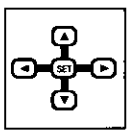


1) Press ▲▼ to select.
2) Press SET to set "ON" or "OFF."

If you select DVD LOCK STATUS:
- **"ON" → DVD Lock is activated.**
- **"OFF" → DVD Lock is deactivated.**

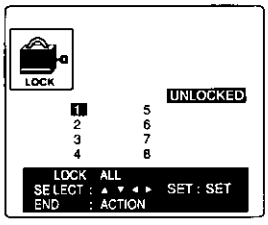
2 Select CHANGE SETTINGS.

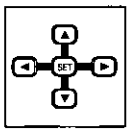




1) Press ▲▼ to select.
2) Press SET to display.

3 Select RATING LEVEL.





1) Press ▲▼◀▶ to select.
2) Press SET to select "LOCKED" or "UNLOCKED."

LEVEL 1 : Lock All:
Playback of all DVDs is prohibited (e.g. to prohibit playback of DVDs for adults which are not encoded with rating level information.)

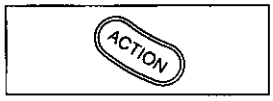
LEVEL 2 : DVDs for children can be played back. (DVDs for adults/general audiences are prohibited.)

LEVEL 3 to 7 :
DVDs for general audiences/children can be played back. (DVDs for adults are prohibited.)

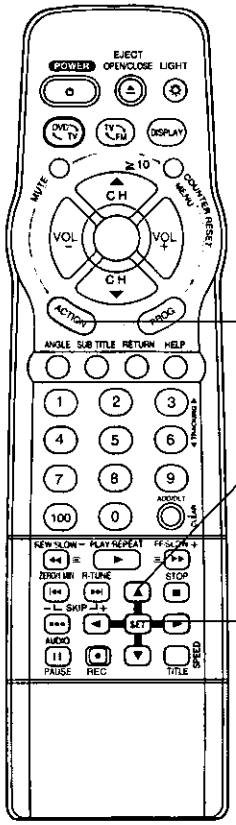
LEVEL 8 : No Limit:
All DVDs can be played back. (Factory preset)

- Ratings highlighted in RED will be blocked, and those highlighted in GREEN will not be blocked.

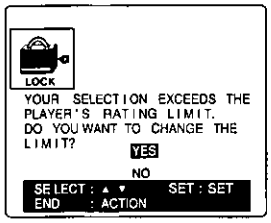
4 End setup.



Press ACTION three times.



<When DVD Lock is activated>



After DVD Lock is set and a blocked DVD is played, this message will appear.
The message may differ depending on the disc.

To continue viewing a blocked program for now,
Press ▲▼ to select "YES" and SET. Then, enter your 4 digit secret code.
When "NO" is selected, blocked programs cannot be viewed.

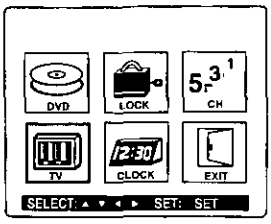
To change the DVD LOCK settings, after entering your secret code in step 3 on page 36, select "OFF" to deactivate DVD Lock or chane the rating level.

Picture/Audio Adjustment

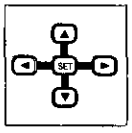
Picture Adjustment

1

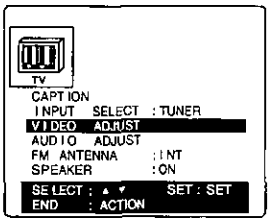
Display MAIN MENU.
Press ACTION.

2 

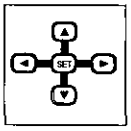
Display SET UP TV screen.



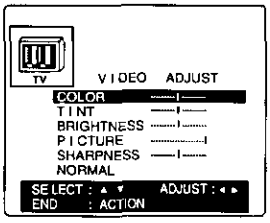
1) Press ▲▼◄► to select "TV".
2) Press SET to display.

3 

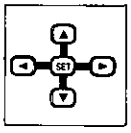
Display VIDEO ADJUST screen.



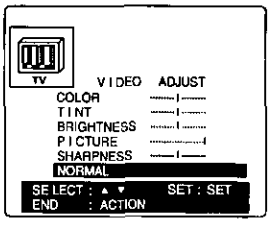
1) Press ▲▼ to select.
2) Press SET to display.

4 

Adjust desired item.



1) Press ▲▼ to select an item. (See below right.)
2) Press ◄► to adjust.



To Reset Picture Controls.

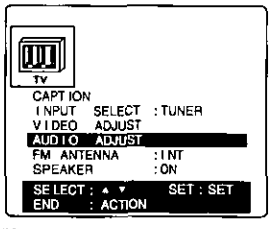
Press ▲▼ and SET to select and set "NORMAL."
All controls return to their factory settings.

5

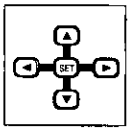
End setup.
Press ACTION three times to exit.

Audio Adjustment

a **Do steps 1 and 2 above.**

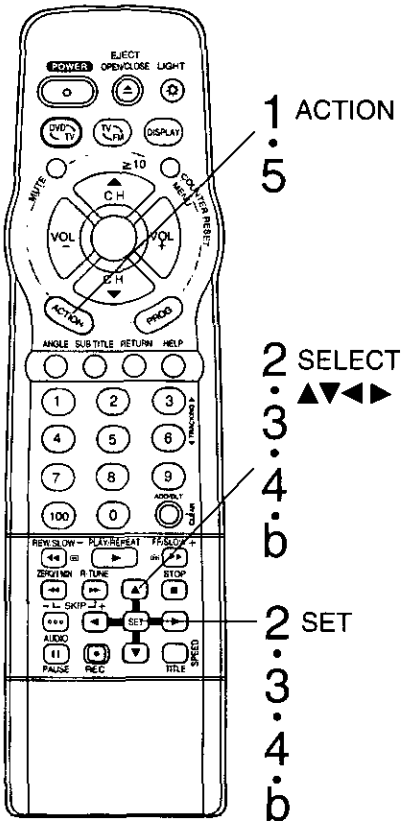
b 

Select AUDIO ADJUST.



1) Press ▲▼ to select.
2) Press SET to set.

C **Do steps 4 and 5 above.**
(See description right.)



Picture Adjustment

COLOR Control
Adjust color intensity.

TINT Control
Adjust for natural flesh tones.

BRIGHTNESS Control
Adjust picture brightness.

PICTURE Control
Adjust picture intensity by adjusting both contrast and color level in the proper balance.

SHARPNESS Control
Adjust picture sharpness.

Audio Adjustment

BASS Control
To adjust the intensity of low frequency sound.

TREBLE Control
To adjust the intensity of high frequency sound.

BALANCE Control
To adjust the (L/R) unit speaker output level.

- The levels set here do not affect other audio equipment when connected to the Audio Output L/R Connector.

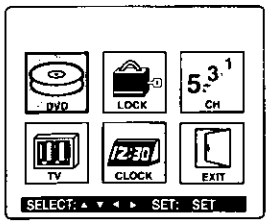
For assistance, call 1-800-211-PANA(7262)

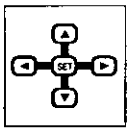
DVD Initial settings

1 Display MAIN MENU.

Press ACTION in stop mode.

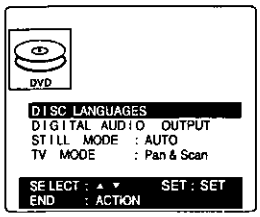
2 Display DVD screen.

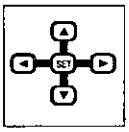




1) Press ▲▼◀▶ to select.
2) Press SET.

3 Select the desired item.





1) Press ▲▼ to select.
2) Press SET.

DISC LANGUAGES (See below)
All languages offered on the disc can be set. If the language set is not offered on the disc, the original disc language will be selected.

DIGITAL AUDIO OUTPUT (See page 52.)
You can set the audio output that comes from the digital audio output terminal.

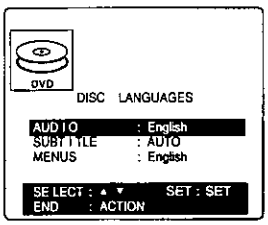
STILL MODE (See page 53.)
To select "Field still" or "Frame still" to prevent jittering from occurring or to let small text or fine patterns seen clearly in the still picture mode. When AUTO is set "Field Still" or "Frame Still" is selected automatically.

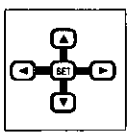
TV MODE (See page 53.)
To select whether the video material for a wide-screen will be played back in the Pan & Scan style or in the Letterbox style on the screen.

When selecting DISC LANGUAGES [DVD only]

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

4 Select the desired item.





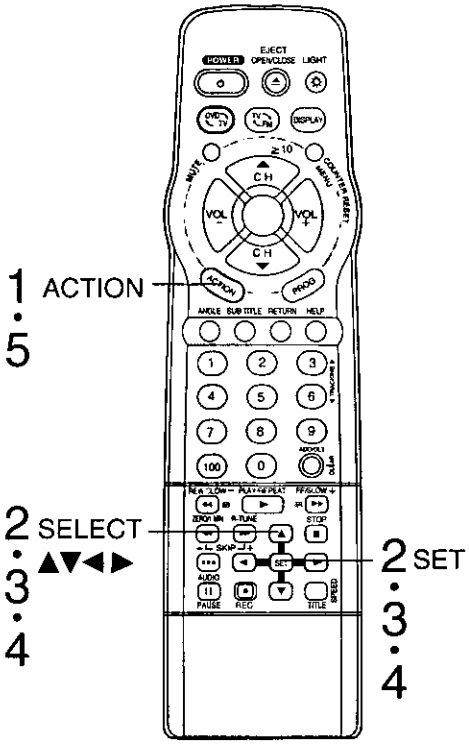
1) Press ▲▼ to select.
2) Press SET repeatedly for language. (Refer to the right.)

5 Redisplay DVD menu to continue setup.

Press ACTION and go to step 3 to setup another setting.

Or, to exit, press ACTION three times.

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



"AUDIO" selections

To select the audio soundtrack language.
English/French/Spanish (factory preset: English)
Original: Original disc language
OTHER **:** Other language selection*

"SUB TITLE" selections

To select the subtitle language.
AUTO: Same language selected for "AUDIO" (Factory preset)
- If language set for "AUDIO" is used in playback, subtitles will not appear.
- If another language is used during playback, the subtitles will appear in the language selected at the setup "AUDIO".

English/French/Spanish
OTHER **:** Other language selection*

"MENUS" selections

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

To enter OTHER ** code number,**
Press NUMBERED keys (Refer to the language codes on page 56).
To make corrections, press ◀ repeatedly to delete the language code number.

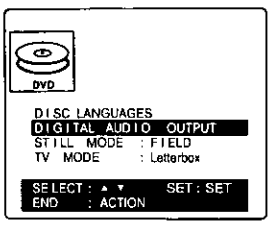
* If the selected language is not offered, the original disc language is selected.

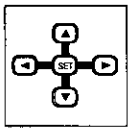
Selecting DIGITAL AUDIO OUTPUT

Select the digital output to be output from the optical / coaxial digital audio output connector of the unit.

1 **Do steps 1 and 2 on page 51.**

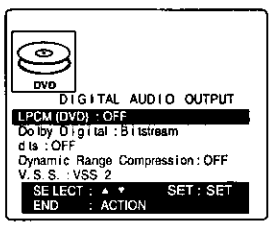
2 **Display DIGITAL AUDIO OUTPUT screen.**

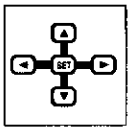




1) Press ▲▼ to select.
2) Press SET.

3 **Select the desired item.**





1) Press ▲▼ to select.
2) Press SET repeatedly for output.

"LPCM (DVD)" selections

OFF: Only linear PCM of 48 kHz/16 bit is output. When playing DVDs recorded in linear PCM of 48 kHz/20 bit or 96 kHz, no digital audio is output. (Factory preset)
PCM: When playing DVDs recorded in linear PCM of 48 kHz/20 bit/24 bit or 96 kHz, digital audio converted to 48 kHz/16 bit is output.
(Digital output of PCM audio is restricted to 48 kHz/16 bit or below for copyright protection.)

"Dolby Digital" selections

Bitstream: Dolby Digital (AC-3) bitstream (2ch-5.1ch) is output. (Factory preset)
PCM: PCM (2ch) of 48 kHz/16 bit is output.

"dts" selections

OFF: No output.(Factory preset)
Bitstream: dts bitstream is output.

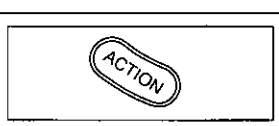
"Dynamic Range Compression" selections

OFF: Normal audio range is selected. (Factory preset)
ON: For dynamic sound even at low volume, this is useful for late-night listening. [Dolby Digital (AC-3) DVDs only].

"V.S.S." selections

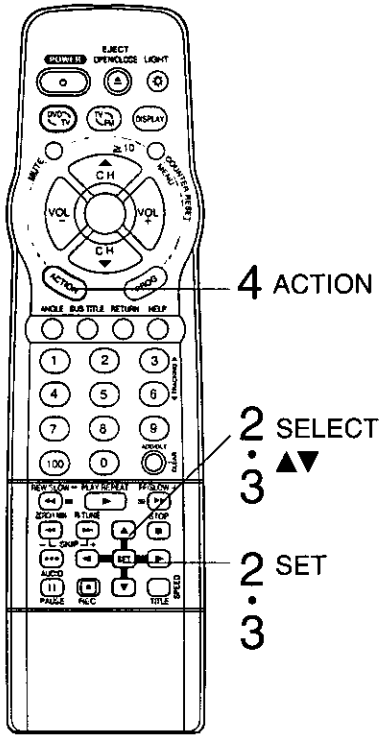
Virtual Surround Sound creates the effect of sound coming from nonexistent rear speakers even when only connected to a 2-channel stereo system. [Dolby Digital (AC-3) DVDs only].
OFF: No Virtual Surround Sound effect. (Factory preset)
VSS 1: Natural effect.
VSS 2: Emphasized effect.

4 **Redisplay DVD menu to continue setup.**



Press ACTION and go to step 2 to setup another setting.

Or, to exit, press ACTION three times.



Type of amplifier to be connected	Recommendable setting		
	LPCM (DVD)	Dolby Digital	dts
No amplifier is connected	OFF	Bitstream	OFF
AV amplifier (with digital audio input connector) without Dolby Digital/dts decoder	PCM*1	PCM*2	OFF*2
AV amplifier including Dolby Digital decoder	PCM*1	Bitstream	OFF
AV amplifier including Dolby Digital/dts decoder	PCM*1	Bitstream	Bitstream*3

- Make settings according to amplifier connected to optical/coaxial audio output as shown in above table.
- When a dts decoder is not connected, to enjoy dts DVD, please select audio output other than dts at the dts DVD menu screen. Otherwise, there will be no sound from the unit speakers.

*1 Audio output from unit is converted to 48 kHz/16 bit in addition to audio from digital audio output. To enjoy high quality sound at 48 kHz/20 bit /24 bit or 96 kHz, connect the amplifier or decoder directly to the audio output connectors, not to the digital audio output connector. [Select "OFF" at the "LPCM (DVD)".]

*2 When connecting an amplifier (with an optical/coaxial digital input connector) which does not contain the Dolby Digital (AC-3) or dts decoder, be sure to select "PCM" or "Off".
If "Bitstream" is selected, starting DVD play may cause such a high level of noise as to be harmful to your ears and damage the speakers.

*3 When a dts decoder is connected, please select "Bitstream" in "dts". If "OFF" is selected, there will be no sound.

Notes

- The virtual surround effect may not work properly for some DVD software.
- Turn off other surround effects when using this virtual surround effect.
- For optimum effect, the distance between the unit and the listener should be about 3 or 4 times the distance between the right and left front speakers.

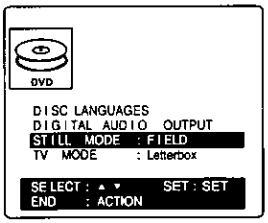
For assistance, call 1-800-211-PANA(7262)

Selecting STILL MODE

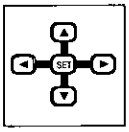
Set to reduce jitter in a displayed still picture.

1 **Do steps 1 and 2 on page 51.**

2



Set STILL MODE.



1) Press ▲▼ to select TV MODE.
2) Press SET repeatedly to select setting.

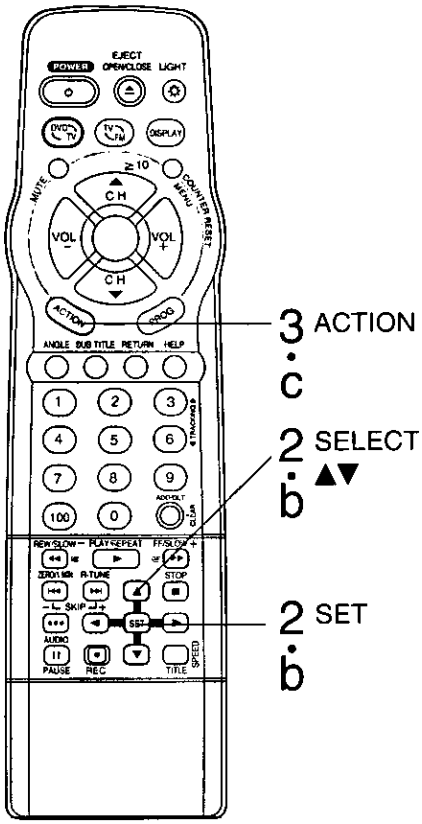
AUTO: "Field still" or "Frame still" is automatically selected during the still mode. (Factory preset)

FIELD: "Field still" is always selected.
Select this setting when jittering occurs in the pictures even when "AUTO" is selected.

FRAME: "Frame still" is always selected.
Select this setting when small text or fine patterns cannot be seen clearly even when "AUTO" is selected.

3

Exit this mode.
Press ACTION twice.

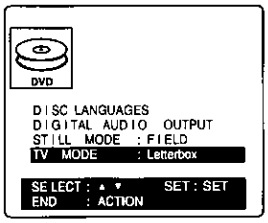


Selecting TV MODE

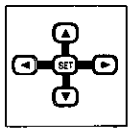
Set the screen display style for wide-screen video material playback.

a **Do steps 1 and 2 on page 51.**

b



Set TV MODE.



1) Press ▲▼ to select TV MODE.
2) Press SET repeatedly to select setting.

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

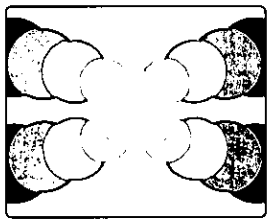
Letterbox : Wide screen video data is played in Letterbox style (top and button of screen has black margin).

c

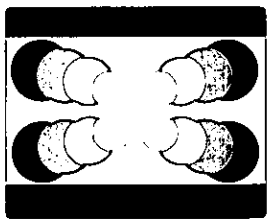
Exit this mode.
Press ACTION twice.

Example

- Pan & Scan (Factory preset)



- Letterbox



Before Requesting Service

Check the flowing points once again if you are having trouble with your unit.

Power	Correction
No power...	• Completely insert Power Plug into an AC outlet. • Set POWER button to ON.
Power turns itself off...	• Auto power-off (shut off) occurs after about 5 minutes elapse in DVD mode or if there is no broadcast signal in TV or Playback mode. Turn the power back on. (P.18, 32)
Monitor	**Correction**
No picture or sound...	• Make sure your antenna system (TV or CABLE), is correctly set. (P. 9) • Completely insert Power Plug into an AC outlet. • Set POWER button to ON. • Select "INT" on SP switch. (P.10)
Poor picture with normal sound...	• Adjust BRIGHTNESS, SHARPNESS, and PICTURE controls in the SET UP TV menu. (P.50)
Poor sound with normal picture...	• Adjust VOLUME control. (P.14)
Poor TV reception...	• Adjust SHARPNESS and PICTURE controls in the SET UP TV menu. (P.50)
No color or poor color...	• Adjust TINT and COLOR controls in the SET UP TV menu. (P.50)
Ghost (multiple) images...	• Install a directional antenna.
TV programs cannot be watched...	• Make sure the selected channel is in unit's memory. (P.13)
Channel cannot be selected...	• Only the channel begin recorded can be viewed on this unit.
VCR	**Correction**
TV program cannot be recorded...	• Make sure your antenna system (TV or CABLE), is correctly set. (P. 9) • Make sure cassette record tab is intact. (P. 6)
Timer recording cannot be performed...	• Check that clock is set to current time and date. • Make sure DSS/CABLE box (if used) is left on and tuned to channel to be recorded. • Set recording Start/Stop time correctly. (P.20-21) • Timer recording may not be performed or continued if a power interruption of more than 1 minute occurs before or during a Timer Recording, after power is restored.
No playback picture, or the playback picture is noisy or contains streaks...	• Adjust TRACKING control in either direction. (P.16) • Try Head Cleaning. (P.8)
VCR cannot be controlled...	• Make sure VCR LOCK is set to off. (P.33)
DVD/Video CD/CD	**Correction**
Play fails to start even when PLAY is pressed... Play starts but then stops immediately...	• This unit cannot play discs other than DVDs, Video CDs and CDs. • The disc may be dirty and require cleaning. • Be sure disc is installed with label side up.
Picture is distorted during rapid advance or rapid reverse...	• The picture will be somewhat distorted at times: this is normal.
No rapid advance (or rapid reverse) play...	• Some discs may have sections which prohibit rapid advance (or rapid reverse).
Play does not start even when title is selected...	• Confirm the "DVD LOCK" setting. (P.49)
Audio soundtrack and/or subtitle language is not the one selected at the initial settings...	• If the audio soundtrack and/or subtitle language selected at DVD initial settings does not exist on the disc, it will not be accessible.
No subtitles...	• Subtitles appear only when available on disc. • "OFF" is selected at the changing subtitle language. Select "ON" to display the subtitles. (P.46)
Alternative audio soundtrack (or subtitle) language cannot be selected...	• Alternative language cannot be selected with discs which do not contain more than one language. • For some discs, alternative language cannot be selected with the AUDIO or SUB TITLE button. Try selecting it from the DVD menu if available.
Angle cannot be changed...	• This function is dependent on software availability. Even if disc has multiple angles, they may be recorded for specific scenes only (ANGLE indicator on unit lights up). (P.47)

For assistance, call 1-800-211-PANA(7262)

Remote Control	Correction
Unit cannot be controlled...	• Aim Remote directly at the remote sensor on the unit. (P.66) • Avoid any object blocking signal path. • Inspect the remote batteries. (P.6) • Make sure VCR LOCK is set to off. (P.33) • Exposing unit remote sensor to direct fluorescent or outdoor light may cause signal interference.
"CH" on the MAIN MENU cannot be selected...	• Press DVD↔TV for TV mode.

Miscellaneous	Correction
Video cassette cannot be inserted...	• Insert the cassette window side up; record tab facing you.
Video cassette cannot be removed...	• Completely insert Power Plug into an AC outlet.
Eject does not function or insertion cannot be done...	• Turn the POWER off and then on, and try ejecting or inserting the tape again.
Video cassette ejects when a recording is started, or the power is turned off for timer recording...	• Make sure cassette record tab is intact. (P.6)
The disc cannot be removed...	• First, turn the unit power off. Then, prepare a rigid wire (e.g. an extended paper clip, etc.) and, applying moderate force, insert it straight into the hole at the base of the tray. The tray will eject a little. Now, pull the tray all the way out and remove the disc. (P.65)
In Stop mode, the VCR motor (CYLINDER) continues to rotate...	• To enable Quick Play mechanism, the VCR cylinder will rotate for about 5 minutes. This reduces response time from Stop to Play mode and from Play to Rewind Search mode.

If you cannot resolve the problem, please call the Customer Satisfaction Center for product assistance at 201-348-9090.

To locate an authorized servicenter, please call toll free 1-800-211-PANA (7262).

Warning and Instruction Displays

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

OSD	Caution	Pg
NO CH FOUND PLEASE CHECK ANTENNA CABLE CONNECTION THEN PUSH CH UP KEY AGAIN	• If no active channels are found for CHANNEL MEMORY...	9
PLEASE SET CLOCK BEFORE PROGRAMMING	• If you attempt to set or review a Timer Recording, VCR Plus+ System Programming or set the On-Timer and the Clock is not set...	12, 13
CHECK CASSETTE RECORD TAB	• If you press REC, and a cassette is inserted with no record tab...	6, 17
TO CANCEL TIMER REC HOLD DOWN STOP KEY FOR APPROX 3 SEC	• If you press STOP during a Timer Recording...	21
NO CASSETTE PLEASE INSERT A CASSETTE	• If you press PLAY, FF, REW, or REC without a cassette inserted...	16, 17
PLEASE PREPARE FOR TIMER REC	• If the unit is not in Stop mode or a cassette with record tab is not inserted two minutes before a Timer Recording is about to begin...	20, 21
VIDEO HEADS MAY NEED CLEANING PLEASE INSERT HEAD CLEANING CASSETTE OR REFER TO MANUAL END: PLAY KEY	• If head cleaning becomes necessary while playing back a tape...	8
VCR LOCK ACTIVATED	• If you press a function button other than STOP/EJECT or POWER while the unit is in VCR Lock mode...	33
PLEASE CHECK THE TYPE OF DISCS, AND STAIN OR SCRATCH OF A DISC	• If you press PLAY, or the unit reads data from a stained or scratched disc in DVD mode. Also, if the type of disc is other than DVD, Video CD or CD...	7
IT IS PROHIBITED TO COPY DVD/ VIDEO CD/CD TO VHS	• If you press REC in DVD mode...	17

Language code list

Enter the appropriate code number for the initial settings "AUDIO", "SUB TITLE" and/or "MENUS" (see page 51).

Code	Language
6565	Afar
6566	Abkhazian
6570	Afrikaans
6577	Ameharic
6582	Arabic
6583	Assamese
6588	Aymara
6590	Azerbaijani
6665	Bashkir
6669	Byelorussian
6671	Bulgarian
6672	Bihari
6678	Bengali; Bangla
6679	Tibetan
6682	Breton
6765	Catalan
6779	Corsican
6783	Czech
6789	Welsh
6865	Danish
6869	German
6890	Bhutani
6976	Greek
6978	English
6979	Esperanto
6983	Spanish
6984	Estonian
6985	Basque
7065	Persian
7073	Finnish
7074	Fiji

Code	Language
7079	Faroese
7082	French
7089	Frisian
7165	Irish
7168	Scots Gaelic
7176	Galician
7178	Guarani
7185	Gujarati
7265	Hausa
7273	Hindi
7282	Croatian
7285	Hungarian
7289	Armenian
7365	Interlingua
7378	Indonesian
7383	Icelandic
7384	Italian
7387	Hebrew
7465	Japanese
7473	Yiddish
7487	Javanese
7565	Georgian
7575	Kazakh
7576	Greenlandic
7577	Cambodian
7578	Kannada
7579	Korean
7583	Kashmiri
7585	Kurdish
7589	Kirghiz
7665	Latin

Code	Language
7678	Lingala
7679	Laothian
7684	Lithuanian
7686	Latvian, Lettish
7771	Malagasy
7773	Maori
7775	Macedonian
7776	Malayalam
7778	Mongolian
7779	Moldavian
7782	Marathi
7783	Malay
7784	Maltese
7789	Burmese
7865	Nauru
7869	Nepali
7876	Dutch
7879	Norwegian
7982	Oriya
8065	Panjabi
8076	Polish
8083	Pashto, Pushto
8084	Portuguese
8185	Quechua
8277	Rhaeto-Romance
8279	Romanian
8285	Russian
8365	Sanskrit
8368	Sindhi
8372	Serbo-Croatian
8373	Singhalese

Code	Language
8375	Slovak
8376	Slovenian
8377	Samoan
8378	Shona
8379	Somali
8381	Albanian
8382	Serbian
8385	Sundanese
8386	Swedish
8387	Swahili
8465	Tamil
8469	Telugu
8471	Tajik
8472	Thai
8473	Tigrinya
8475	Turkmen
8476	Tagalog
8479	Tonga
8482	Turkish
8484	Tatar
8487	Twi
8575	Ukrainian
8582	Urdu
8590	Uzbek
8673	Vietnamese
8679	Volapük
8779	Wolof
8872	Xhosa
8979	Yoruba
9072	Chinese
9085	Zulu

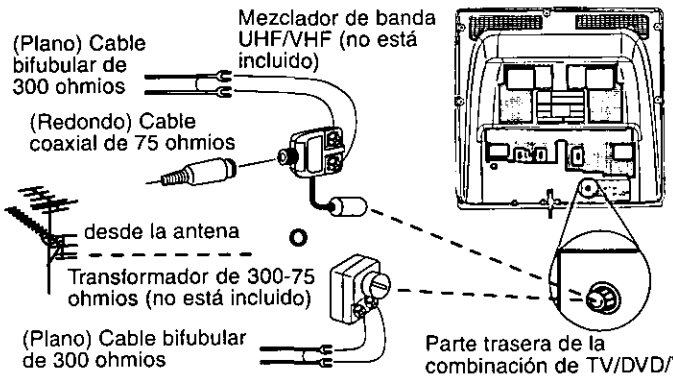
For assistance, call 1-800-211-PANA(7262)

Spanish Quick Use Guide/Guía para rápida consulta

Conexión de la antena externa

Desenganche la antena del televisor o de la videograbadora que tuviera anteriormente y conéctela a la parte trasera del registrador Combinación de VCR/TV, como se muestra en el diagrama. Si el sistema de su antena tiene conductores UHF y VHF separados, usted necesita un mezclador de banda UHF/VHF (no viene con el equipo.)

ADVERTENCIA:
Al utilizar cables coaxiales RF del "Tipo tuerca", solo debe apretarse con los dedos. Si se aprieta demasiado los cables pueden resultar dañados.

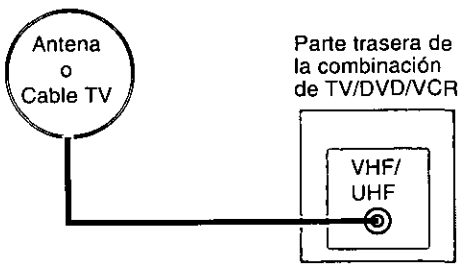


Conexiones de TV cable

■ Sin un decodificador de TV cable

Podrá;
- grabar o ver canales sin codificar.

No Podrá;
- grabar o ver canales codificados.
- ver otro canal que no sea el seleccionado para cualquier tipo de grabación.

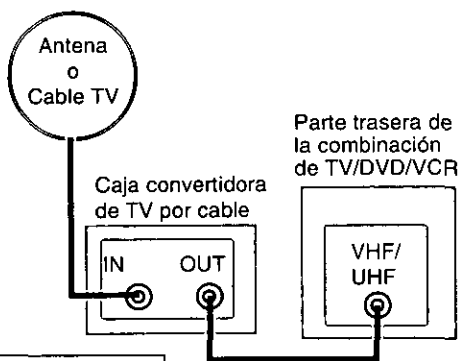


■ Con un decodificador de TV cable

Podrá;
- grabar o ver cualquier canal incluso los canales codificados.

NOTA : El canal deberá ser seleccionado en el decodificador de TV cable.

No Podrá;
- ver otro canal que no sea el seleccionado para cualquier tipo de grabación.
- hacer una grabación con temporizador de un canal a menos que lo seleccione en el decodificador de TV cable.



Para ver y grabar un canal codificado/ no codificado
Sintonice el canal del Registrador de la combinación de VCR/TV en el canal de salida de la caja convertidora de televisión por cable (por ejemplo el canal 3.)
Después, seleccione en el decodificador de TV cable el canal que se quiera ver o grabar.

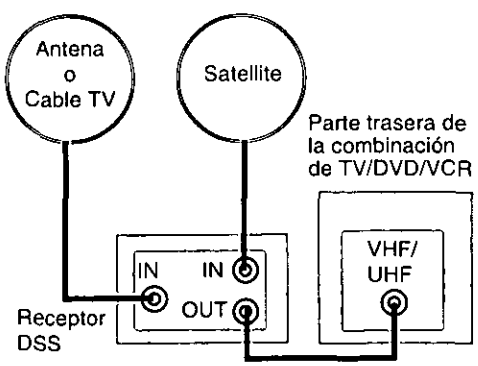
■ Con un receptor DSS

Podrá;
- grabar o ver cualquier canal incluso los canales codificados.

NOTA : El canal deberá ser seleccionado en el receptor DSS.

No Podrá;
- ver otro canal que no sea el seleccionado para cualquier tipo de grabación.
- hacer una grabación con temporizador de un canal a menos que lo seleccione en el receptor DSS.

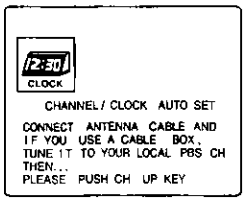
NOTA : El receptor DSS debe estar apagado para ver programas desde un decodificador de TV cable o desde la antena. Consulte el manual del receptor DSS para más detalles.



Para fijar el canal y reloj

1 **Pulse POWER en el control remoto o el aparato.**

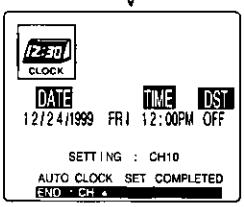
2



Comience el ajuste automático de canales y el ajuste automático del reloj.
Pulse CH ▲.

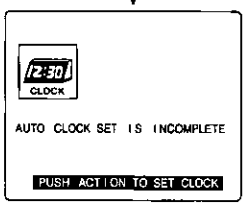
Las siguientes informaciones aparecerán seguidamente:
- CH AUTO SET PROCEEDING
- CH AUTO SET COMPLETED
- AUTO CLOCK SET PROCEEDING

Caso 1



(Ajuste terminado)
Pulse CH ▲ para salir.
- Si la hora indicada y DST no son correctos, vea la sección "Para fijar o fijar de nuevo el reloj."

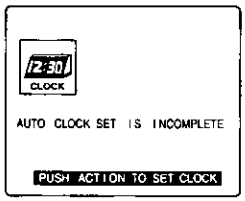
Caso 2



(Ajuste sin terminar)

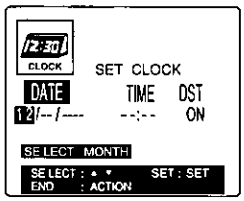
Caso 2 **El ajuste del reloj es incompleto. Ajuste el reloj manualmente.**

A



Exhiba la pantalla FIJAR RELOJ.
Presione ACTION para salir de este modo.

B



Ajuste el reloj manualmente.
1) Presione ▲▼ para seleccionar el mes.
2) Presione ▶ para ajustar.

- De la misma manera, ajuste el día, el año, la hora y la hora de ahorro de energía. (DST)

Para hacer correcciones,
pulse repetidamente ◀ ▶ para moverse hasta el error, luego corríjalo.

C **Final del ajuste.**
Pulse dos veces ACTION.

Para fijar o fijar de nuevo el reloj

En caso de que el reloj es incorrecto o ha ocurrido un corte eléctrico.

1 Pulse ACTION para que parezca el MENU PRINCIPAL.
2 Pulse ▲▼◀ ▶ para elegir "CLOCK." Luego, pulse ACTION para que aparezca la pantalla de a FIJACION RELOJ.
3 Pulse ▲▼ para elegir "MANUAL," y luego▶ para que aparezca la pantalla de la FIJACION RELOJ.
4 Por favor continue con los pasos **B** y **C** de la instrucción anterior (Caso 2.)

NOTA IMPORTANTE PARA AJUSTE AUTOMATICO DEL RELOJ

- El ajuste automático del reloj será realizado al volver a encender el aparato cada vez que lo apague. Si usa un decodificador de TV cable y desea que la función de ajuste automático del reloj funcione, el decodificador de TV cable debe quedar encendido y sintonizando el canal PBS en el momento en que se apaga el aparato.
- Si usa un sintonizador de TV satelital, para que funcione el ajuste automático del reloj, debe de estar apagado.
- Si usa un toma de audio/video para conectar el aparato y el decodificador de TV cable o el sintonizador de TV satelital, deberá también conectar el cable coaxial RF para poder usar las funciones de ajuste automático de reloj y ajuste automático de canal.
- Si por cualquier razón se cambiara la hora manualmente, no se podrá realizar la corrección automática de la hora.

Por ayuda, llame al 1-800-211-PANA(7262)

Operaciones básicas para la reproducción

1 **Inserte un casete.**
- El aparato se enciende automáticamente.

2 **Pulse PLAY.**
- La reproducción comienza automáticamente si el casete no tiene la lengüeta para prevención de grabación.

- Para encontrar una escena en particular Búsqueda hacia adelante → Pulse FF Búsqueda hacia atrás → Pulse REW
- Para ver una imagen fija (congelada) → Pulse PAUSE
- Para ver en cámara lenta → Pulse SLOW+ o SLOW- en el modo de imagen fija.
- Para ver imágenes cuadro a cuadro → Pulse PAUSE en el modo de imagen fija.
- Para parar → Pulse STOP
- Para rebobinar la cinta → Pulse REW
- Para expulsar la cinta → Pulse EJECT en el control remoto o STOP/EJECT en el aparato.

Operaciones básicas para la grabación

1 **Inserte un casete con la lengüeta para prevención de grabado.**
- El aparato se enciende automáticamente.

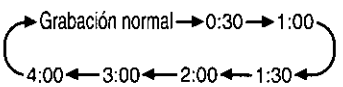
2 **Seleccione el canal.**
Pulse CH ▲▼ o las teclas numéricas correspondiente.

3 **Seleccione la velocidad de grabación.**
Pulse SPEED.
SP = reproducción normal
LP = reproducción larga
SLP = reproducción super larga
- La velocidad seleccionada debe aparecer en la pantalla.

4 **Comience la grabación.**
Pulse REC.
- Para editar partes no deseadas de una grabación, pulse PAUSE para hacer una pausa durante la grabación.
- No podrá ver otro canal durante la grabación.

■ Para parar → Pulse STOP.

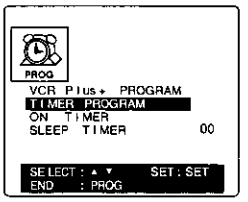
■ **El aparato deja de grabar a una hora prefijada.** (Grabación de un toque)
Pulse REC repetidamente para ajustar la hora de grabación (30 min - 4 horas.)



Grabación con temporizador

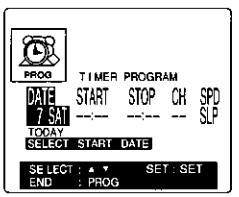
1 **Exhiba FIJAR PROGRAMACION.**
Pulse PROG.

2



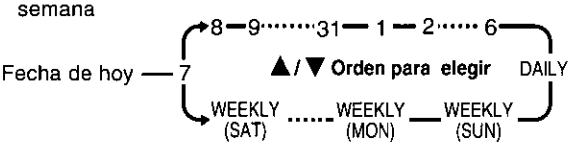
Exhiba TIMER PROGRAM.
1) Pulse ▲▼ para seleccionar.
2) Pulse ▶ para exhibir.
- Si ya existe un programa en la memoria, pulse▲▼ y ▶ para seleccionar un número de programa sin usar.

3



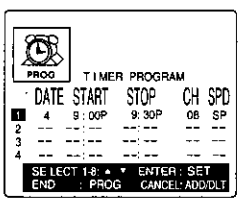
Ajuste la fecha de grabación.
1) Pulse ▲▼ para seleccionar.
2) Pulse ▶ o ◀ para ajustar.

- 1 - 31 = Grabación única
- DAILY = a la misma hora de lunes a viernes
- WEEKLY SUN-SAT = a la misma hora una vez a la semana



Repita el paso 3 para ajustar:
hora de comienzo, hora de parada, canal (o LINE para una fuente exterior), velocidad (SP, LP, SLP)

4



Termine el programa.
Pulse PROG.

Para introducir más programas.
Pulse ▲▼ y ▶ para seleccionar y ajustar el número de programa en blanco, y luego repita los paso 3.

5 **Salga de este modo.**
Pulse PROG dos veces.
- Si está usando un decodificador de TV cable, asegúrese que se encuentra en el canal deseado y que la alimentación queda conectada para grabar con temporizador.
- El indicador PROG TIMER se enciende en el aparato.

Spanish Quick Use Guide/Guía para rápida consulta

Operaciones básicas del DVD

1 **Pulse POWER en el control remoto o el aparato.**

2 **Elija el modo DVD**
Pulse DVD↔TV.

3 **Introducir un disco.**
1) Pulse OPEN/CLOSE.
2) Ponga un disco en la bandeja de disco.
- Sujete el disco sin tocar ninguna de sus superficies, póngalo con el lado donde esteá impreso el título hacia arriba, alinéelo con las guías y póngalo en su posición apropiada.
  Disco de 3"(8 cm) Disco de 5" (12 cm)

4 **Iniciar la reproducción**
Pulse PLAY.
La bandeja del disco se cierra automáticamenty.
- Si está usando un DVD interactivo (Interactive DVD) o un Vídeo CD con contol de reproducción (playback control) y aparece un menú de títulos (TITLE MENU) en la pantalla, siga al paso 5.

5 **Elija el artículo deseado.**
1) Pulse ▲▼◀▶ o las teclas numéricas.
2) Pulse SET para la reproducción.
Si usa las teclas numéricas, la reproducción comienza automáticamente.

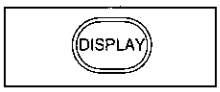
6 **Parar la reproducción.**
Pulse STOP.

7 **Expulsar el disco.**
Pulse OPEN/CLOSE.

- **Para buscar una escena particular**
  Búsqueda hacia adelante →
  Pulse FF en el modo de reproducción.
  Búsqueda hacia atrás →
  Pulse REW en el modo de reproducción.
  (Para liberar, pulse PLAY)
- **Para saltar un capítulo o una pista**
  Salto hacia adelante →
  Pulse SKIP ▶▶I en el modo de reproducción.
  Un capítulo (DVD) o una pista (Vídeo CD/CD) se salta cada ves que se oprime la tecla.
  Salto hacia atrás →
  Pulse I◀◀ SKIP en el modo de reproducción.
- **Para ver una imagen fija**
  Pulse PAUSE durante la reproducción.
  (Para liberar, pulse PLAY)
- **Para ver imágenes cuadro a cuadro (DVD/Vídeo CD)**
  La imagen avanza un cuadro cada vez que presiona la tecla.
  Pulse PAUSE en el modo de imagen fija.
  (Para volver a la reproducción normal, pulse PLAY.)
- **Para ver en cámara lenta (DVD/Vídeo CD)**
  Pulse SLOW+ o SLOW- en el modo de imagen fija.
  (Para liberar, pulse PLAY)

Funcionnamiento del DVD utilizando visualizaciones en pantalla

Cuando se pulsa DISPLAY, la visualización en pantalla muestra la información del disco (título / capítulo / número de sista, tiempo transcurrido de reproducción, audio / idioma del subtítulo, y ángulo) e información (repetir la reproducción, modo reproducción, Karaoke vocal e´ncendido / apagado, etc.).

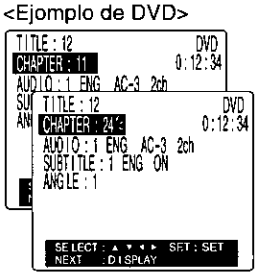
1 

Visualiza Visualizaciones en pantalla.
Pulse DISPLAY en el modo reproducción o parada.
- Cada vez que se pulse DISPLAY, la visualización en pantalla cambia como se muestra a continuación.

Información seleccionada del disco
↓
Información seleccionada de la unidad
↓
Pantalla normal

2 **Seleccio el ítem deseado**
1)Pulse ▲▼ (o ◀▶) para seleccionar.
2)Pulse SET para ajustar

3 <Ejomplo de DVD>



<Ejomplo de Vídeo CD>

Seleccion el ajuste deseado
1)Pulse ▲▼ para seleccionar.
2)Pulse SET para ajustar.

Para volver a la pantalla normal, pulsar repetidamente RETURN o DISPLAY.

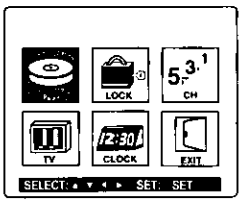
Por ayuda, llame al 1-800-211-PANA(7262)

Reproducción programada (Vídeo CD/CD)

Puede usted programar pistas específicas y el orden de reproducción.
• Vídeo CD o CD es insertado en el modeo DVD.

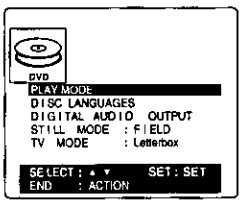
1 **Visualizar MAIN MENU.**
Pulse ACTION en el modo parada.

2



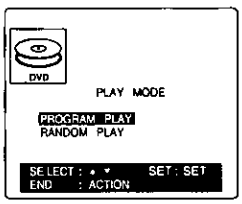
Vísualizar la pantalla DVD.
1) Pulse ▲▼◀▶ para seleccionar "DVD."
2) Pulse SET para visualizar.

3



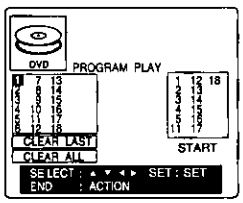
Seleccionar PLAY MODE.
1) Pulse ▲▼ para seleccionar.
2) Pulse SET para visualizar.

4



Seleccionar PROGRAM PLAY.
1) Pulse ▲▼ para seleccionar.
2) Pulse SET para visualizar.

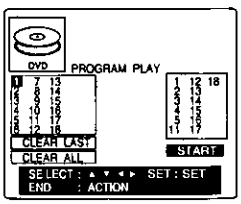
5



Seleccionar el número de la pista deseada. (Se visualizan los números de la pista del disco).
1) Pulse ▲▼◀▶ para seleccionar.
2) Pulse SET para seleccionar.

- Repita el paso 5 para seleccionar otra pista.
- La pista seleccionada se añade a la parte derecha.

6



Comenzar PROGRAM PLAY.
1) Pulse ▲▼◀▶ para seleccionar "START."
2) Pulse SET.

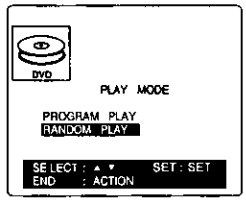
- La reproducción comienza en la secuencia programada.
- Para cancelar, pulsar STOP durante la reproducción y luego pulse ADD/DLT.

Reproducción arbitraria (Vídeo CD/CD)

Las pistas se reproducen de forma arbitraria.

1 **Repita los pasos 1-3 de la página anterior.**

2



Seleccione RANDOM PLAY.
1) Pulse ▲▼ para seleccionar.
2) Pulse SET.

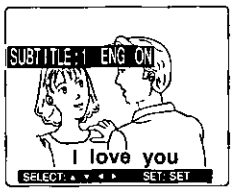
- Comienza la reproducción arbitraria.
- Para cancelar, pulse STOP durante la reproducción y luego pulse ADD/DLT.

Spanish Quick Use Guide/Guía para rápida consulta

Cambio del idioma de subtítulos [DVD solamente]

El idioma de los subtítulos seleccionado al hacer las fijaciones iniciales se puede cambiar por otro idioma diferente, si éste se encuentra disponible.

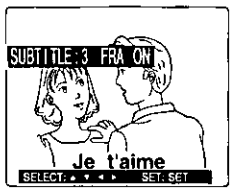
1



Pulse SUBTITLE durante la reproducción.

Cuando no haya subtítulos grabados, "-" se visualizará en lugar del número de idioma.

2



Seleccionar el idioma deseado.

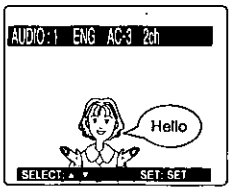
1) Pulse ▲▼ para seleccionar idioma.
2) Pulse ▶ (o ◀) para ajustar.
3) Pulse ▲ (o ▼) para seleccionar "ON" o "OFF."

Para voler a la pantalla normal, pulse SUB TITLE.

Cambio del idioma de la pista de sonido [DVD solamente]

El idioma de la pista de sonido seleccionado al hacer las fijaciones iniciales se puede cambiar por otro idioma diferente, si éste se encuentra disponible.

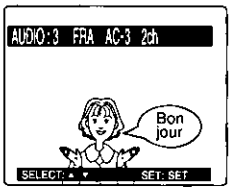
1



Visualizar la pantalla AUDIO.

Pulse AUDIO durante la reproducción.

2



Seleccionar el idioma deseado.

Press ▲▼ to select desired language.

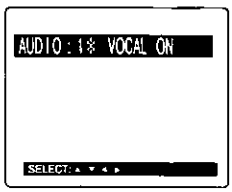
Para voler a la pantalla normal, pulsar AUDIO.

Selección de vocal para los discos de Karaoke [DVD/Video CD]

1 **Visualizar la pantalla AUDIO.**

Pulse AUDIO durante la reproducción.

2



Seleccionar el ajuste deseado.

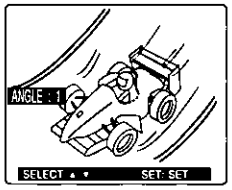
1) Pulse ▲▼ (o ◀▶) para seleccionar.
2) Pulse ▶ (o ◀) para ajustar. (DVD solamente)

- DVD Karaoke (1 vocal) VOCAL ON ↔ VOCAL OFF
- DVD Karaoke (2 vocales) VOCAL V1 + V2 → VOCAL V1 ↓ VOCAL V2 ← VOCAL OFF
- Video CD LR → L → R

Visión desde otro ángulo [DVD solamente]

Algunos discos DVD tienen escenas que hansido filmadas simultáneamente desde un número de ángulos diferentes. Con estos discos, la misma escena podrá verse desde cada uno de estos ángulos diferentes utilizando el botón ANGLE.

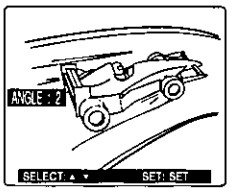
1



Visualizar la pantalla de ángulo.

Pulse ANGLE durante la reproducción.

2



Seleccionar el ángulo deseado.

Pulse ▲▼ para seleccionar.

Para voler a la pantalla normal, pulsar ANGLE.

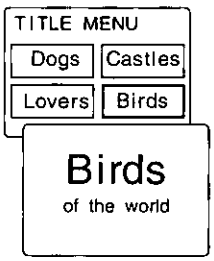
Utilización de un menú de títulos [DVD solamente]

Algunas discos con películas, por ejemplo, vienen con dos o más títulos. Si el disco tiene un menú de títulos grabado, el botón TITLE podrá utilizarse para seleccionar el título de la película.

1 **Pulse TITLE durante la reproducción.**

Ahora se visualiza una lista de los títulos del disco.

2



Seleccionar el título deseado.

1)Pulse ▲▼ ▲▼ 0 la (s) tecla (s) NUMBERED para seleccionar.
2)pulse SET.

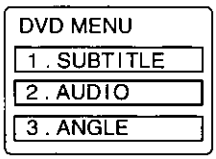
Utilizacion de un menu de DVD [DVD solamente]

Algunos discos DVD tienen estructuras únicas de menús llamadas menús DVD. por ejemplo, los DVDs programados con un contenido complejo proporcionan menús guía, y los grabados con varios idiomas proporcinan menús para audio e idiomas de subtítulos. Aunque los contenidos de los menús DVD y la operación cambian de disco a disco, a continuación se explica la operación básica cuando se utiliza esta característica.

1 **Pulse MENU durante la reproducción.**

El menú de DVD introducido en el disco se visualiza ahora.

2



Seleccionar el ítem deseado.

1)Pulse ▲▼ ▲▼ 0 la (s) tecla (s) NUMBERED para seleccionar.
2)pulse SET.

Por ayuda, llame al 1-800-211-PANA(7262)

Fijaciones iniciales

1 **Visualizar MAIN MENU.**
Pulse ACTION en el modo de parada.

2 **Visualizar la pantalla DVD.**
1) Pulse ▲▼◀▶ para seleccionar.
2) Pulse SET.

3 **Seleccionar el artículo deseado.**
1) Pulse ▲▼ para seleccionar.
2) Pulse SET.

DISC LANGUAGES
Todos los idiomas ofrecidos en el disco pueden ser ajustados, Si el idioma ajustado no es ofrecido en el disco, se seleccionará el idioma original del disco.

DIGITAL AUDIO OUTPUT
Puede usted ajustar la salida audio procedente del terminal de salida audio digital.

STILL MODE
Para seleccionar "Campo fijo" o "Marco fijo" para prevenir inestabilidad o para permitir ver textos pequeños o patrones finos claramente en el modo de imagen fija.

TV MODE
Para seleccionar si el material del vídeo para pantalla ancha será vuelto a reproducir en el estilo Pan&Scan o en el estilo Letterbox en la pantalla.

4 **Seleccionar el artículo deseado.**
1) Pulse ▲▼ para seleccionar.
2) Pulse SET.

5 **Volver a visualizar el menú de DVD para continuar el ajuste.**
Pulse ACTION y pase al paso 3 para ajustar otro ajuste o, para salir, pulse ACTION tres veces.

Selección de DISC LANGUAGES [DVD solamente]

Seleccione "AUDIO"
English/French/Spanish : (Fijación de fábrica : ingles)
Original : Se seleccionará el idioma original de cada disco.
OTHER ** :** Se puede seleccionar el otro idioma.

Seleccione "SUB TITLE"
AUTO : Se seleccionará el mismo que fue seleccionado en la preparación de "Audio".(Fijación de fábrica)
- Si el idioma seleccionado en la preparación de "Audio" se utiliza durante la reproducción, los subtítulos no aparecerán.
- Si se utiliza otro idioma durante la reproducción, los subtítulos aparecerán en el idioma seleccionado en la preparación de "AUDIO"

English/French/Spanish
OTHER ** :** Se puede seleccionar el otro idioma.

Seleccione "MENUS"
English/French/Spanish : (Fijación de fábrica : inglés)
OTHER ** :** Se puede seleccionar el otro idioma.

Selección de DIGITAL AUDIO OUTPUT

Seleccione "LPCM(DVD)"
OFF : Por el conector de salida de audio digital solamente sale PCM lineal de 48 kHz/16 bits. Durante la reproducción del DVD grabado en el PCM lineal de 48 kHz/20 bits/24 bits o 96 kHz, no sale audio digital.(Fijación de fábrica)

PCM : Durante la reproducción del DVD grabado en el PCM lineal de 48 kHz/20 bits/24 bits o 96 kHz, sale audio digital convertido a 48 kHz/16 bits.(La salida digital de audio PCM está restringida a 48 kHz/16bits o menos para proteger los derechos de autor.)

Seleccione "Dolby digital"
Bitstream: Sale un flujo de bits Dolby digital (AC-3) (2ch -5.1ch). (fijación de fábrica)
PCM : Sale PCM(2ch) de 48 kHz/16 bits.

Seleccione "dts"
OFF : No salida (fijación de fábrica)
Bitstream : Sale un flujo de bits dts.

Seleccione "Dynamic Range Compression"
OFF : Se selecciona el margen de audio normal. (fijación de fábrica)
ON : Seleccione este ajuste para disfrutar de un sonido dinámico incluso a bajo volumen. Esto es muy útil para escuchar tarde durante la noche.[Esta función sólo se activa con DVDs Dolby Digital (AC-3).]

Seleccione "V.S.S."
El sonido envolvente virtual crea el efecto de sonido procedente de altavoces que parece que estén en la parte de atrás incluso cuando ha conectado sólo a un sistema estereo de 2 canales. [Sólo Dolby DIgital (AC-3) DVD].
OFF : No efecto de sonido envolvente virtual (Preajuste de fábrica)
VSS 1 : Efecto natural
VSS 2 : Efecto acentuado

Selección de STILL MODE

AUTO : Durante el modo de imagen fija se seleccionarán automáticamente "Campo fijo" o "Marco fijo" . (Fijacion de fabrica)

FIELD : Seleccione este ajuste cuando ocurra "distorsión" en las imagenes, incluso cuando se haya seleccionado "AUTO".

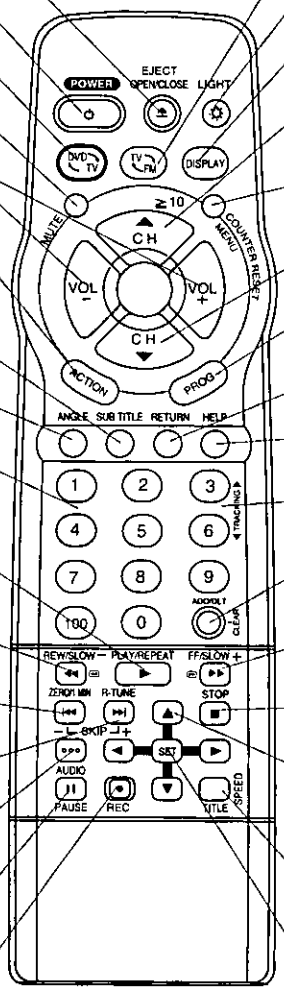
FRAME : "Marco fijo" es siempre seleccionado. Seleccionar este ajuste cuando no se puedan ver claramente texto pequeño o patrones finos incluso cuando esté seleccionado "AUTO".

Selección de TV MODE

Pan&Scan : Datos de la pantalla ancha de vídeo son reproducidos en el estilo Pan & Scan (la parte derecha e izquierda de la pantalla son recortadas). (Preajuste de fábrica
- Datos de vídeo no formateados en Pan & Scan serán reproducidos en el estilo letterbox.

Letterbox : Datos de la pantalla ancha de vídeo son reproducidos en el estilo Letterbox (la parte de arriba y abajo de la pantalla tienen un margen negro).

Remote Control Buttons



EJECT/OPEN/CLOSE
See pages 16, 18, 64.

POWER
See pages 12, 14, 18.

DVD↔TV
See page 18.

MUTE
See pages 14, 29.

VOLUME UP/DOWN
See page 14.

ACTION
See pages 12, 13, 17, 23, 24, 28-31, 33, 35-38, 44, 49, 50-53.

SUBTITLE
See page 46.

ANGLE
See page 47.

NUMBERED KEYS
See pages 12-14, 17-19, 25, 30, 31, 36, 41, 48.

PLAY/REPEAT
See pages 16, 18, 19, 32, 45.

REW/SLOW−
See pages 16-19.

SKIP−/ZERO/1 MINUTE SKIP
See pages 18, 19, 32.

SKIP+/R-TUNE
See pages 14, 18, 19.

AUDIO
See pages 15, 31, 34, 46, 47.

PAUSE
See pages 16-19.

REC
See page 17.

TV↔FM
See pages 30, 31.

LIGHT
See page 64.

DISPLAY
See pages 14, 15, 17, 27, 32, 39, 41.

CHANNEL UP/≥10
See pages 12, 14, 17, 18, 30.

MENU/COUNTER RESET
See pages 18, 19, 32, 48.

CHANNEL DOWN
See pages 14, 17, 30.

PROG
See pages 20, 21, 25-27.

RETURN
See pages 18, 42.

HELP
See page 64.

TRACKING UP/DOWN
See page 16.

ADD/DLT
See pages 12, 13, 21, 24, 26, 31, 45-46.

FF/SLOW+
See pages 16-19.

STOP
See pages 16-19, 21, 44, 45.

SELECT
See pages 12, 13, 17, 18, 20, 21, 23-31, 33, 35-38, 44-53.

TITLE/SPEED
See pages 17, 18, 48.

SET
See pages 12, 13, 17, 18, 20, 21, 23-31, 33, 35-38, 41, 44, 45, 48-53.

Light Tower® Illuminated Remote Control

LIGHT button:

When LIGHT is pressed, (DVD↔TV, TV↔FM, DISPLAY, CH UP/DOWN, VOL UP/DOWN, ACTION or PROG) buttons will light for 5 seconds for easy button location.

If no button is pressed in 5 seconds, the light goes out to conserve the battery.

EJECT button:

When this button is pressed in TV mode, the tape is ejected. This button is inoperative if pressed during recording.

If pressed in DVD mode, the disc tray opens or closes.

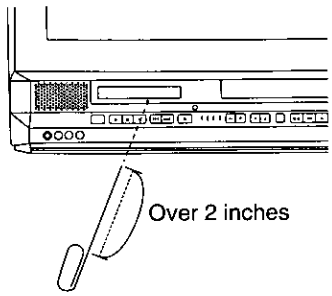
HELP button:

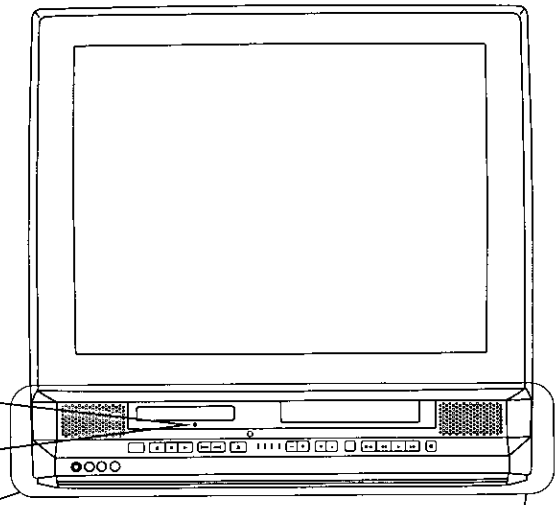
When HELP is pressed, a simple operation guide is be displayed to help you through an operation.

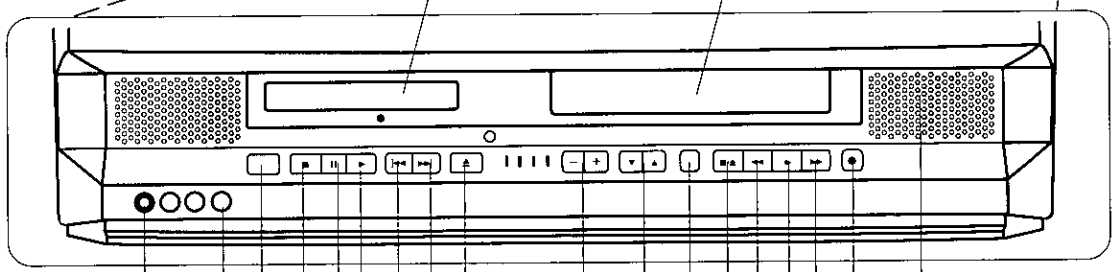
Front View of the unit

If the disc cannot be removed,

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







Disc Tray
See Page 18.

Cassette Compartment
See Pages 16, 17.

Phones Jack
See page 14.

Audio/Video In Jacks
See pages 22, 40.

POWER
See pages 8, 12, 14, 18.

STOP
See page 18.

PAUSE
See page 19.

PLAY/REPEAT
See pages 18, 45.

SKIP ⏮
See page 19.

SKIP ⏭
See page 19.

OPEN/CLOSE
See page 18.

Built In Speaker (× 2)

REC
See pages 17, 33.

FAST FORWARD/SEARCH
See pages 8, 16.

PLAY/REPEAT
See pages 8, 16, 32.

REWIND/SEARCH
See page 16.

STOP/EJECT
See pages 16, 17.

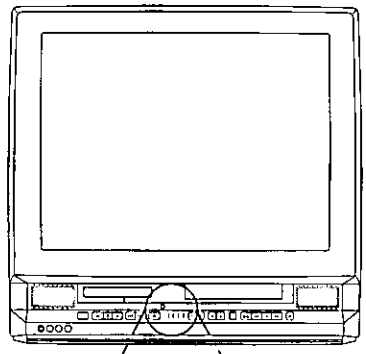
TV/FM
See pages 30, 31.

CHANNEL UP/DOWN
TRACKING UP UP/DOWN
See pages 14, 16, 17.

VOLUME UP/DOWN
See page 14.

Location of Controls

Indicators on the Front Panel



Remote Sensor

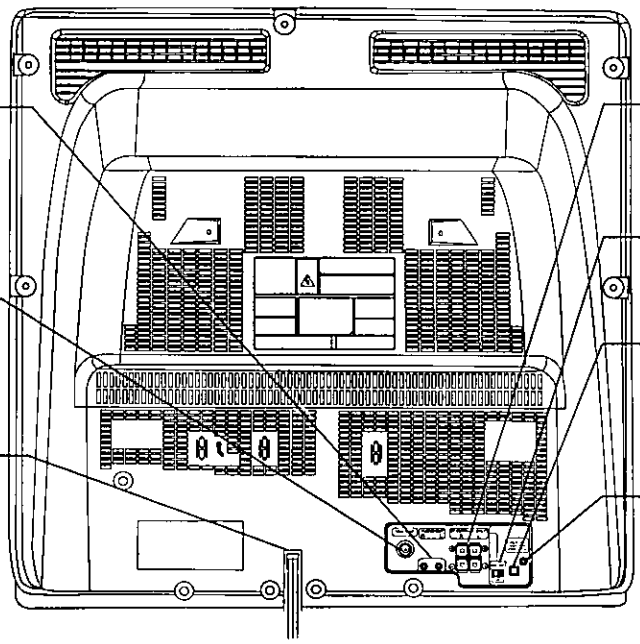
ON TIMER Indicator
Lights when the On Timer is set.
See page 26.

ANGLE Indicator
Lights when a scene recorded at different angles is detected.
See page 47.

REC Indicator
Lights during recording. In Rec Pause or OTR Pause mode, the indicator flashes.
See page 17.

PROG TIMER Indicator
Lights when the unit is set for Timer Recording. It flashes when a Timer Recording has been set with no tape inserted, the clock is not set, or the tape is in motion.
See pages 20, 21, 25.

Rear View of the unit



Audio Output Connector (L/R)
See page 10.

External Speaker Output connector
See page 10.

Speaker switch
See page 10.

VHF/UHF Antenna Input Terminal
See page 9.

Optical digital audio output connector
See page 11.

AC Power Plug

Coaxial audio output connector
See page 11.

For assistance, call 1-800-211-PANA(7262)

Warranty

Panasonic Consumer Electronics Company,
Division of Matsushita Electric Corporation of America,
One Panasonic Way
Secaucus, New Jersey 07094

Panasonic Sales Company,
Division of Matsushita Electric of Puerto Rico, Inc.
AVE. 65 de Infantería, Km. 9.5 San Gabriel
Industrial Park Carolina, Puerto Rico 00985

PANASONIC Video Products
Limited Warranty

Panasonic Consumer Electronics Company or Panasonic Sales Company (collectively referred to as "the Warrantor") will repair this product with new or refurbished parts, free of charge, in the USA or Puerto Rico, in the event of a defect in materials or workmanship as follows (all time periods commence from the date of the original purchase):

PRODUCT	PARTS	LABOR
CAMCORDER	ONE (1) YEAR, EXCEPT CCD IMAGE SENSOR CCD IMAGE SENSOR - SIX (6) MONTHS	NINETY (90) DAYS NINETY (90) DAYS
VCR	ONE (1) YEAR	NINETY (90) DAYS
A/V MIXER	ONE (1) YEAR	NINETY (90) DAYS
MONITOR-VCR/DVD	ONE (1) YEAR, EXCEPT CRT CRT - TWO (2) YEARS	NINETY (90) DAYS CRT - NINETY (90) DAYS CUSTOMER PAYS ALL LABOR CHARGES AFTER 90 DAYS

Monitor-VCR/DVD In-home or carry-in Service: 22" (diagonal) CRT / LCD and Larger
Monitor-VCR Carry-in Service: 21" (diagonal) CRT / LCD and smaller

Batteries (if included) - New rechargeable batteries in exchange for defective rechargeable batteries for ten (10) days.
Non-rechargeable batteries are not warranted.

Tape (if included) - New video cassette tape in exchange for a defective video cassette tape for five (5) days.

In-home, carry-in or mail-in service, as applicable, in the USA can be obtained during the warranty period by contacting a Panasonic Services Company (PASC) Factory Servicenter listed in the Service Directory. Or call toll free 1-800-211-PANA (7262), to locate an authorized PASC Servicenter. Carry-in or mail-in service in Puerto Rico can be obtained during the warranty period by calling the Panasonic Sales Company telephone number listed in the Servicenter Directory.

This warranty is extended only to the original purchaser. A purchase receipt or other proof of the date of the original purchase is requires before warranty service is rendered.

This warranty only covers failures due to defects in materials and workmanship which occur during normal use and does not cover normal maintenance, including, but not limited to, video and audio head cleaning. The warranty does not cover damage which occurs in shipment, or failures which are caused products not supplied by the warrantor, or failures which result from accident, misuse, abuse, neglect, mishandling, misapplication, alteration, modification, faulty installation, set-up adjustments, improper antenna, inadequate signal pickup, maladjustment of consumer controls, improper operation, power line surge, improper voltage supply, lightning damage, commercial use such as hotel, office, restaurant, or other business or rental use of the product, or service by anyone other than a PASC Factory Servicenter or a PASC authorized Servicenter, or damage that is attributable to acts of God.

LIMITS AND EXCLUSIONS

There are no express warranties except as listed above.
THE WARRANTOR SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING, WITHOUT LIMITATION, DAMAGE TO TAPES) RESULTING FROM THE USE OF THIS PRODUCTS, OR ARISING OUT OF ANY BREACH OF THE WARRANTY. ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE, ARE LIMITED TO THE APPLICABLE WARRANTY PERIOD SET FORTH ABOVE. Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

If a problem with this product develops during or after the warranty period, you may contact your dealer or Servicenter. If the problem is not handled to your satisfaction, then write to the Customer Satisfaction Center at the Panasonic Consumer Electronics Company address above.

SERVICE CALLS WHICH DO NOT INVOLVE DEFECTIVE MATERIALS OR WORKMANSHIP AS DETERMINED BY THE WARRANTOR, IN ITS SOLE DISCRETION, ARE NOT COVERED. COSTS OF SUCH SERVICE CALLS ARE THE RESPONSIBILITY OF THE PURCHASER.
warvid 10/20/97

Service Center List

For Product Information, Operating Assistance, Literature Request, Dealer Locations, and all Customer Service inquiries please contact:
1-800-211-PANA (7262), Monday-Friday 9am-9pm Saturday-Sunday 9am-7pm, EST.

Web Site: http://www.panasonic.com
You can purchase parts, accessories or locate your nearest servicenter by visiting our Web Site.

Accessory Purchases:

1-800-332-5368 (Customer Orders Only)
Panasonic Services Company 20421 84th Avenue South, Kent, WA 98032
(6 am to 5 pm Monday - Friday; 6 am to 10:30 am saturday; PST)
(Visa, MasterCard, Discover Card, American Express, Check)

Factory Servicenters Locations

CALIFORNIA
6550 Katella Avenue
Cypress, CA 90630

800 Dubuque Avenue
S. San Francisco,
CA 94080

20201 Sherman Way
Suite 102
Canoga Park, CA 91306

3878 Ruffin Road
Suite A
San Diego, CA 92123

COLORADO
1640 South Abilene
Street Suite D
Aurora, CO 80012

FLORIDA
3700 North 29th Avenue
Suite 102
Hollywood, FL 33020

GEORGIA
8655 Roswell Road
Suite 100
Atlanta, GA 30350

ILLINOIS
9060 Golf Road
Niles, IL 60714

1703 North Randall
Road Elgin, IL 60123
(Pick-up / Drop-off only)

MARYLAND
62 Mountain Road
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