

Pioneer *sound.vision.soul*

**PRV-9000
DVD Recorder**

Operating Instructions

Version 1.0

November 27, 2001

Pioneer Electronic Corporation
Pioneer Electronics (USA), Inc.

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<p>IMPORTANT:</p>  <p>The lightning flash within an equilateral triangle is intended to alert the user to the presence of un-insulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock.</p>	<p>CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN</p> <p>TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</p>	 <p>The exclamation point within a equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the equipment.</p>
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1 INTRODUCTION

The Pioneer PRV-9000 Pro DVD-Video Recorder is a stand-alone set-top unit that can make DVD-Video discs with the press of a single button and creates the disc in *real time*. Anyone familiar with the operating of a VCR can easily operate the PRV-9000, making the creation of compatible DVD-Video discs as quick and easy as recording videotape. Recordings are made using either write-once DVD-R or re-recordable DVD-RW discs that are compatible with most DVD-Video players and DVD-ROM drives.* In DVD-Video mode, maximum program capacity is either one hour or two hours per disc, and up to 99 separate video segments (titles) can be recorded. The PRV-9000 Pro DVD-Video Recorder can automatically generate a DVD title menu that can be used to access any recorded title on a DVD-R compatible DVD-Video player similar to how movie titles are used. Analog and digital A/V inputs allow easy connection to both legacy and current video sources. The recorder outputs include component, Y/C and composite video signals. The unit can also play DVD-Video discs (read-only), DVD-R and DVD-RW media, as well as CD-Audio and Video CD discs(read-only), CD-R and CD-RW media.

**Note: DVD-R media is compatible with most DVD-Video players and DVD-ROM drives. DVD-RW media is also compatible with many players and drives when using DVD-Video mode. In either case, users should confirm playback compatibility with the target player model or computer system prior to purchase.*

1.1 Features

1.1.1 Playback

The following points summarize playback features.

- **Progressive Scan Compatible**

Compared to standard interlaced video, progressive scan effectively doubles the amount of video information fed to your television or monitor. The result is a stable, flicker-free image.

Note: Check with the monitor manufacturer for Progressive Scan compatibility.

- **Cinema Surround Sound**

Connect the PRV-9000 to a Dolby Digital-compatible amplifier/receiver to enjoy full surround sound effects from DVD discs with Dolby Digital.

- **Search Functionality**

Unlike video tape that needs to be wound to the correct place, you can jump to the right part of the DVD disc. Search to a title, a chapter or to a specific time on a disc.

- **Disc Navigator (VR mode)**

Use the Discnavi (Disc Navigator) to find your way around and edit a disc. This feature displays a still frame (picture) from each title, or an image from a chapter within a title, as a visual reminder of that portion of the disc contents.

1.1.2 Recording

The following points summarize the recording functions.

- **Program up to 8 Timed Recordings**
Program the PRV-9000 to record up to eight events, up to a month in advance, using the VCR+Plus system. In addition to recording single programs, you can specify daily or weekly recordings too.
- **One-Touch Recording**
Use the one-touch recording feature to start a 30-minute recording block immediately. The recording time is extended another 30-minutes each time the one-touch button is pressed.
- **Disc Timer Recording (VR mode)**
Instead of storing a timer program in the recorder's memory, program a disc for a timed recording. The timer is automatically set when the disc is loaded. This is a great function for recording a regular weekly program on a single disc.
- **Optimized Recording (VR mode)**
Optimized recording adjusts the playback quality/recording time automatically if a timer recording is too long for the available disc space.
- **High Quality 16-bit Linear PCM Audio**
When using one of the high-quality settings in VR mode, the audio is recorded in the uncompressed 16-bit Linear PCM format. This format delivers clear audio to accompany the high picture quality.
- **Picture Quality Adjustments**
During playback or recording, you can adjust various quality settings to improve the picture. For example, to copy an old video tape to DVD, optimize the picture quality before transferring it to disc.
- **Manual Level Recording (VR mode)**
While the standard mode allows up to two hours of recording to a disc, using the manual mode allows the picture quality to be adjusted down to add recording time. There are a total of 32 recording rates with the lowest picture quality giving up to 8 hours of recording time per disc.
- **Auto-Recording from Satellite Receiver or Other Set-Top Systems**
Connecting a satellite receiver or a set-top box to the recorder's Line 2/Auto Rec inputs provide automatic starts and stops synchronized to the timer settings on the receiver or the set-top box.

1.1.3 Video Input/Output

The PRV-9000 has a built-in DV (Digital Video) input/output jack for directly connecting a digital video camera to the unit. Simply transfer the footage to the unit and edit your video. DVD content may also be transferred back to the DV camera.

1.1.4 Editing

The following points summarize the editing functions.

- **Safe, Non-Destructive Editing** (VR mode)
When editing a DVD-RW disc, the original content on the disc is left untouched. The edited version (Playlist content) points to your selected areas on the original disc content.
- **Chapter Marking** (VR mode)
Use the chapter marks that were automatically inserted during recording for edits.
- **Add, Move and Delete Parts** (VR mode)
Parts are segments that make up a title. Parts, or video scenes, inserted into the Playlist, can be moved or deleted. The original content is unaffected, just the segments on the playlist are affected.

1.1.5 Compatibility

DVD-Video is a new recording format agreed upon by the DVD Forum in the year 2000. There may be some issues playing a recordable DVD (DVD-R/RW) disc in some players. The following points provide general compatibility information.

- **Play Video-format recordings on a DVD player** (Video mode)
Discs formatted and recorded using the Video mode can be played back compatible DVD players and drives.
- Some older players may fail to play back the DVD-R/RW format.
- DVD-Video playback may require additional software to function properly.

Note: Some symptoms include an unreadable TOC (Table of Contents) from a disc, video artifacts, playback freezes, audio and/or video dropouts. Pioneer suggests addressing problems to the manufacturer of the playback device.

1.2 Box Contents

Thank you for buying the Pioneer PRV-9000 DVD recorder. Please check for the following accessories included with your product.

- Remote control
- AA/R6P dry-cell batteries (2)
- Stereo Audio cable (red/white)
- Video cable (yellow)
- RF Antenna cable
- Power cord
- Pioneer DVD-RW disc (blank media)
- Operating Instructions
- Warranty card

1.2.1 Inserting Batteries in the Remote Control

Follow the directions to insert the provided batteries in to the remote control.

1. Open the battery compartment on the back of the remote control.
2. Insert two AA/R6P batteries in to the compartment following the positive/negative indicators within the chamber.
3. Close the cover.

Installing the batteries incorrectly can result in damage to the batteries and the remote control. Damaged batteries may leak or burst. Please observe the following guidelines:

- Avoid mixing new and old batteries - replace all batteries simultaneously.
- Use batteries of the same voltage.
- Align batteries according to the charge symbols (+, -) shown within the compartment.
- Remove batteries from a disused remote control (idle for a month or more).
- Dispose of batteries according to the manufacturer's recommendations.

1.2.2 Using the Remote Control

When using the remote control, follow these guidelines.

- Avoid using a remote control if there is direct sunlight or strong fluorescent light shining directly on the unit's sensor.
- Confirm that there are no obstacles between the remote control and the sensor on the recorder.
- Avoid using remotes for other equipment located close to the recorder.
- Replace the batteries if there is a falling off of operating range.
- Use the remote within the operating range/angle shown below (Fig 1-1).

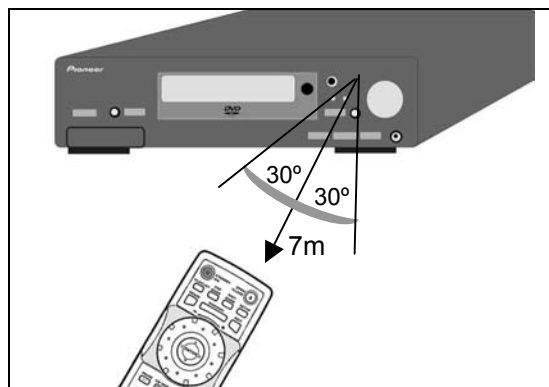


Figure 1-1: operating range for the remote control

1.3 Media Compatibility

Differences between DVD-R and DVD-RW discs is that DVD-R is a record-once medium for Video formatting only while DVD-RW is an erasable/re-recordable medium for both the Video and VR formats. A DVD-RW disc may be erased and reused approximately 1,000 or more times.

DVD-R discs work in many manufacturers' DVD players and drives when the disc is *finalized*. This finalizing process locks in the contents and adds information to let other DVD devices recognize the disc as a DVD-Video disc. Check with the product manufacturer for DVD-R compatibility.

Depending upon the recording method and the particular DVD player/drive, playback of DVD-RW media is possible. Only DVD playback devices that are specifically compatible with DVD-RW recognize this type of media. Look for the RW-compatible logo on all playback devices.

Note: Damaged or dirty DVD-R/RW and CD-R/RW discs may fail to play back. Also, dirt, smears or condensation on the player's lens may also cause faulty playback.

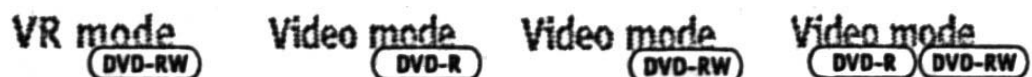
A disc with one or more of the following logos is playable on the PRV-9000:



Note: The RW compatibility symbol (^{RW} COMPATIBLE) indicates that the device recognizes material recorded on a DVD-RW VR-formatted disc.

The PRV-9000 records to DVD media only, CD-R and CD-RW can be read but not written to. Other formats such as DVD-RAM, DVD-ROM, CD-ROM, SACD and Photo CD are incompatible with this device.

Many functions depend upon the selected recording mode on the recorder and the recording format on the disc. One or more of the following symbols appear throughout this manual to help identify recording compatibility.



Note: When a disc is created in a compatible format, the settings on the recording application may still cause playback failures.

1.3.1 DVD-Video Compatibility

The compatible DVD-Video format supports the following functions:

- Single-sided or double-sided discs
- Single Layer or dual-layer discs
- Dolby Digital, DTS, MPEG or Linear PCM digital audio
- MPEG-2 digital audio

DVD-Video discs are divided into one or more titles. Each title may be divided into smaller sequences called chapters (Fig 1-2).

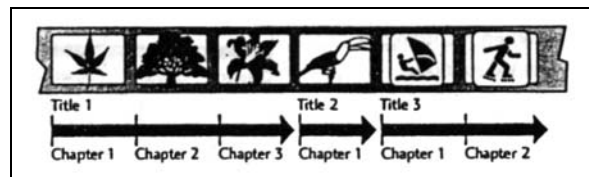


Figure 1-2: Titles and Chapters

1.3.2 Audio CD Compatibility

The compatible Audio CD format supports the following functions:

- 12cm (5") or 8cm (3") discs
- Linear PCM digital audio
- CD-Audio, CD-R or CD-RW formats
(plays CD-R/RW discs recorded in *CD Audio/Video CD* format or with MP3 audio files)

Note: Audio CDs are divided into tracks rather than titles and chapters.

1.3.3 Video CD Compatibility

The compatible Video CD format supports the following functions:

- 12cm (5") or 8cm (3") discs
- MPEG-1 digital audio
- MPEG-1 digital video

Like Audio CDs, Video CDs are divided into tracks (Fig 1-3).

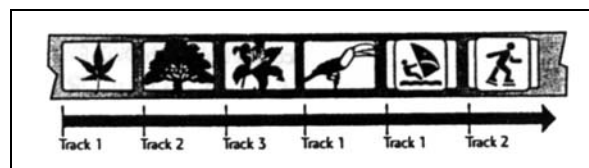


Figure 1-3: Video CD tracks

1.3.4 DVD Disc Box Information

The following information can be found on the side of DVD media. If the information is missing, contact the manufacturer of the disc (Fig 1-4).

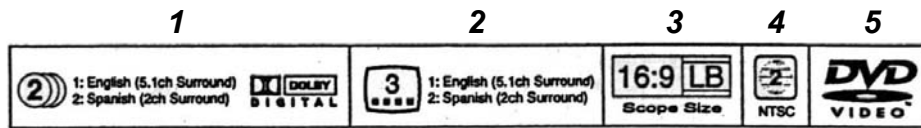


Figure 1-4: Information available from the side of DVD media case, box or jacket

Reading from left to right:

1 – Audio Language and Audio Formats

DVD-Video discs may have up to eight soundtracks consisting of languages and/or music. The first track on the list is the original soundtrack.

Dolby Digital:

Dolby Digital is the most widespread DVD-Video audio format. These soundtracks may be mono, stereo, or up to 5:1 channels (surround sound) with the 1 referring to a special low-frequency effects channel.

DTS:

DTS is another 5:1 channel surround format used on some DVD-Video discs, often in addition to Dolby Digital.

Linear PCM:

Linear PCM audio may be on some DVD-Video discs, usually with music-related materials. PCM is mono or stereo channels only.

2 – Subtitle Languages

DVD discs may have up to 32 subtitle streams however, subtitles are not mandatory.

3 – Screen Aspect Ratio

Movies are filmed in a variety of screen formats. The box is marked with the original format (example shows Cinemascope) and provides a recommendation for best viewing (example shows 16:9, LetterBox).

4 – Region Code and TV Format

The world is divided in to six DVD regions with two additional region codes; region 7-reserved and 8-international venues (airplanes, cruise ships, etc.). For additional information on region codes, refer to the DVD FAQ website - <http://dvddemystified.com/dvdfaq.html#1.10>

5 – DVD-Video logo

6 – Angle Mark (📺)

Some DVD-Video discs provide scenes filmed simultaneously from two or

more angles. Discs with multiple angles support switching between views during playback.

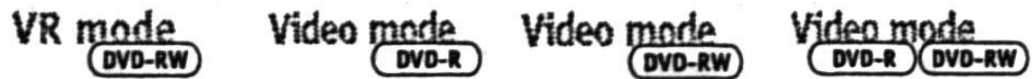
1.3.5 DVD Region Codes

All DVD Video discs carry region mark on the case indicating the region(s) of the world where the disc may be played. The PRV-9000 also has a region code printed on the rear panel. The codes on the discs and this unit must have a matching code in order to function. Discs marked with *ALL* play on this device.

1.4 Recording & Editing Limitations

There are two recording modes on the PRV-9000, VR mode and Video mode. When recording to DVD-R, set the unit to Video mode only. DVD-RW media supports both Video and VR modes. Many functions are dependent upon the recording method.

One or more of the following symbols appear throughout this manual to help identify recording compatibility.



For more information, please refer to Chapter 4: GETTING STARTED, section 4.8 *Recording Options*.

1.4.1 VR Mode

The VR mode (Video Recording) is a subset of the Video mode. While Video mode allows video viewing and minimal navigation, VR mode provides advanced playback options and menu creation. When selecting the VR mode, refer to these guidelines.

- Two play modes: Standard Play (SP) or Manual (MN)
- Multiple picture quality/recording time settings
 - *SP mode has two different settings available*
 - *MN mode has 32 different settings available*
- Incompatible with DVD set-top players
- Recordings may be extensively edited

1.4.2 Video Mode

When selecting the Video mode, refer to these guidelines.

- Two picture quality/recording time settings
- Compatible with many DVD devices when the disc is *finalized*
- Limited editing ability

1.4.3 Editing A DVD Recording

Traditionally, editing a VCR/VHS videotape requires two tape decks, one deck to play back the original tape and a second unit to record the changes. DVD recording allows you to make a *Playlist* of what to play and when to play it, leaving the original material intact (Fig 1-5). The PRV-9000 recorder plays back the disc according to your Playlist selections.

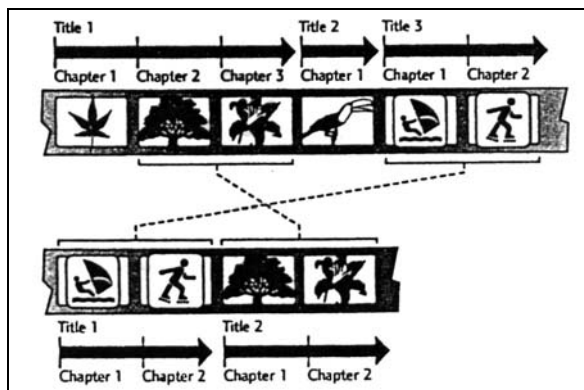


Figure 1-5: Original content > edited Playlist

Throughout this manual, the word, *Original*, refers to the actual content while the word, *Playlist*, refers to the edited version.

1.4.4 On-Screen Icons

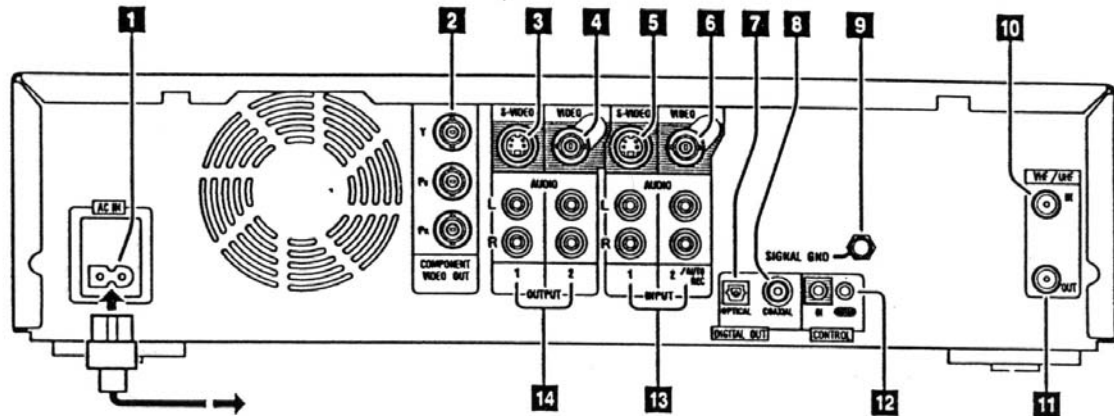
While using the PRV-9000 recorder, a <disc> icon or a <player> icon may appear on-screen. The <disc> icon means that the disc blocks the requested function and the <player> icon means the recorder blocks the function.

Disc blocks function: **Recorder/Player blocks function**



2 CONNECTION OPTIONS

Become familiar the rear panel of the PRV-9000 before connecting other components.



- 1 - **AC IN** (power inlet)
- 2 - **Component Video Out (BNC ports)**
to a TV or monitor with Component Video In
- 3 - **S-Video Output 1** (S-Video port)
to a TV ,monitor, AV receiver or other equipment with S-Video Input
- 4 - **Video Output 2** (BNC port)
to a TV ,monitor, AV receiver or other equipment with composite Video Input
- 5 - **Video Input 1** (S-Video port)
to record from a camcorder, VCR or other equipment with a S-Video output
- 6 - **Video Input 2/AUTO REC*** (BNC port)
to record from a camcorder, VCR or other equipment with a composite video output
- 7 - **Digital Out Optical**
to an AV receiver, Dolby Digital/DTS decoder or other equipment with Optical Digital Input
- 8 - **Digital Out Coaxial** (RCA pin)
to an AV receiver, Dolby Digital/DTS decoder or other equipment with Coaxial Digital Input
- 9 - **Signal Gnd**
*recorder may fail under certain environmental conditions (excessive noise)
terminal is a ground for when multiple devices cause signal interference but is NOT a safe
grounding terminal*
- 10 - **VHF/UHF In** (F-type)
from TV antenna
- 11 - **VHF/UHF Out** (F-type)
signal from the VHF/UHF In to the TV/monitor
- 12 - **Control In/Out** (monaural mini jacks)
to other Pioneer equipment for unified remote operation
- 13 - **Audio Input 1, 2/AUTO REC*** (RCA pins)
to record from a camcorder, VCR, satellite receiver or other equipment
- 14 - **Audio Output 1, 2** (RCA pins)
to the audio inputs of a TV, monitor, AV receiver or other equipment

Note: AUTO REC detects a signal at the Video Input 2 port but fails if a video signal is absent.

2.1 Basic Connections

The PRV-9000 is shipped with cables for installing the unit in your home however existing or additional cables may be required for full operation. For other equipment connections, refer to the section entitled **Alternative Connections** later in this chapter.

*Note: In the following instructions, PRV-9000 connections/jacks are in **boldface print**.*

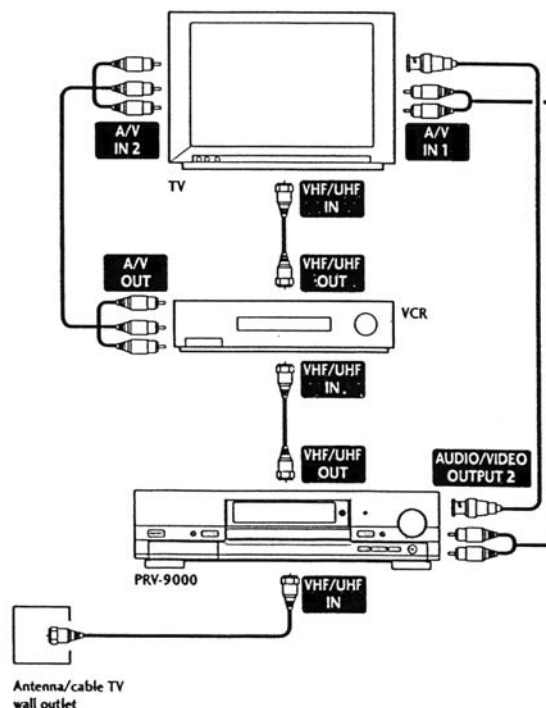


This recorder is equipped with copy-protection technology. Do not use AV cables to connect this unit to a TV via a VCR.

2.1.1 Connect to an Antenna

Connect the PRV-9000 to the antenna in order to record TV programs.

1. Connect the antenna cable to the **VHF/UHF In** port on the rear panel.
2. Connect the **VHF/UHF Out** port to the VCR's antenna input jack using a RF antenna cable (not provided).
If a VCR is unnecessary, connect to the TV's Antenna In jack.
3. Connect the VCR's antenna output to the TV's antenna input using your existing RF antenna cable.
4. Connect the VIDEO/AUDIO OUTPUT 2 ports to the TV's AV inputs using a stereo audio cable (not provided) and a BNC video cable (not provided). The left and right outputs must be matched to the inputs.
5. Connect the VCR to the TV using a set of audio and video cables.

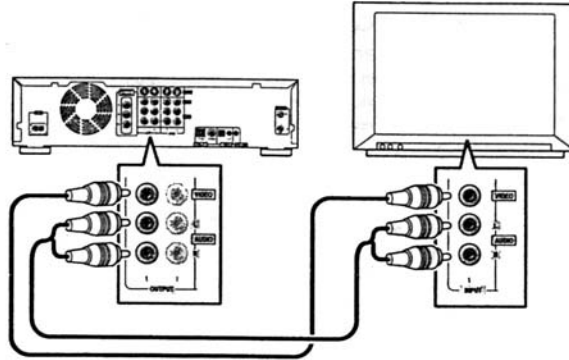


Before plugging in the PRV-9000 for the first time, verify that all cables are firmly connected. Before disconnecting any equipment, turn OFF the power and unplug from any power sources.

2.1.2 Connect to a TV for Disc Playback

Connect the PRV-9000 to your TV or monitor to watch DVD discs. Using the following setup allows sound to play through the television speakers.

1. Connect **Video Output 1** to the TV's Video In jack using the provided video cable.
2. Connect **Audio Output 1 Left/Right** to the TV's Stereo Audio Inputs using the provided stereo audio cable.



2.2 Alternative Connections (Rear Panel)

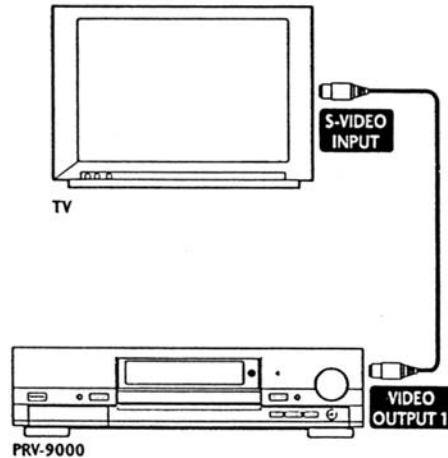
Alternative connections encompass video and audio sources. The following diagrams are only setup suggestions for common types of products. Your equipment and setup may differ.

Note: For high-quality playback, consider sending audio and video signals through an AV receiver/amplifier.

- **Video** – The PRV-9000 has standard (composite) S-Video and component video outputs. The type of video effects the picture quality. S-Video delivers a better picture than Composite Video while Component Video provides the best picture. The variety of outputs provides flexibility for connecting a wide range of products.
- **A/V Amplifier** – To enjoy multi-channel surround sound, connect an AV amplifier/ receiver using either *digital optical output* or *coaxial output*. Connect through one of outputs, it is unnecessary to use both outputs simultaneously to achieve surround sound. Pioneer recommends using stereo analog as well as one of the digital connections through an AV receiver for best disc playback compatibility.
- **Other AV Sources** – The PRV-9000 has three audio/video input ports, two sets on the rear panel and one set under a panel on the front of the unit. These connection points currently support VCRs, satellite tuners and camcorders.

2.2.1 Connect Through S-Video Output

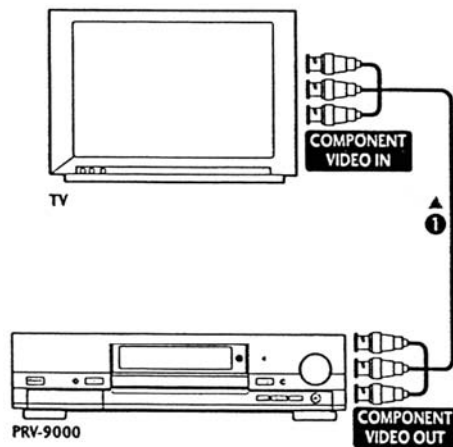
S-Video carries an image as separate color and luminance (brightness) signals. These signals are transmitted through a single cable from the S-Video Output port to the S-Video Input connection on the display device (Figure 2-4). The PRV-9000 has multiple S-Video outputs for connecting TVs, monitors, VCRs or other equipment.



Connect **S-Video Output** to a S-Video Input on your TV or monitor.

2.2.2 Connect Through Component Video Out

Component Video carries the picture as two separate color signals and a luminance (brightness) signal. These signals are transmitted through a single cable with each end providing three connectors. Join one set of cable connectors to the recorder's Component Video Out port then the other set to the Component Video In connections on the display device (Figure 2-5). There is a single Component Video Out port on the PRV-9000 recorder.



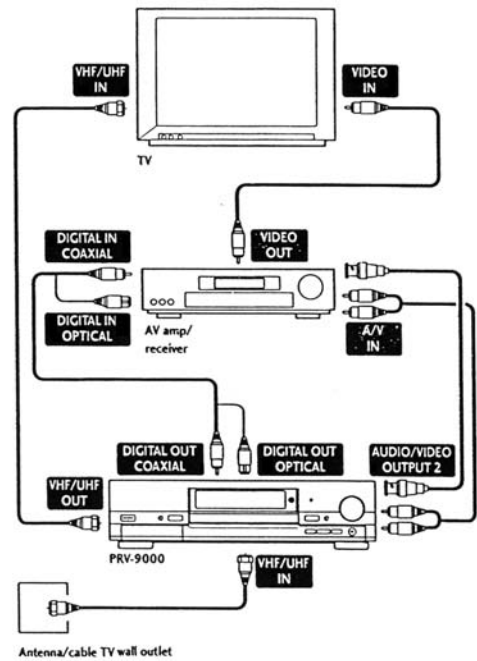
Connect **Component Video Output** to a Component Video Out on your TV.

*Note: To set the recorder for progressive scan through Component Video Out, refer to chapter 9, **Initial Setup Menu**, Video In/out Settings.*

2.2.3 Connect to an AV Receiver

To enjoy multi-channel surround sound, connect an AV amplifier/receiver using either *digital optical output* or *coaxial output*. It is unnecessary to use both outputs simultaneously to achieve surround sound. Pioneer recommends using stereo analog as well as one of the digital connections through an AV receiver for best disc playback compatibility.

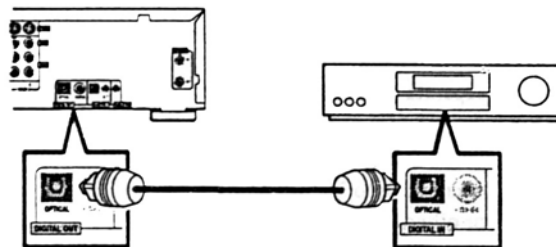
1. Connect units with RF antenna cables as shown in the figure to the right.
2. Connect a **Digital Out** port from the recorder to a digital input on the AV receiver/amplifier.
3. Connect the **Audio Output 2** (analog) to the analog audio input on the AV receiver.
4. Connect the **Video Output 2** to the video input on the receiver.
5. Connect the AV receiver's video output to the display device's video input.



The diagram shows the PRV-9000 connected to the AV receiver using the recorder's Composite (standard) Video output. As an alternative, use the S-Video output or Component Video (BNC) output connections.

Connect through the Optical Digital Output

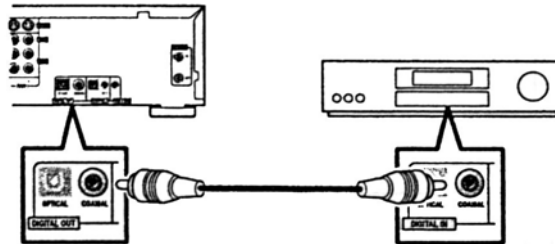
For an optical connection, use a optical cable (not provided). It is unnecessary to use both optical and coaxial outputs simultaneously to achieve surround sound. Pioneer recommends using stereo analog as well as one of the digital connections through an AV receiver for best disc playback compatibility.



Connect **Optical Digital Output** to an optical input on the AV receiver.

Connect through the Coaxial Digital Output

For a coaxial connection, use a coaxial cable, similar to a video cable (not provided). It is unnecessary to use both optical and coaxial outputs simultaneously to achieve surround sound. Pioneer recommends using stereo analog as well as one of the digital connections through an AV receiver for best disc playback compatibility.

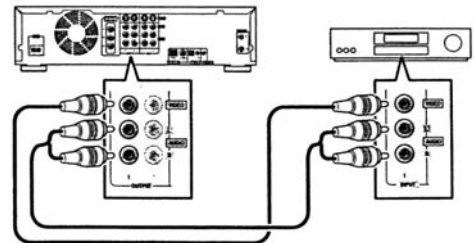


Connect **Coaxial Digital Output** to an coaxial input on the AV receiver.

Connect Analog Audio and Video

To send through an AV receiver/amplifier, Pioneer recommends using stereo analog as well as a digital connection for best disc playback compatibility.

1. Connect **Audio Output** to the analog audio inputs on the AV receiver/amplifier.
2. Connect **Video Output** to the analog video inputs on the AV receiver/amplifier.*



* As an alternative, you may use **S-Video Output** or **Component Video Output** to use an AV receiver/amplifier

Note: If using the Digital Out to record while watching another broadcast, there is a slight delay in the playing TV channel.



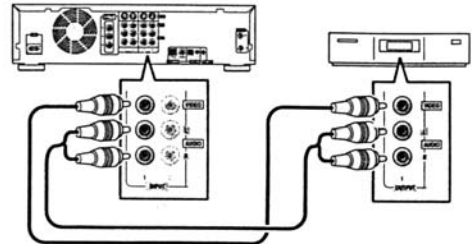
This recorder is equipped with copy-protection technology. Do not use AV cables to connect this unit to a TV via a VCR or other device.

2.2.4 Connect to Other A/V Sources – Satellite/Cable

The PRV-9000 supports several AV products including VCRs, satellite tuners and camcorders.

Connect to a VCR / Satellite Receiver:

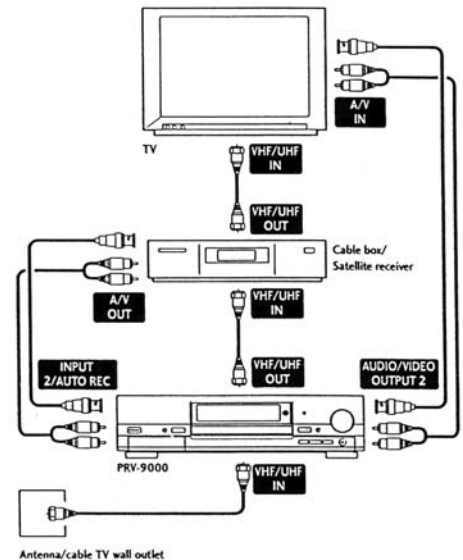
1. Connect the VCR's (or receiver) Video Output to the **Video Input**. **S-Video In** with an S-Video cable (not provided) or **Video In** jack with supplied cable
2. Connect the VCR's audio outputs to **Audio IN L/R** with a standard stereo audio cable (not provided).



Connect to a Cable Box or Satellite Receiver:

If the cable box or satellite receiver provides less than five scrambled channels, refer to the following diagram for assistance. For systems with six or more scrambled channels, please refer to the following section.

1. Connect RF cables as shown with the antenna/cable line connected to the PRV-9000.
2. Connect the recorder's **Audio Output 2** to the TV's audio input using a stereo audio cable (not supplied).
3. Connect the recorder's **Video Output 2** to the TV's video input using a BNC cable (not supplied).
4. Connect audio/video outputs from the cable box/satellite tuner to the recorder's **INPUT 2/AUTO REC** posts using a stereo audio cable and a BNC video cable, respectively.
(enables watching/recording scrambled television broadcasts)



The diagram shows standard video connections. As an alternative, you can use the S-Video or Component Video (BNC) connections if available.

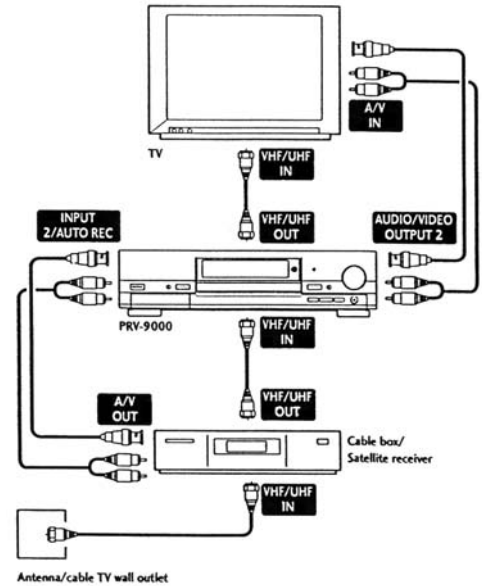
The PRV-9000 provides a **Cable TV Input** for recording programs from cable. Please refer to your cable box instructions for any additional configuration information.

Note: For high-quality playback, send audio and video signals through an AV receiver.

Alternate Method to Connect Cable or Satellite:

If the cable box or satellite receiver provides six or more scrambled channels, refer to the following diagram for assistance.

1. Connect RF cables as shown with the antenna/cable line connected to the cable box/satellite tuner.
2. Connect the recorder's **Audio Output 2** to the TV's audio input using a stereo audio cable (not supplied).
3. Connect the recorder's **Video Output 2** to the TV's video input using a BNC cable (not supplied).
4. Connect audio/video outputs from the cable box/satellite tuner to the recorder's **INPUT 2/AUTO REC** posts using a stereo audio cable and a BNC video cable, respectively.
(enables watching/recording multiple-scrambled television broadcasts)

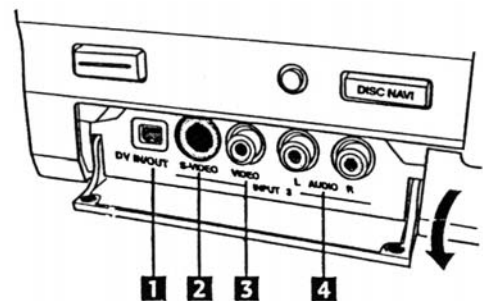


2.3 Alternative Connections (Front Panel)

Alternative connections encompass video and audio sources. The following diagrams are only setup suggestions for common types of products. Your equipment and setup may differ.

Become familiar the front ports (behind the lower left panel) before connecting any components. Reading from left to right, the ports are as follows:

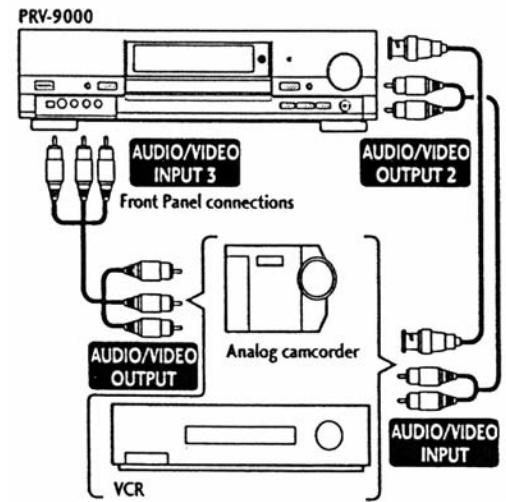
- 1 - **DV IN/OUT** – combined input/output jack for digital camcorder access
- 2 - **S-Video Input 3** (S-Video) – connect to an S-Video output on an external device
- 3 - **Video Input 3** (RCA pins) – connect to a composite video output on another device
- 4 - **Audio L/R Input 3** (RCA pins) – connect to a stereo pair of audio outputs on another device



Note: For high-quality playback, consider sending audio and video signals through an AV receiver/amplifier.

2.3.1 Connecting a VCR or an Analog Camcorder

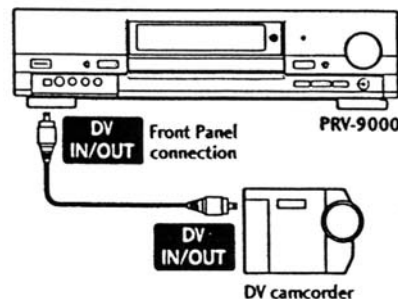
1. Connect the VCR/camcorder's Video Output to a front Video Input.
 - **Video Input 3** with a S-Video or RCA-pin video cable (not provided)*
 - **Video Input 1** with a S-Video cable
 - **Video Input 2** (rear panel) with a BNC video cable (not provided)
2. Connect the VCR/camcorder's audio outputs to the front **DV IN/OUT** port with standard stereo audio cable (one cable provided).
 - **Video Out 1** with a S-Video cable (not provided)
 - **Video Out 2** with a standard BNC video cable (not provided)



* As an alternative, you may use **Component Video Output** to connect (cable provided).

Note: If the input terminals of the other device are RCA, use a BNC/pin conversion adapter to make connections.

2.3.2 Connecting a Digital Camcorder



Connect the front **DV In/Out** jack to a DV digital camcorder or deck to transfer DV tapes or DVD-R/RW discs to DVD-R/RW. (DV cable not provided)

IMPORTANT: The DV In/Out jack is for DV equipment only. This jack is incompatible with computers, digital satellite tuners and D-VHS video decks.

Use a single DV (also known as i.Link) cable for audio and video signals to connect compatible equipment to the PRV-9000. There are three elements to remember when communicating through the **DV In/Out** jack:

- Compatible with the DV-format (DVC-SD) sources
- Controlling the PRV-9000 via the DV In/Out jack is unavailable (including connecting multiple units, also known as daisy-chaining)
- Switching the DV audio output may cause noise in the connected device

The following messages may appear on-screen when using the **DV IN/OUT** port on the recorder's front panel:

- **DV camcorder not connected**
Check the cable connection from the camcorder to the jack. Reseat the cable if necessary. Also verify that the camcorder is powered ON.
- **The power is switched off**
Check the power on the camcorder and turn on if necessary.
- **Too many camcorders connected**
The DV jack supports a single DV device at one time.
- **No cassette**
Load a cassette in to the connected equipment.
- **Put into play or stop mode**
The camcorder is either in camera/record mode or record-pause mode.
- **Playback stopped**
Verify that the tape is running and that the camcorder is sending a signal.
- **The DV camcorder does not operate**
Check the camcorder for operation or power problems. Try switching off the DVC link (detailed explanation in a later chapter).

If problems with audio or video occur, read through Chapter 10: TROUBLESHOOTING for assistance.

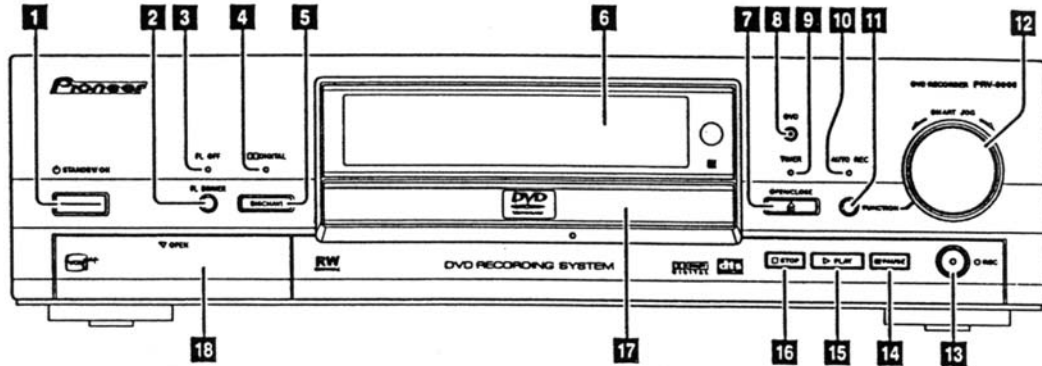
Note: Some camcorders are incompatible with the remote control for the PRV-9000. Operate the system manually if your camcorder is incompatible with the remote.



This recorder is equipped with copy-protection technology. Do not use AV cables to connect this unit to a TV via a VCR or other device.

3 CONTROLS (REMOTE & PANEL) AND DISPLAYS

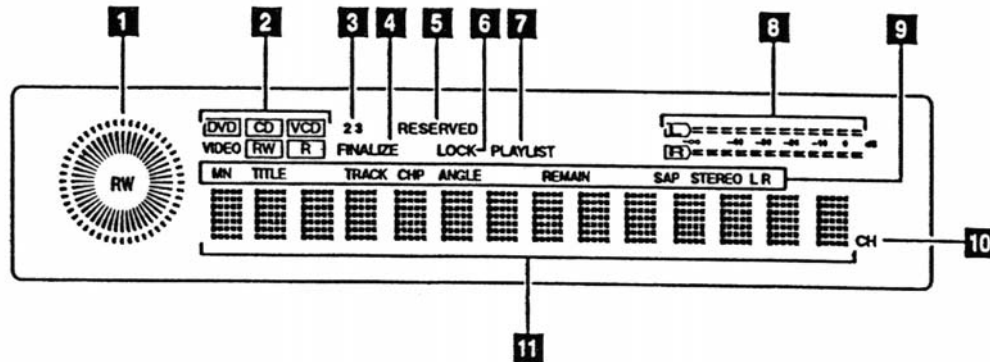
Become familiar the front panel of the PRV-9000.



- | | |
|--|---|
| <p>1 - STANDBY/ON</p> <p>2 - FL DIMMER button
<i>Press to change the display brightness</i></p> <p>3 - FL OFF indicator
<i>Lights when the display is turned OFF (after pressing FL Dimmer)</i></p> <p>4 - DOLBY DIGITAL indicator
<i>Lights when a Dolby Digital soundtrack is playing</i></p> <p>5 - DISCNAVI button
<i>Press to display Discnavi menu (disc navigator)</i></p> <p>6 - Display
<i>Refer to the following page for details</i></p> <p>7 - OPEN/CLOSE button
<i>Press to open/close the disc tray</i></p> <p>8 - DVD indicator
<i>Lights when a DVD disc is loaded</i></p> <p>9 - Timer indicator
<i>Lights when the record timer is set and the power is in Standby mode</i></p> | <p>10 - AUTO REC indicator
<i>Lights when the recorder has been set for automatic recording</i></p> <p>11 - FUNCTION button
<i>Toggles the SMART JOG operations</i></p> <p>12 - Smart Jog dial control
<i>Turn to change the parameters selected with the Function button</i></p> <p>13 - REC button/indicator
<i>Press to start recording</i></p> <p>14 - PAUSE button
<i>Press to pause playback or recording</i></p> <p>15 - PLAY button
<i>Press to start or restart playback</i></p> <p>16 - STOP button
<i>Press to halt playback or recording</i></p> <p>17 - Disc tray</p> <p>18 - Front Panel Ports/Jacks
<i>Analog and Digital input/output ports for connecting a camcorder or other external equipment</i></p> |
|--|---|

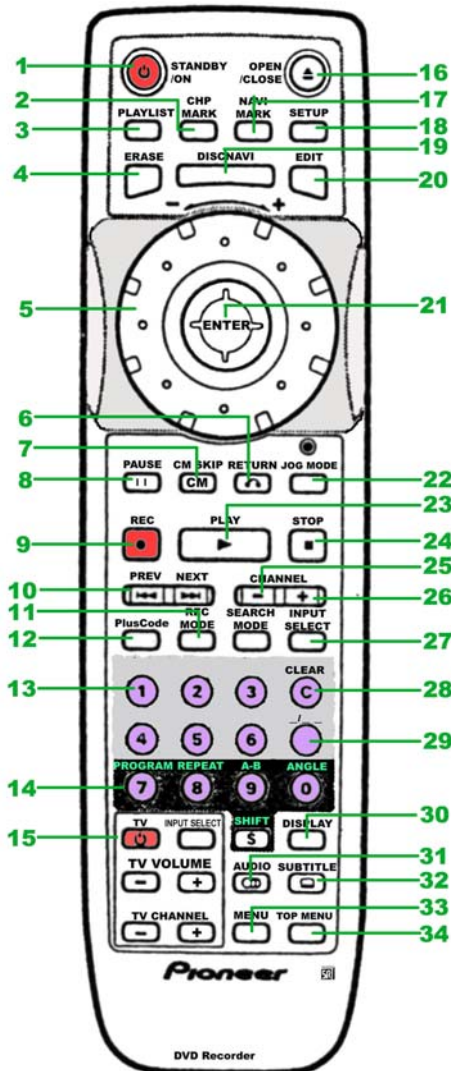
The **RW COMPATIBLE** mark on this product indicates that the device is compatible with Video Recording formatted (VR mode) DVD-RW discs. Also, DVD-RW discs recorded on this recorder in VR mode should play on other systems bearing this mark.

The PRV-9000 display provides settings information.



- 1 - Play/Record indicator**
 - Outer (white) ring denotes the playback speed and direction
 - Inner (red) ring denotes elapsed playback/recording time
 - Note: When loading a VR mode disc, the RW indicator in the center lights up.
- 2 - DVD / CD / VCD / RW / R indicator**
 - Reveals the loaded disc's type
- 3 - 2 3**
 - Indicates the remote control mode
 - Note: If nothing is displayed then the mode is 1 (default)
- 4 - FINALIZE**
 - Lights when a finalized disc is loaded
- 5 - RESERVED**
 - Lights when a disc with a timer program is loaded
- 6 - LOCK**
 - Lights when the content lock/parental control is active
- 7 - PLAYLIST**
 - Lights when a VR mode disc is loaded (system must be in Playlist mode)
- 8 - Audio Level indicators**
 - Monitors the audio level during playback and the audio input level during recording
- 9 - Status Bar**
 - MN – manual rate recording level
 - TITLE – current title number playing from the DVD disc
 - TRACK – current track number of the playing CD or Video CD
 - CHP – current chapter number playing from the DVD disc
 - ANGLE – lights when a multi-angle scene is available on the playing DVD disc
 - TOTAL – displays the total playing time for the currently loaded disc
 - REMAIN – displays the recording time available on the currently loaded disc
 - SAP – lights when the selected broadcast provides Secondary Audio Program (SAP)
 - STEREO – lights when the incoming TV audio signal is in stereo
 - L R – indicates which channels are recorded/ played back when in Dual Mono mode
(see Chapter 9:INITIAL SETUP MENU section 9.1.5 Audio In Settings)
- 10 -CH**
 - Channel indicator for the built-in television tuner
- 11 -Character Display**

Review the functions of the remote control included with the Pioneer PRV-9000. Additional information regarding the remote control is available throughout this section of the manual.



- | | | |
|--|---|---|
| <p>1 - STANDBY/ON
press to power on/off the DVD Recorder</p> <p>2 - CHP MARK
inserts a chapter mark when playing/recording a VR formatted DVD-RW disc</p> <p>3 - PLAYLIST
toggles between Original Content and Playlist material</p> <p>4 - ERASE
delete function for DISCNAVI or Title List menu</p> <p>5 - Jog Dial
controls scanning/slow motion speed and direction</p> | <p>6 - RETURN
steps back to the previous menu/screen</p> <p>7 - CM SKIP
moves 30 seconds forward on the disc (length of a typical broadcast commercial)</p> <p>8 - PAUSE
Pauses playback or recording</p> <p>9 - REC (record)
starts recording; press repeatedly to set recording time</p> <p>10 - PREV & NEXT
track or chapter skip; displays previous/next menu page</p> <p>11 - REC MODE
switches record modes between SP and MN for VR format discs or between V1 and V2 for Video format discs</p> <p>12 - PLUS CODE
press to enter a programming number for timer recordings</p> <p>13 - Number buttons
press to enter a programming number for timer recordings</p> <p>14 - PROGRAM/REPEAT/ A-B/ANGLE/SHIFT
press Shift first to access functions printed in green refer to chapter 5 for details</p> <p>15 - TV Controls
to control the TV Input Select, Channels, and Volume</p> <p>16 - OPEN/CLOSE (tray)
press to open/close the disc tray</p> <p>17 - NAVI MARK
to select a thumbnail image for the current title from within the DISCNAVI menu</p> <p>18 - SETUP
press to reveal the Setup menu</p> <p>19 - DISCNAVI
press to reveal the Discnavi menu</p> <p>20 - EDIT
to access the edit function from within the Discnavi or Title List menu</p> | <p>21 - ENTER / Joystick
use the joystick to navigate on-screen menus / press Enter to select the highlighted option</p> <p>22 - JOG MODE button/indicator
toggles Jog dial between scanning and frame advance</p> <p>23 - PLAY
starts playback</p> <p>24 - STOP
halts playback/recording</p> <p>25 - CHANNEL - / CHANNEL +
changes the channel for the built-in TV tuner</p> <p>26 - SEARCH MODE
allows disc searching by title, chapter, track or time</p> <p>27 - INPUT SELECT
changes the input select when recording</p> <p>28 - CLEAR C
clears the current setting</p> <p>29 - / _ _
Switch input from single digits to double digits</p> <p>30 - DISPLAY
reveals/changes on-screen information</p> <p>31 - AUDIO
changes the audio channel or language</p> <p>32 - SUBTITLE
reveals/changes the subtitles on multi-lingual DVD-Video discs</p> <p>33 - MENU
reveals the disc menu on DVD-video discs or displays the Title List on Video format DVD-RW discs</p> <p>34 - TOP MENU
Reveals the disc 'top' menu for DVD-Video discs or the Title List on Video format DVD-RW discs</p> |
|--|---|---|

Note: When working with the setup menu, lightly brush a fingertip across the ENTER key in the direction you wish to scroll. This button doubles as the joystick.

Using the On-Screen Displays:

Most settings and functions are available through on-screen menus and graphic links. Scroll to or make a selection then press ENTER to activate that feature. Information about a highlighted option displays at the bottom of the screen. In addition, under Help is a summary of the on-screen navigation controls.

The setup procedures in the following section prepares the recorder for full operation and assist you to become familiar with the on-screen functions.

4 GETTING STARTED

Before plugging in the PRV-9000 for the first time, verify that all cables are properly and firmly connected. Once all equipment is linked, following the steps below for standard operation.

Powering ON the system:

1. Press **STANDBY/ON** on the remote control of from the recorder's front panel.
To return the recorder to Standby, press the button again.
2. Turn ON the TV or monitor.
3. Set the video input for the recorder according to the directions below.
(may use the remote control to set the recorder)

4.1 Initial Setup

Most of the settings and functions are accessed using on-screen displays. These commands are navigated with the joystick. The joystick is very sensitive and only requires gentle pressure in the required direction to move the on-screen cursor.

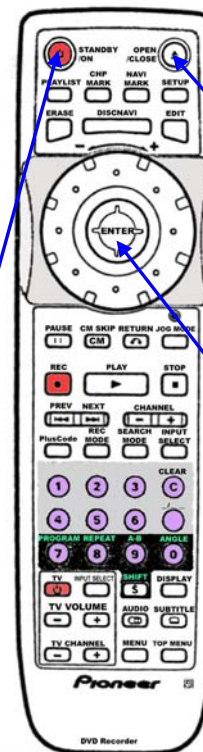
Use the joystick to highlight the various menus and options then press **ENTER** to select the highlighted item.

Information about the highlighted menu or option is shown on the lower portion of the screen.

STANDBY / ON

SETUP

ENTER / Joystick



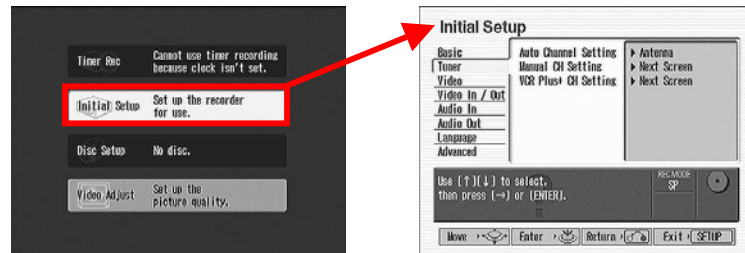
Note: A summary of navigation controls is listed under the HELP information.

4.1.1 Set the Clock

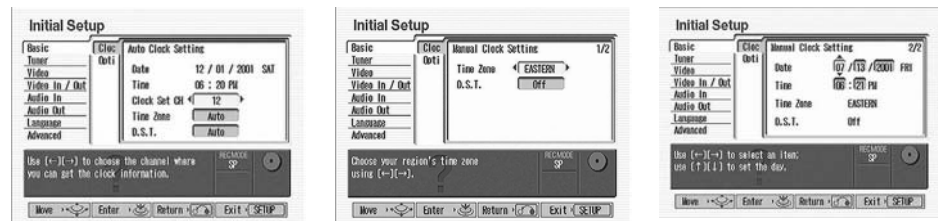
The clock must be set before using the timed recording function. The PRV-9000 has an *automatic clock setup* feature but supports manual clock setting as well. The following commands are based on using the remote control.

1. Press **SETUP** to reveal the Setup menu.

2. Select **Initial Setup** from the menu.
Use the joystick to highlight the option then press **ENTER**.



3. Confirm that **Basic** from the Initial Setup menu is highlighted.
Menu options appear to the right of the highlighted menu selection.
4. Select **Clock Setting** from the Basic Setup menu.
Use the joystick to move right, highlighting the Clock Setting option.
5. Highlight **Auto** from the Clock Setting submenu.
6. Press **ENTER** to select the function.
The following clock options are available from a pop-up screen. Move the joystick to the left or right to change selections.
 - Channel to broadcast clock information
 - Time Zone selection
 - Daylight Savings Time (DST) observed



7. Set **Clock Set CH** to the channel number for PBS.
If leaving other settings to Auto causes the recorder to fail, manually, move the joystick left/right to create a setting for the highlighted option.
 - Cable: turn ON the cable box and set to PBS
 - Digital Satellite Receiver: turn OFF the satellite receiver
8. Press **ENTER** after changing or confirm all settings.
The previous menu appears on screen.
9. Press **SETUP** to exit the Setup menu.
10. Press **STANDBY/ON** to change the recorder to the standby mode.
The **AUTO CLOCK SET** message appears in the display then changes to the current time. If the clock fails to set, skip down to the next section to manually set/change the clock.
11. Press **STANDBY/ON** again to power the recorder ON.

12. Confirm that the clock displays the correct time and date.

Note: If the clock is incorrect, check the clock settings under step 5 above.

Manually Set Clock:

To manually set the clock, follow the steps below.

1. Press **SETUP** on the remote control.
2. Highlight **Initial Setup** from the main menu.
Use the joystick to move down the main menu.
3. Press **ENTER** to access the Initial Setup menu.
4. Confirm that **Basic** is highlighted on the Initial Setup menu.
Menu options appear to the right of the highlighted menu selection.
5. Select **Clock Setting** from the Basic Setup menu.
Use the joystick to move right, highlighting the Clock Setting option.
6. Highlight **Manual** from the Clock Setting submenu.
7. Press **ENTER** to confirm your selection.
8. Set the Time Zone and whether Daylight Savings Time is observed.
Move the joystick to the left or right to change settings.
9. Press **ENTER** to register your selections and proceed to the date/time submenu.
10. Set the date (mm/dd/yyyy) and the time.
 - *Move the joystick to the left or right to navigate the entry fields.*
 - *Use the joystick to the increase or decrease the numbers.*
11. Press **ENTER** to store your selections.
The previous menu appears on screen.
12. Press **SETUP** to exit the Setup menu.
13. Press **STANDBY/ON** to change the recorder to the standby mode.
14. Press **STANDBY/ON** again to power the recorder ON.

4.1.2 Set the TV Aspect Ratio

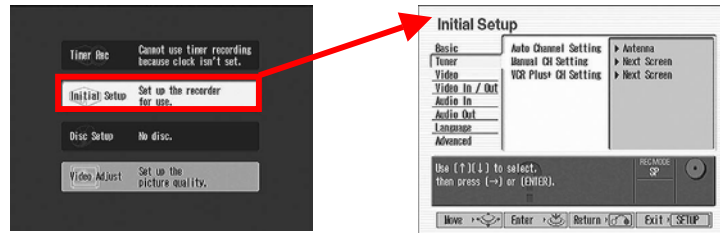
A television has an aspect ratio of either 4:3 (standard) or 16:9 (widescreen). If the TV's aspect ratio is standard while the disc is widescreen (check the disc jacket or disc label for the aspect ratio), choose between Letterbox or Pan & Scan viewing.

- Letterbox – shows full screen with black bars on the top and bottom
- Pan & Scan – chops off the sides of the picture while following the

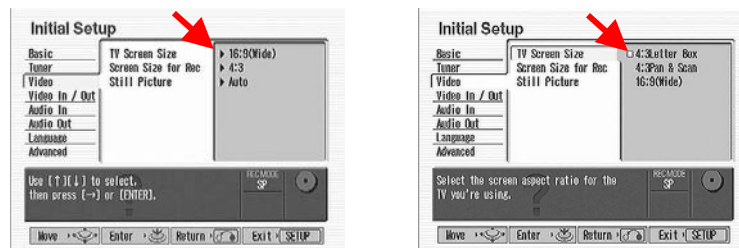
primary screen action

To play DVD-Video discs on a standard television, follow the directions below.

1. Press **SETUP** to access the menu.
2. Highlight **Initial Setup** from the main menu.
Use the joystick to highlight the option.
3. Press **ENTER** to confirm your selection.



4. Highlight **Video** from the Initial Setup menu by using the joystick.
5. Select **TV Screen Size** from the Video menu by using the joystick.
Options appear to the right with the current setting marked (square).
Note: For more screen size and setting information, refer to Chapter 11: ADDITIONAL INFORMATION, section 11.5 Screen Sizes & Disc Formats,
6. Choose the aspect ratio to match the setting of the TV or monitor.
 - 4:3 Letterbox (Standard)
 - 4:3 Pan & Scan (Standard)
 - 16:9 Wide (Widescreen)



7. Press **SETUP** to exit the Setup menu.
8. Press **STANDBY/ON** to change the recorder to the standby mode.
9. Press **STANDBY/ON** again to power ON the recorder.

4.1.3 Set the Digital Audio Output

When operating the PRV-9000 with an AV amplifier/receiver for full surround sound, set the recorder to output digital audio signals that match the receiver. If you are unsure of the required signals, refer to the owner's manual for the AV amplifier/receiver.

1. Press **SETUP** to access the menu.
2. Highlight **Initial Setup** from the main menu.
Use the joystick to highlight the option.
3. Press **ENTER** to confirm your selection.

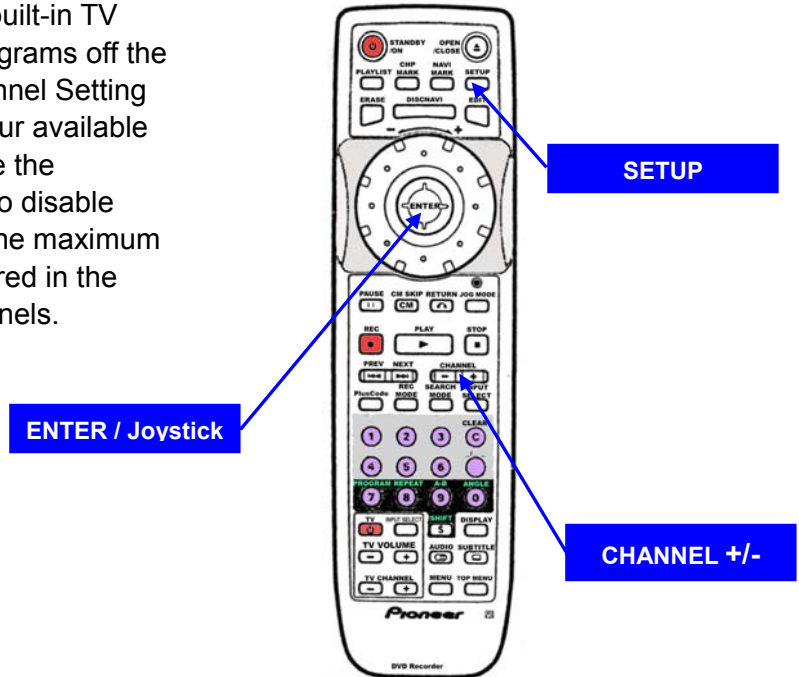


4. Highlight **Audio Out** from the Initial Setup menu by using the joystick.
5. Select **Dolby Digital Out** from the Audio Out submenu.
Options appear to the right with the current setting marked (square).
6. Set the option to **Dolby Digital – PCM** unless your receiver has a built-in Dolby Digital decoder.
*If your receiver has this decoder, set the option to **Dolby Digital**.*
7. Press **ENTER** to confirm your selection.
The cursor moves back to the previous submenu.
8. Select **DTS Out** from the submenu by using the joystick.
9. Verify that the DTS option is set to **OFF** unless the receiver has a built-in DTS decoder. *If your receiver has this decoder, set the option to **ON**.*
10. Press **ENTER** to confirm your selection.
The cursor moves back to the previous submenu.
11. Select **96kHz PCM Out** from the submenu.
12. Set the sampling rate to **96kHz-48kHz** unless your receiver is compatible with a **96kHz** sampling rate for audio.
13. Press **ENTER** to confirm your selection.
The cursor moves back to the previous submenu.
14. Select **MPEG Out** from the submenu.
15. Set the option to **MPEG – PCM** unless your receiver has a built-in MPEG audio decoder.
*If your receiver has this decoder, set the option to **MPEG**.*
16. Press **ENTER** to confirm your selection.
The cursor moves back to the previous submenu.
17. Press **SETUP** to exit the Setup menu.

18. Press **STANDBY/ON** to change the recorder to the standby mode.
19. Press **STANDBY/ON** again to power the recorder ON.

4.1.4 Auto-Tune the Channels

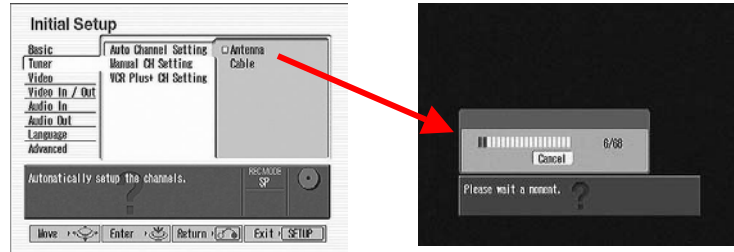
The PRV-9000 has a built-in TV tuner for recording programs off the air. Use the Auto Channel Setting feature to tune in to your available television stations. Use the Channel Skip feature to disable unwanted channels. The maximum number of settings stored in the PRV-9000 is 192 channels.



1. Press **SETUP** to access the menu.
2. Highlight **Initial Setup** from the main menu.
Use the joystick to highlight the option.
3. Press **ENTER** to confirm your selection.



4. Highlight **Tuner** from the Initial Setup menu by using the joystick.
5. Select **Auto Channel Setting** from the Tuner submenu.
6. Select **Antenna** or **Cable** to automatically begin scanning for stations.
*To cancel the Channel Search at any time, press **ENTER**.*

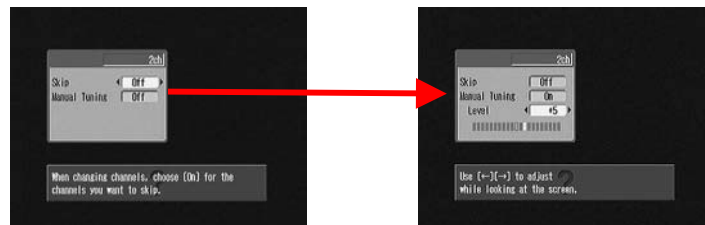


Note: to fine-tune individual stations/channels, use the Manual CH Setting feature discussed in the following section of this manual.

4.1.5 Set Channels Manually & Channel Skipping

The PRV-9000 has a built-in TV tuner for recording programs off the air. Use the Auto Channel Setting feature to tune in to your available television stations and the Channel Skip function to ignore channels without stations. The maximum number of settings stored in the PRV-9000 is 192 channels.

1. Press **SETUP** to access the menu.
2. Highlight **Initial Setup** from the main menu by using the joystick.
3. Press **ENTER** to confirm your selection.
4. Highlight **Tuner** from the Initial Setup menu.
5. Select **Manual CH Setting** from the Tuner submenu.
6. Press **ENTER** to jump to the *Next Screen* option.
7. Press **ENTER** to go to the Manual Channel Setting screen.
8. Use the Channel +/- button to set the channels manually.
 - To add the displayed channel, change the **Manual Tuning** setting to **On** then move down to **Level** to manually tune in the channel.
 - To bypass the displayed channel, change the **Skip** setting to **On**.

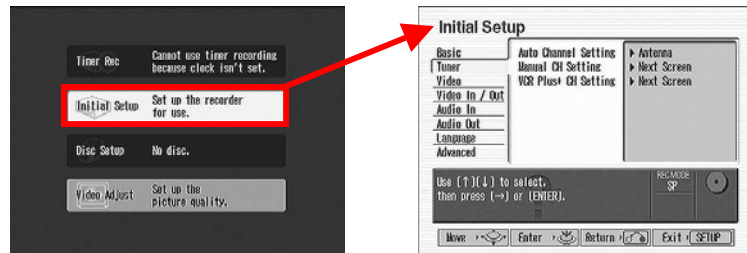


9. Press **ENTER** to return to the Initial Setup menu.
10. Press **SETUP** to exit the menu.

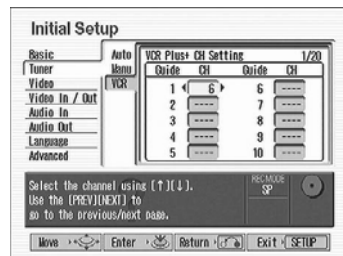
4.1.6 Assign Guide Channels for VCR Plus+

The VCR Plus+ system uses guide channels to assign station channels with specific VCR Plus+ codes.

1. Press **SETUP** to access the menu.
2. Highlight **Initial Setup** from the main menu by using the joystick.
3. Press **ENTER** to confirm your selection.



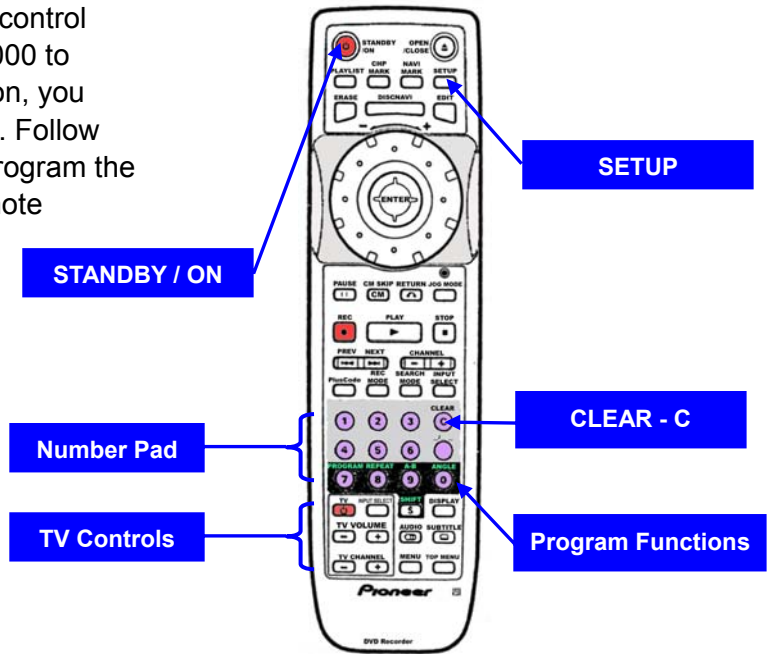
4. Highlight **Tuner** from the Initial Setup menu by using the joystick.
5. Choose **VCR Plus+ CH Setting** from the Tuner submenu.



6. Press **ENTER** to jump to the *Next Screen* option.
7. Press **ENTER** to go to the VCR Plus+ channel setting screen.
8. Assign channels to the guide channels as necessary.
 - Refer to a TV Guide or other program chart to choose channels.
 - Use the PREV/NEXT button to scroll through the 20 guide channels.
9. Press **ENTER** to return to the Initial Setup menu.
10. Press **SETUP** to exit the menu.

4.1.7 Set the Remote to Control a TV

Before using the remote control supplied with the PRV-9000 to directly control a television, you must set the maker code. Follow the directions below to program the maker code in to the remote control.



1. Hold down the **CLEAR** button while using the **number buttons** to input the maker code for your television or monitor.
Use the first listed code for your television's make.

Television Maker	Maker Code
GE	11, 28
General	33
Goldstar	10, 23
Grandiente	35
Hitachi	06, 24, 25, 31
Magnavox	12, 29
Mitsubishi	09
NEC	36
Panasonic	08, 22
Philips	07
Pioneer	00, 34
RCA	01, 15, 16, 17, 18
Sanyo	14, 21
Sharp	02, 19, 27
Sony	04
Toshiba	05, 26, 30
Victor	13, 32
Zenith	03, 20

Note: If the TV maker's name is not shown on the chart, this remote is incompatible with your television model.

2. Press the **TV** button to check the remote's compatibility/functionality.
If the code is correct, the television powers ON.
3. Manipulate television controls as needed.

Button	Function
TV	Press to turn television ON/OFF (standby)
INPUT SELECT	Press to change video input
TV VOLUME	Use to adjust the television volume
TV CHANNEL	Use to change TV channels

Note: If there are several codes for your brand of television set and the first code fails, repeat the procedure with the next code until a code functions properly.

4.1.8 Additional Settings

Other settings available on the Initial Setup menu include the options below:

- Audio input/output formats
- Video input/output formats
- DVD-Video language settings
- Parental lock settings

Note: These settings are explained in later chapters.

The TV Control buttons on the remote (boxed area in the lower right corner of the remote control) sends commands to the television or monitor. The following chart provides a summary of each button's function.

Remote Button	Function
TV <power>	Press to toggle the television ON and OFF.
INPUT SELECT	Press to change the video input
TV VOLUME +/-	Use to adjust the volume on the television.
TV CHANNEL +/-	Use to scroll through the active TV stations.

4.1.9 Return to Default (Factory) Settings

During certain situations, you may wish to return the recorder to the factory (default) settings. An example is if a Content/Parental Lock password is entered in error or if it is forgotten; resetting the recorder erases the current password.

Follow the directions below to restore default settings.

1. Power ON the recorder.
2. Remove any discs left in the tray.
3. Close the tray.
4. Hold down the **STOP** button on the recorder's front panel.
5. Press the **STANDBY/ON** button (front panel).
6. Continue holding down the **STOP** button until the display on the front panel clears.
The display shows only placeholders for the time.
7. Power ON the recorder and operate as normal.
All settings have returned to the default/factory settings.

4.2 Using the Built-in TV Tuner

4.2.1 Changing TV Channels

To change the channel when a disc is not playing, use the number pad or the **CHANNEL** button on the remote or use the **SMART JOG** on the front panel.

Note: Channels programmed through the antenna are numbered 2 through 69 and cable channels are numbered 2 through 125.

Remote Control – Number Pad: Input the channel then press **ENTER**.

Ex: Select Channel 4 – Press the digit 4 then press **ENTER**.

Select Channel 39 – Press the digit 3 then the digit 9. Press **ENTER**.

As an alternative method for two-digit numbers, press the **_/__** button followed by the two-digit channel number.

Remote Control – Channel button: Press the **CHANNEL +** or **-** button to scroll through the channels.

Front Panel – Smart Jog: Press the **FUNCTION** button until **CHANNEL?** appears in the display. Turn the Smart Jog wheel to change the channel.

4.2.2 Changing Audio Channels

Some TV programs are broadcast with both a main and a secondary audio channel (SAP). Use the **Audio** button to change the audio playback track.

When the **Audio** button is pressed, the current audio channel appears on the display. Pressing Audio again changes the audio playback channel to another setting. The three audio channels are as follows:

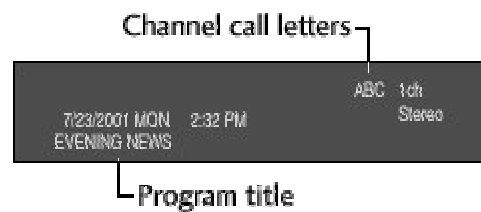
- Stereo – dual output
- Mono – single output
- SAP – Second Audio Program

The following guidelines may solve unexpected sound issues.

- Selecting SAP when the secondary signal is absent still provides the primary sound to play.
- If the sound quality is poor when set to Stereo, change to Mono.
- When setting to Dual Mono while using an external input port allows audio channel switching to just left, just right or both left and right.

4.2.3 **Displaying Program Titles & Channel Call Letters**

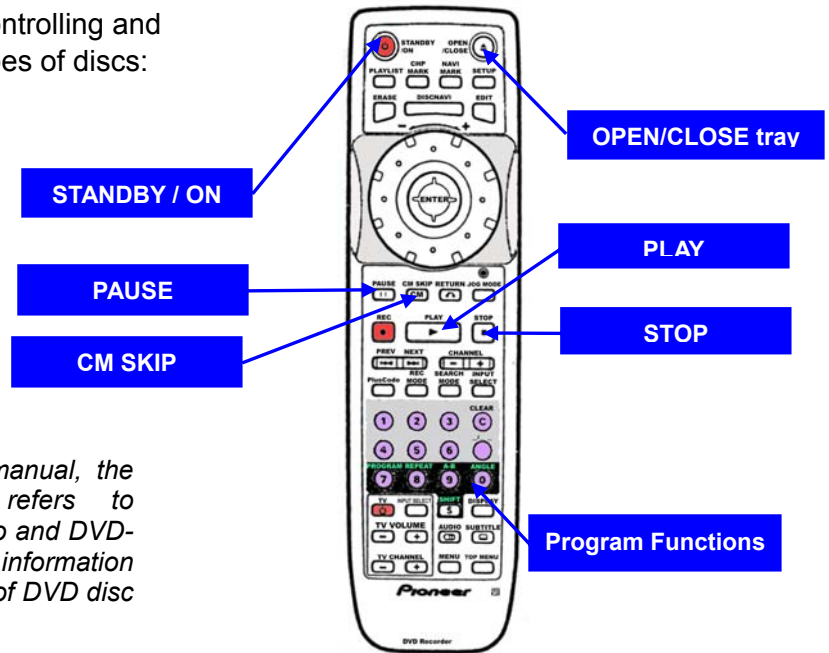
Some broadcast stations transmit the program title and channel call letters with the production. To view this information, press the DISPLAY button. Once the information is on-screen, pressing DISPLAY again causes the displayed information to change.



4.3 Playing Discs



This section explains controlling and playing the following types of discs:

- DVD (all types)
- Video CD
- Audio CD



Note: Throughout this manual, the generic term DVD refers to playback-only DVD-Video and DVD-R/RW discs. If the information pertains to a single type of DVD disc it is noted as such.



When attempting to play back a DVD disc, a  (function denied by the player) or a  (function denied by the disc) symbol may appear on the screen.

The following steps are for standard playback operation:

1. Press **STANDBY/ON** to power up the recorder.
If playing a DVD or Video CD, also turn the TV/viewing device ON.
2. Verify that the display device is set to the correct video input if playing a Video disc.
3. Press the **OPEN/CLOSE** button (on the remote control) to open the tray.
4. Load a disc in to the tray with the label facing up.
If loading a double-sided disc, place the side to be played first face down.
5. Press the **Play** button to begin playback.

Note: To remove a disc, press the Eject button before powering OFF the recorder.

To play a DTS audio CD, connect the recorder to a DTS-compatible amplifier/receiver through the digital ports. Set the Audio setting to STEREO.

To eliminate excessive noise, avoid connecting through the analog outputs for this equipment configuration.

4.3.1 Video (Mode) Playback Control



The chart below reflects control options when playing back a DVD-Video disc or a DVD-R/RW disc in Video mode.

Button	Function
	Starts playback <i>If the display shows RESUME, playback starts from the previous stopped location.</i>
	Pauses disc playback or resumes playback of a paused disc
	Stops playback <i>The display shows RESUME. Press a second time to cancel playback.</i>
	Skips to the start of the current chapter then to previous chapters
	Skips to the next chapter
CM SKIP	(Commercial Skip) Each press skips forward 30-seconds which is the approximate length of a commercial. <i>Use this button to skip up to a maximum of four minutes.</i>

4.3.2 VR (Mode) Playback Control








The chart below reflects control options when playing back a DVD-RW disc in the VR mode.

Button	Function
	Starts playback <i>If the display shows RESUME, playback starts from the previous stopped location.</i>
	Pauses disc playback or resumes playback of a paused disc
	Stops playback <i>The display shows RESUME. Press a second time to cancel playback.</i>
	Skips to the beginning of the current chapter then to previous chapters <i>Press and hold for two seconds to skip to the previous title</i>
	Skips to the next chapter <i>Press and hold for two seconds to skip to the next title</i>
CM SKIP	(Commercial Skip) Each press skips forward 30-seconds which is the approximate length of a commercial. <i>Use this button to skip up to a maximum of four minutes.</i>

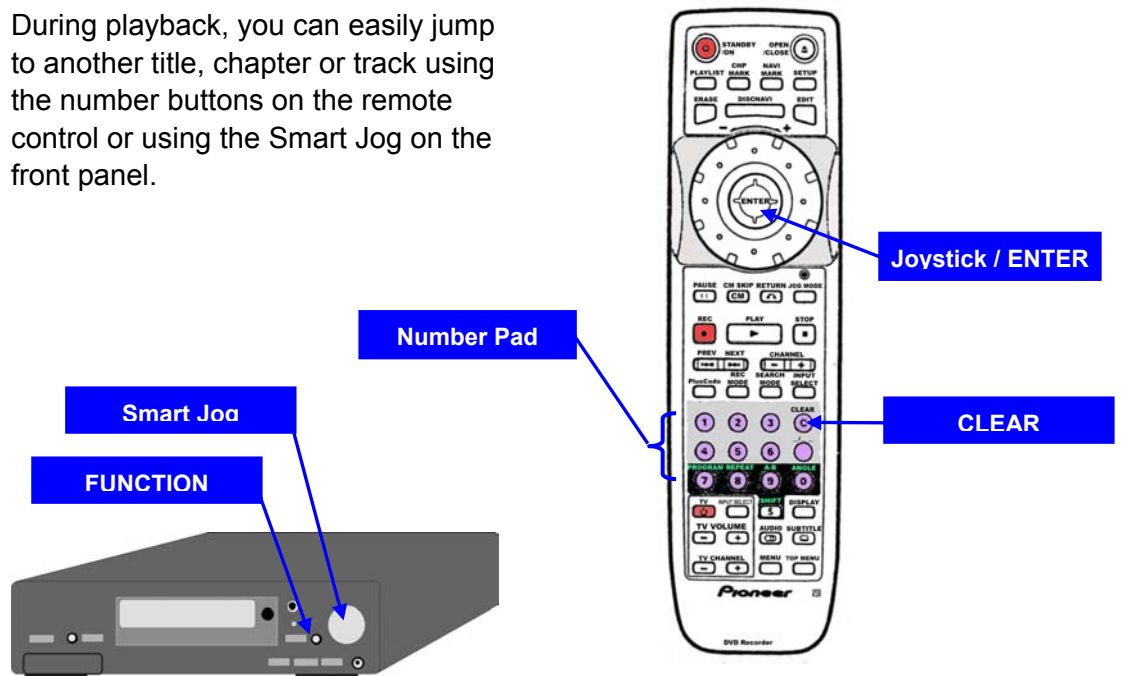
4.3.3 CD and Video-CD Playback Control

The chart below reflects control options when playing back a CD disc.

Button	Function
	Starts playback (Video-CD only) <i>If the display shows RESUME, playback starts from the previous stopped location.</i>
	Pauses disc playback or resumes playback of a paused disc
	Stops playback (Video-CD only) <i>The display shows RESUME. Press a second time to cancel playback.</i>
	Skips to the start of the current track then to previous tracks
	Skips to the next track
CM SKIP	(Commercial Skip) Each press skips forward 30-seconds which is the approximate length of a commercial. <i>Use this button to skip up to a maximum of four minutes.</i>

4.4 Navigating Discs

During playback, you can easily jump to another title, chapter or track using the number buttons on the remote control or using the Smart Jog on the front panel.



To change title, chapter, or track from the front panel, follow the steps below.

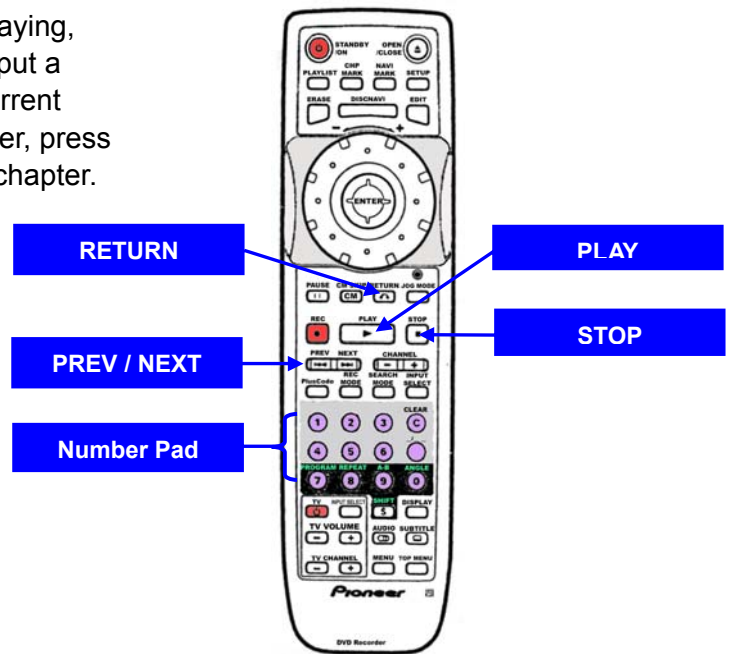
1. Press the **FUNCTION** button on the front panel repeatedly until the appropriate selection appears.
 - **TITLE?** (DVD)
 - **CHAPTER?** (DVD)
 - **TRACK?** (CD/Video CD)
2. Turn the **Smart Jog** dial on the front panel to select a title/chapter/track. *Once the Smart Jog dial is released, playback jumps to the specified point on the disc and begins.*

Note: During playback, use the numbers to jump to a different title, chapter or track. If you make a mistake, use the CLEAR button to begin again.

4.4.1 DVD-Video Navigation

While a DVD-Video disc is playing, use the number buttons to input a chapter number within the current title. After entering the number, press the Enter button to play that chapter.

Example:
 Change to Chapter 6:
 6 then ENTER
 Change to Chapter 24:
 2 and 4 then ENTER



4.4.2 DVD-R/RW Navigation

While a DVD-R or DVD-RW disc is playing, use the number buttons to input a title or chapter number. No other buttons are required to select the title or chapter.

Example:
 Change to Title 2: 2 then ENTER
 Change to Chapter 24: 2 then 4 then ENTER

An alternate method of navigating a DVD-R/RW disc recorded in VR mode is to use the disc navigator (DISCNAVI) button discussed later in this manual.

DVD-R/RW discs recorded in Video mode can be navigated using the Title List menu discussed later in this manual.

4.4.3 CD and Video-CD Navigation

While a CD or Video-CD disc is playing, use the number buttons to input a track number within the current title.

Example:

Change to Track 6: 6 then ENTER

Change to Track 24: 2 then 4 then ENTER

Note: To start playback again, press CLEAR.



4.4.4 DVD-Video Menu Navigation

Many DVD-Video discs provide menus to play to different sequences. Some menus appear automatically while other menus must be requested. If a menu fails to appear, press **MENU** or **TOP MENU**.

Button	Function
TOP MENU	Reveals "top menu" of a DVD disc <i>Which menu displays varies with each disc.</i>
MENU	Reveals a DVD disc menu <i>Varies with each disc and may be the same as TOP MENU</i>
RETURN	Recalls the previously displayed menu
Joystick	Moves the cursor around the screen and calls submenus
ENTER	Selects the highlighted menu option
Numbers	Chooses a numbered menu option (some discs only) <i>Press ENTER to activate the option</i>

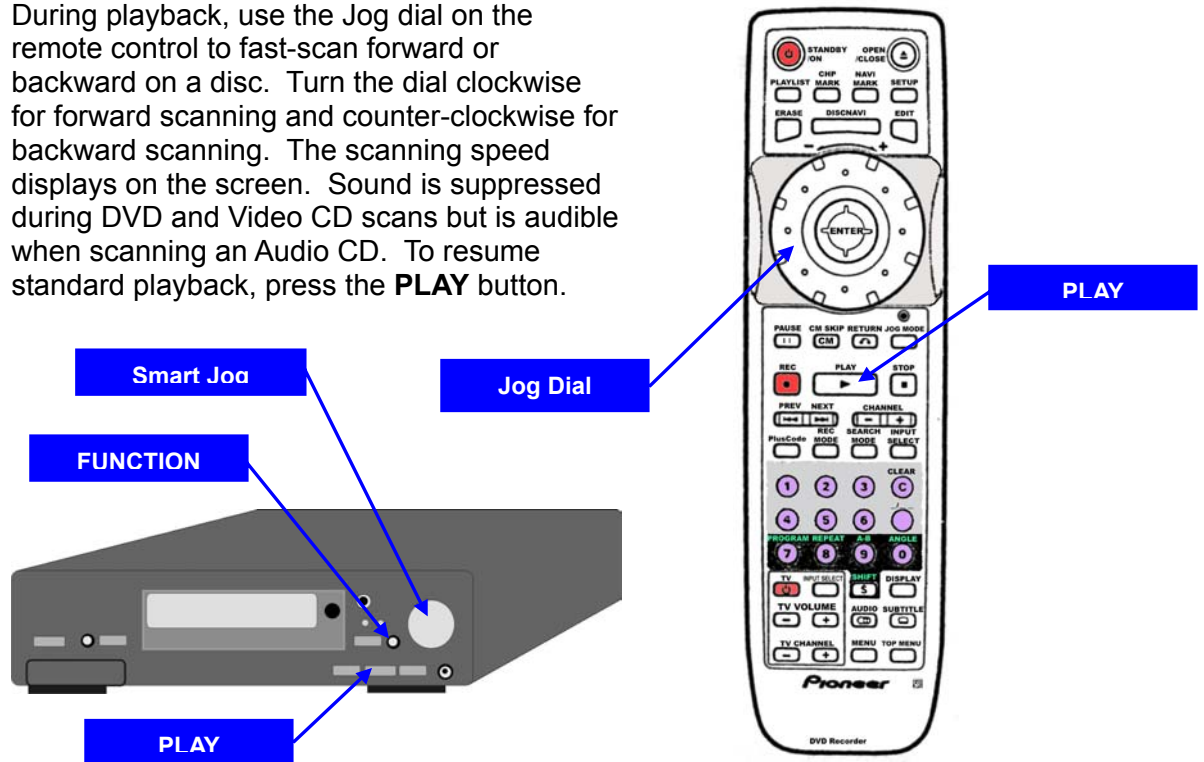
4.4.5 Video-CD Menu Navigation

Some Video-CD discs contain menus, called Playback Control (PBC) menus. To view the PBC menu, press the **RETURN** button once. To begin playing a disc without using the PBC menu, press **PLAY** rather than **RETURN**.

Button	Function
RETURN	Displays the PBC menu
Numbers	Selects a numbered menu option when available
	Displays the previous menu page if applicable
	Displays the next menu page if applicable

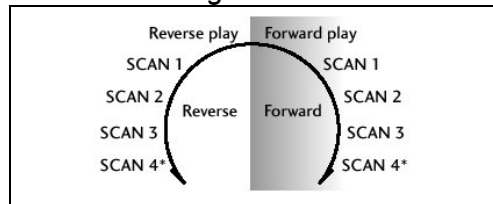
4.5 Scanning Discs

During playback, use the Jog dial on the remote control to fast-scan forward or backward on a disc. Turn the dial clockwise for forward scanning and counter-clockwise for backward scanning. The scanning speed displays on the screen. Sound is suppressed during DVD and Video CD scans but is audible when scanning an Audio CD. To resume standard playback, press the **PLAY** button.

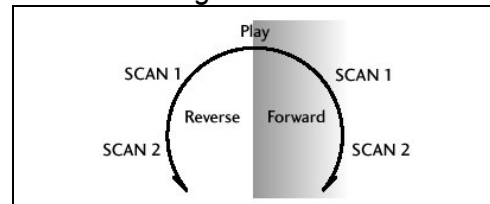


Normal playback may automatically resume when reaching a new chapter. Test the disc for this function before playing the material in a professional setting.

DVD Scanning with remote control



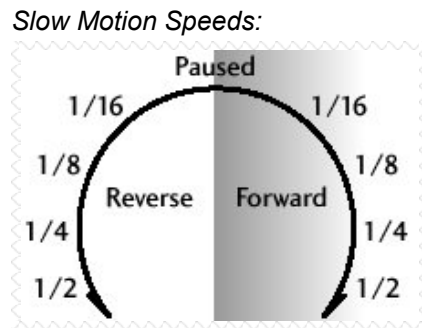
CD Scanning with remote control



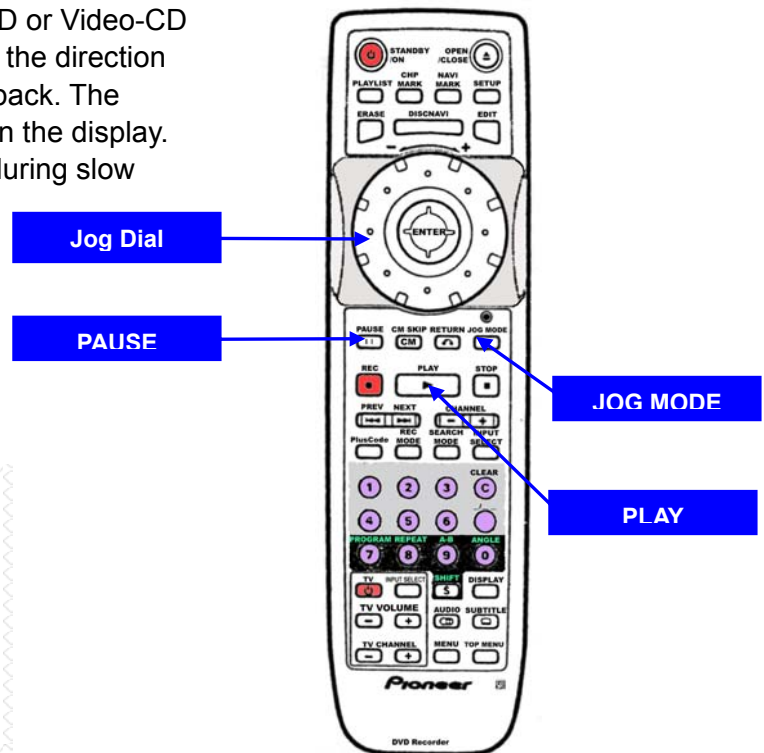
Note: SCAN 4 is only available on VR mode DVD-RW discs.

4.6 Slow-Motion Playback

After pausing playback of a DVD or Video-CD disc, use the Jog dial to control the direction and speed of slow-motion playback. The direction and speed is shown on the display. The picture quality is reduced during slow motion viewing.



Note: Video-CD only supports forward slow motion.



From the Remote Control:

To view a video segment or disc in slow motion, follow the directions below.

1. Begin playback of a disc.
2. Press the **PAUSE** button.
3. Turn the Jog dial to start slow-motion playback.
 - Forward motion – turn clockwise
 - Reverse motion – turn counter-clockwise
4. Verify the selected direction and speed is shown on the display.
5. Press **PLAY** to resume standard playback.

From the Front Panel:

To use the buttons on the front of the recorder, follow the directions below.

1. Begin playback of a disc.
2. Press the **FUNCTION** button until *STEP?* appears on the display.
3. Turn the Jog dial to start slow-motion playback.
 - Forward motion – turn clockwise
 - Reverse motion – turn counter-clockwise
4. Refer to the on-screen display for scanning speed and adjust accordingly.
5. Press **PLAY** to resume standard playback.

Normal playback may automatically resume when reaching a new chapter. Test the disc for this function before playing the material in a professional setting.

4.7 Frame Advance/Frame Reverse Playback

After pausing playback of a DVD or Video-CD disc, use the Jog dial to control the frame-by-frame advance. Frame reverse is also possible on DVD media however the picture quality may degrade.

From the Remote Control:

To view a video segment or disc frame-by-frame, follow the directions below.

1. Begin playing a disc.
2. Press the **JOG MODE** button.
The Jog mode indicator lights.
3. Turn the Jog dial to advance/reverse frame-by-frame.
 - * *Forward frame – turn clockwise*
 - * *Reverse frame – turn counter-clockwise*
4. Press **PLAY** to resume standard playback.

Note: Pressing the JOG MODE button again turns OFF the feature but playback defaults to either forward or reverse scanning rather than normal play.

From the Front Panel:

To use the buttons on the front of the recorder, follow the directions below.

1. Begin playing a disc.
2. Press the **FUNCTION** button until the *STEP?* appears on the display.
3. Turn the **SMART JOG** dial to advance or back up one frame at a time.
4. Press **PLAY** to resume normal playback.

Normal playback may automatically resume when reaching a new chapter. Test the disc for this function before playing the material in a professional setting.

4.8 Recording Options

When preparing to record video, check the following guidelines before proceeding.

- CD-R and CD-RW blank discs are incompatible with this recorder.
- Use DVD-R (General) and DVD-RW discs that are designated for video use.
- Fingerprints, small scratches or other marks on a disc may affect playback and/or recording performance.
- Pioneer takes no responsibility for recording failures due to power fluctuations, defective discs, or damage to the recorder.

The PRV-9000 can play three different types of DVD disc:

- DVD-Video discs
- DVD-RW discs
- DVD-R discs

DVD-R discs are always Video format rather than VR format. This is the same format as pre-recorded (Hollywood release) discs. Once your disc is recorded and finalized, the disc may be played on a standard DVD player that recognizes DVD-R media.

DVD-RW discs are either Video format or Video Recording (VR) format. The PRV-9000's default mode is Video. The recording mode is closely related to the disc format. If the disc is VR format, the recorder must be in VR mode. If the disc is Video format then the recorder must be set to Video mode.

Note: DVD-Video is unsupported as a recording option; however, DVD-Video discs are playable on this recorder.



Changing the format erases existing disc content.

Within the recording modes (fixed for the entire disc), are record settings for determining picture quality and duration preferences. These settings are alterable for each recording session as long as the mode remains the same.

Disc	Disc Format	Recording Mode	Record Settings	Functions
DVD-R	Video	Video	V1 (high quality) V2 (standard)	Playback limited recording limited editing
DVD-RW	Video	Video	V1 (high quality) V2 (standard)	Playback limited recording limited editing
	Video Recording (default)	VR	SP (standard) MN (manual) levels 1 to 32	Playback Recording Original/Playlist editing
DVD-Video	Video	N/A	N/A	Playback only

4.8.1 VR Mode Recording

When recording in VR format, select the recording mode, SP (standard) or MN (manual).

SP – fixed recording quality and recording time
total time maximum of 120 minutes

MN – trade off recording quality for additional recording time
*recording levels range from Level 1 (360 minutes per disc)
to Level 32 (61 minutes per disc)
Default Level 9 (240 minutes/disc)*

Note: SP is equivalent to MN Level 22.

The table below lists maximum recording times for each MN level.

Level	Recording Time	Level	Recording Time
1	360 minutes (longest time)	17	160 minutes
2	345 minutes	18	150 minutes
3	330 minutes	19	140 minutes
4	315 minutes	20	130 minutes
5	300 minutes	21	120 minutes (SP equivalent)
6	285 minutes *	22	110 minutes
7	270 minutes	23	105 minutes
8	255 minutes	24	100 minutes
9	240 minutes	25	95 minutes
10	230 minutes	26	90 minutes
11	220 minutes *	27	85 minutes
12	210 minutes	28	80 minutes
13	200 minutes	29	75 minutes
14	190 minutes	30	70 minutes
15	180 minutes	31	65 minutes
16	170 minutes *	32	61 minutes (highest quality)

* indicates a possibly significant change in picture quality

The following situations may affect recording times:

- The recording times are estimates only and may vary because of bit-rate compression. Exact recording times also depend upon the complexity of the original material.
- When recording with poor broadcast reception or signal interference, available recording time may be shorter than indicated in the previous chart.
- When recording still pictures or audio tracks only, available recording time may be longer than indicated in the previous chart.
- The displayed times, *time used* and *time remaining*, may fail to add up to the total time available on the disc. This imbalance is because of possible hidden titles within recorded segments.
- Heavily edited discs may cause decreased recording time availability.
- Levels 1 through 8 are unavailable when recording from the DV IN/OUT port. The recording level automatically defaults to Level 9 when using this port.
- When recording at the highest quality (Level 32), the audio records as uncompressed Linear PCM unless recording from the DV IN/OUT port. All other audio recording levels are pre-set to 2-channel Dolby Digital.

4.8.2 Video Mode Recording

When recording in Video format, select a quality setting, V1 (high quality) or V2 (standard).

- V1** – maximum recording time of 60 minutes per disc
similar quality to Level 32 in the VR mode
- V2** – maximum recording time of 120 minutes per disc
similar recording time to the SP format in the VR mode

The following situations may affect recording times:

- When recording with the V2 setting, minor artifacts may appear around fast-moving objects.
- Before recording to a DVD-RW Video format disc, set the recorder to the Video mode.
- Before recording in Video mode, set the **Screen Size for Rec(ord)** option.
 - 4:3: standard television screen size
 - 16:9: widescreen/movie screen size
- When recording to a DVD-R disc, continue recording until it is full or *finalize* the disc at the end of the last recording session.
 - * *Un-finalized DVD-R discs are incompatible with most existing players.*
- To increase the *available recording time* shown on the screen, erase the last title recorded on the disc. This action recalculates time displays.
- Recordings are created in 30-second blocks. If the STOP button is pressed in the middle of a block, recording continues until the block is complete.
- To record to a DVD-R disc, press the **REC(ord)** button twice. The first button press causes the PRV-9000 to enter *record standby* mode. The second press begins the recording session.

Note: To set the unit to record after a single REC(ord) button press, refer to Chapter 9: INITIAL SETUP MENU, section 9.2.6 Start Rec on DVD-R.

- Unless a title is the final title recorded to a DVD-RW disc, selecting Erase Title from the Title List menu merely hides the title.

4.8.3 TV Audio-Channel Recording

The PRV-9000 can record one-channel (mono) or two-channel (stereo) audio from television broadcasts. This unit also supports the Secondary Audio Program (SAP) audio channel.

In Video mode, (or in VR mode on the Manual Level 32 setting), you can record either the main audio channel or the SAP audio.

If recording in VR mode but other than at Manual Level 32, the audio options are to capture the main audio only or to record the main audio and SAP audio

together as a single audio channel. During playback, the user is able to switch between the main audio and SAP audio.

4.8.4 Video Recording Restrictions

The following information provides video recording limitations that coincide with the DVD Forum specifications and other source providers' guidelines.

- The recorder is barred from duplicating copy-protected video. Copy-protected video includes DVD-Video discs and some satellite broadcasts. If the PRV-9000 encounters copy-protected material during a recording session, the recorder pauses or stops automatically and shows an error message on the display screen.
- Video coded to copy-only-once is recordable on to a DVD-RW disc in the VR mode with CPRM security. Copyright information is covered in the next section of this manual.
- To display copy control information on screen when recording a TV broadcast or a sequence through an external input, refer to the section entitled *Display Disc Information On-Screen*.

4.8.5 Content Protection for Recordable Media (CPRM)

Content Protection for Recordable Media (CPRM) is a copy-protection system that allows a broadcast program to be copied once. Any additional attempt to copy the protected material fails.

The PRV-9000 is CPRM compatible. To create a copy of a protected broadcast, record to a DVD-RW (formatted in VR mode) disc. The protected material on this disc is blocked from being copied to any other discs or devices.

To play back the copy on a different unit, the player or other device must also be CPRM compatible.

4.8.6 Copyright Guideline

The PRV-9000 incorporates Macrovision Corporation and other rights owners copyright protection technology to guard against illegal or unauthorized use. Audio and video recordings using this recorder are for personal use only.

4.9 Initializing a Disc

When recording to a DVD-R disc, set the mode to Video. For DVD-RW discs, the default is VR mode but can be switched to Video mode. Change the mode from the Disc Setup menu.

Note: Changing the mode on a DVD-RW disc erases all existing material from the disc.

The following directions refer to DVD-RW media but apply to DVD-R discs as well when choosing Video in step 3.

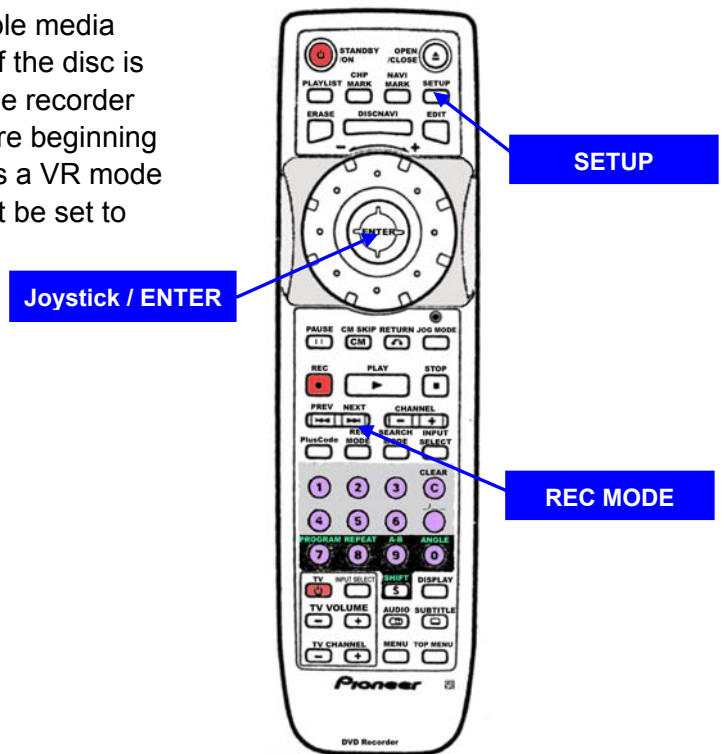
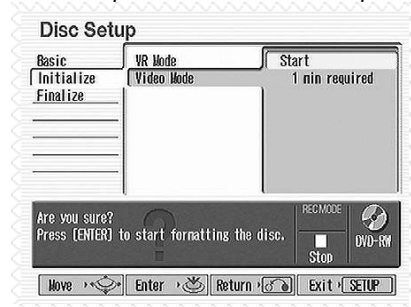
1. Press **SETUP** to access the Setup menu.
2. Highlight **Disc Setup** to reveal the Disc Setup menu by using the joystick.
3. Press **ENTER** to confirm your selection.
4. Highlight **Initialize** from the Disc Setup menu by using the joystick.
5. Choose the appropriate mode from the submenu.
 - * Video mode
 - * VR mode (default)
6. Use the joystick to highlight **Start** from the submenu.
7. Press **ENTER** to begin initializing the disc.

The initialization process may take up to one minute to complete.

4.10 Initializing Recording Modes

The PRV-9000 and the recordable media must have compatible formats. If the disc is formatted to Video mode then the recorder must be set to Video mode before beginning a recording session. If the disc is a VR mode DVD-RW then the recorder must be set to VR mode.

Disc Setup menu / Video mode option:



4.10.1 Initialize for VR Mode Recording

When recording in VR mode (DVD-RW discs only), select either SP (standard) or MN (manual) setting. The Settings screen also provides the following information:

- Total disc recording time
- Data transfer time
- Remaining recording time (based on the current settings)

Follow the directions below to initialize a DVD-RW disc in the VR format.

1. Load a DVD-RW disc formatted for VR mode recording.
If the disc is not already formatted, the recorder automatically prepares the disc for VR recording.
2. Press **REC MODE** as often as needed to select your recording mode.
 - SP (standard)
 - MN (manual)
3. Set the *recording rate level* if MN is the preferred mode.
Use the joystick to increase or decrease the quality levels and the PREV/NEXT buttons to jump to the previous/next pre-set level. Ignore this step if selecting SP as the recording mode.
4. Preview the production for picture quality if necessary.
Additional instructions below
5. Press the **ENTER** button to save the selection and dismiss the menu.

Note: For additional information about VR mode, refer to earlier in this chapter 4.8.1 VR Mode Recording and to Chapter 1: INTRODUCTION, section 1.4.1 VR Mode.

A production preview option is available on the REC MODE submenus.

1. Select the **PREVIEW** menu button to activate an on-screen display of how the material will appear after recording.
2. Adjust the picture quality and/or recording time as needed.
Refer to Chapter 7: EDITING FUNCTIONS & OPTIONS and Chapter 10: DISC SETUP MENU for additional information.
3. Press **ENTER** to accept the displayed settings.
Unless changes are sent to the recorder, the settings are automatically saved after a few seconds and the menu disappears.

4.10.2 Initialize for Video Mode Recording

When recording in Video mode (DVD-R or DVD-RW discs), select either V1 (high quality) or V2 (standard) setting. The V2 setting provides approximately twice as much recording time. The Settings screen also provides the following information:

- Total disc recording time
- Data transfer time
- Remaining recording time available (based on the current settings)

Note: Reinitializing a DVD-RW disc causes all existing material on that disc to be erased/lost.

To prepare for Video mode recording, follow the directions below.

1. Load a disc formatted for Video mode recording.
2. Press **REC MODE** to enter the submenu.
3. Use the joystick to highlight the appropriate mode.
 - V1 (high quality)
 - V2 (standard)
4. Preview the production for picture quality if necessary.
Additional instructions below
5. Press **REC MODE** again to set the mode and dismiss the menu.

A production preview option is available on this submenu.

1. Select the **PREVIEW** menu button to activate an on-screen display of how the material will appear after recording.
2. Adjust the picture quality and/or recording time as needed.
Refer to Chapter 7: EDITING FUNCTIONS & OPTIONS and Chapter 10: DISC SETUP MENU for more information.
3. Press **ENTER** to accept the displayed settings.
Unless changes are sent to the recorder, the settings are automatically saved after a few seconds and the menu disappears.

Note: For additional information about Video mode, refer and to an earlier section in this chapter 4.8.2 Video Mode Recording and to Chapter 1: INTRODUCTION, section 1.4.2 Video Mode.

4.10.3 Setting the Recording Mode from the Front Panel

Instructions in this manual are primarily for controlling the recorder through the remote control. However, the steps below provide directions for using the front panel to set the recording mode on the PRV-9000.

1. Press **FUNCTION** until *REC MODE?* appears in the window.
2. Turn the **Smart Jog** dial to scroll through recording mode options.
 - Video Mode: V1 (high quality) or V2 (standard)
 - VR Mode: SP (standard) or MN (manual)

Note: If selecting MN, press FUNCTION again and turn the SMART JOG dial to select a rate level.

3. Wait 10 seconds for the unit to save the settings and dismiss the menu.

4.10.4 Adjusting the Audio Recording Level from the Front Panel

If the audio is too high or too low, check the audio level meter located on the front of the recorder. The steps below explain how to adjust the audio from the front panel.

1. Press **FUNCTION** until *REC LEVEL?* appears in the window.
2. Turn the **Smart Jog** dial to adjust the volume level.
3. Monitor the audio level meter on the front panel.
If the red bars at the end of the meter are lighting then the audio level is too high.
4. Wait 10 seconds for the recorder to save the settings and dismiss the menu.

4.10.5 Recording from Broadcast Television

TV recording begins automatically and continues to the end of the disc unless recording is stopped. Follow the instructions below to record from a broadcast program.

Note: When recording to VR mode at any quality level excluding MN 32, it is possible to record both the main and the SAP audio streams. The sound can be switched between the streams during disc playback. This function is unavailable in Video mode and in VR mode – level 32.

Follow the instructions below to record a television broadcast.

1. Power ON the PRV-9000.
2. Confirm that the TV input is set to the recorder.

3. Load a recordable disc on to the tray.
Unformatted discs require up to one minute to initialize.
4. Set the recording mode (if necessary).
Refer to the previous sections 4.10.1 Initialize for VR Mode Recording and 4.10.2 Initialize for Video Mode Recording for more information.
5. Use the **CHANNEL +/-** buttons to scroll to the TV channel.
If the recorder is stopped, use number buttons to enter a channel.
6. Press **AUDIO** to choose an audio channel for recording

TV Broadcast	Selected Audio	Broadcast Audio		Monitor Audio
		L ch	R ch	
Mono	Stereo/Mono/SP	Mono	Mono	Mono
Stereo	Stereo/SAP	L	R	Stereo
	Mono	L+R	L+R	Stereo
Mono + SAP	Stereo/Mono	Mono	Mono	Mono
	SAP	Mono †	SAP	SAP
Stereo + SAP	Stereo	L	R	Stereo
	Mono	L+R	Mono	Mono
	SAP	L+R †	SAP	SAP

† When recording in VR mode/MN32 (high quality) or in Video mode, the SAP channel is recorded on this channel.

7. Set the audio recording level (if necessary).
Refer to the previous section, 4.10.4 Adjusting the Audio Recording Level, for more information.
8. Press **REC** to complete the process.
 - DVD-RW: recording begins immediately
 - DVD-R: wait for the on-screen display to refresh then press the REC button again begin the recording session.

Note: The previous table charts different recording settings for different types of broadcasts. The Monitor Audio column indicates what can be heard during the recording session.

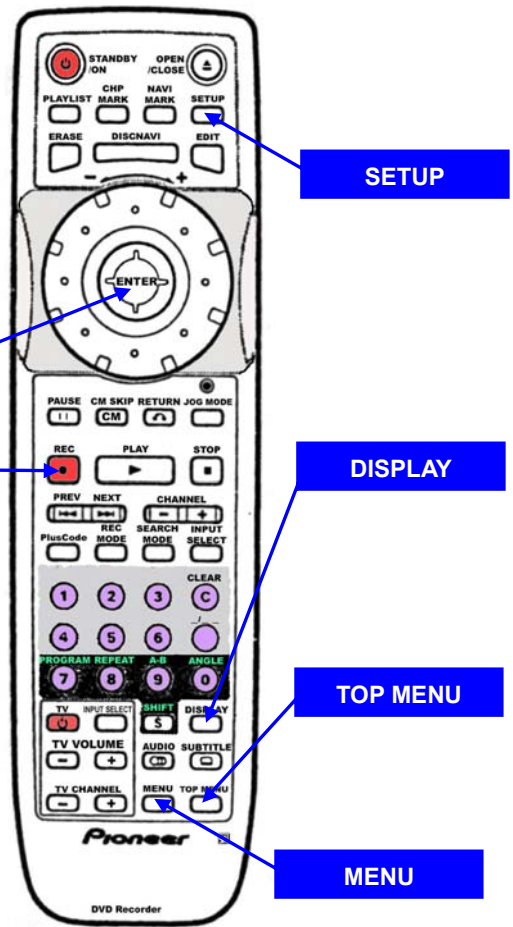
Pressing the **PAUSE** button stops the recording process and pressing a second time resumes the recording session. When recording to a VR disc, resuming the recording process creates a chapter mark at that point.

Recording continues until the **STOP** button is pressed or the disc is full. To record to a fixed time length, refer to the next section 4.10.6 *One Touch Recording* or refer to Chapter 6: RECORDING FUNCTIONS & OPTIONS, section 6.1 *Timer Recording*.

4.10.6 One Touch Recording

The following method is the simplest way to record in 30-minute segments.

1. Load a recordable disc in to the unit.
Unformatted discs require up to one minute to initialize.
2. Select the appropriate settings according to the instructions in the previous section.
* *Record mode*
* *Audio channel*
* *Audio Recording level*
3. Set the recording time.
*Press **REC** to begin recording (or after the second press to record to a DVD-R disc). Pressing the REC button again increases the recording time by 30 minutes. Each subsequent continues to increase the recording time in 30-minute increments. The maximum recording time is six hours.*
4. Confirm that the correct recording time appears on the display.



Press **STOP** to discontinue recording at any time. Once recording has begun, pressing **REC** again cancels the selected recording time without stopping the current record session. When the timed recording is complete, the PRV-9000 automatically enters the Standby mode.

4.11 Playing a Recording on a DVD Player

Most DVD players can play back finalized discs recording in the Video mode. A few players are able to play back DVD-RW media recorded in the VR mode as well. If the player is capable of playing a DVD-RW disc, finalizing the recording is usually unnecessary. For information about playback compatibilities, refer to the operating instructions included with your DVD player.

4.12 Finalize a Disc

Finalizing a disc seals the recording against adding additional segments or from editing the existing material. Often, DVD devices require a disc to be finalized or *fixed* before playing back the recorded sequences.

Finalizing a disc recorded in the Video mode automatically creates a menu for navigating the material. To access this menu, press **MENU** or **TOP MENU** on the remote control.

Once a Video-formatted disc is finalized, additions and editing are blocked. Discs recorded in the VR mode allow additional recordings and edits by reversing the finalization.

Follow the directions below to finalize a disc.

1. Load the disc to be finalized.
Playback must be stopped before proceeding.
2. Press **SETUP** to reveal the menu.
3. Highlight **Disc Setup** from the Setup menu.
4. Press **ENTER** to access the Disc Setup menu.
5. Use the joystick to select **Finalize** from the submenu.
6. Highlight **Start** to prepare for disc finalization.
7. Press **ENTER** to begin finalizing the disc.

If disc finalization takes more than four minutes to complete, an option to cancel the procedure appears on the screen. Press **ENTER** to cancel the operation. At four minutes before completion of a longer project, the option to cancel the operation disappears.

Disc format and content determines the amount of time required to finalize a disc. To finalize a Video-formatted disc requires up to 20 minutes while finalizing a VR disc may take up to an hour. Factors influencing finalization time are as follows:

- Disc type
- Total duration of recorded material
- Number of titles on the disc

*Note: DVD-RW discs finalized on a different DVD recorder may be un-finalized. Load the disc and choose **Undo Finalize** from the Finalize menu.*

4.13 Display Disc Information On-Screen

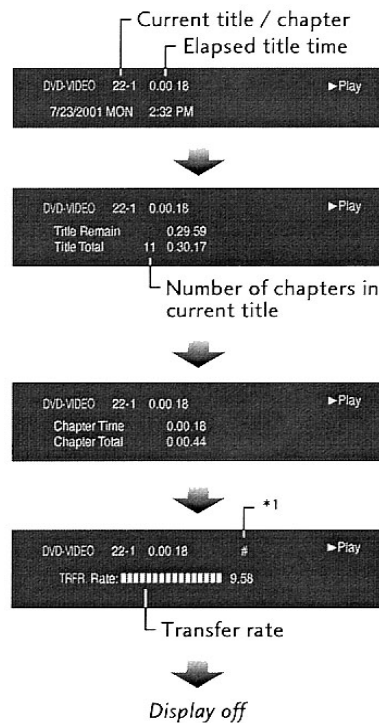
To reveal information about the disc, follow the step below.

1. Load a disc in to the recorder.

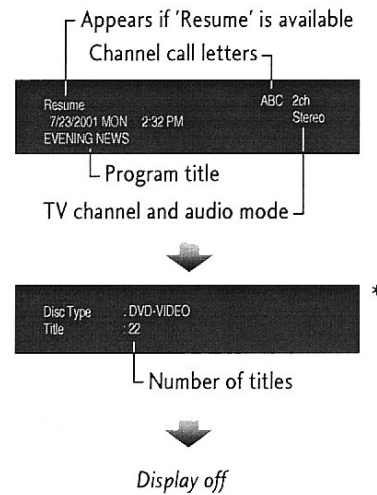
2. Press **DISPLAY** to reveal the primary disc data.
3. Continue pressing **DISPLAY** to cycle through the disc data.
Refer to the following pages for data details.
4. Hide the information by pressing **DISPLAY** repeatedly until reaching the end of the on-screen data loop.

Example of DVD-Video/Video mode on DVD-R or DVD-RW media:

On-screen data while playing a disc:



On-screen data while a disc is stopped:

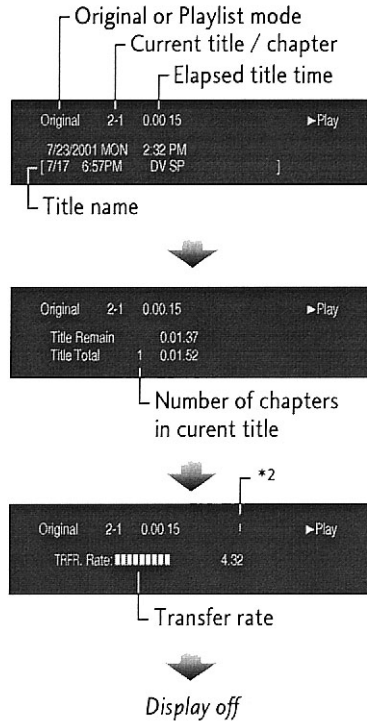


* When an unfinalized disc is loaded, the remaining recording time is also displayed.

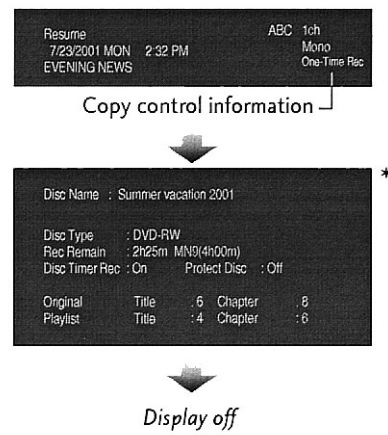
*1 — The '#' symbol refers to the video signal recording at 24 frames per second in progressive scans.
(see *PureCinema* within the glossary at the end of this manual)

Example of VR mode on DVD-RW media:

On-screen data while playing a disc:



On-screen data while a disc is stopped:

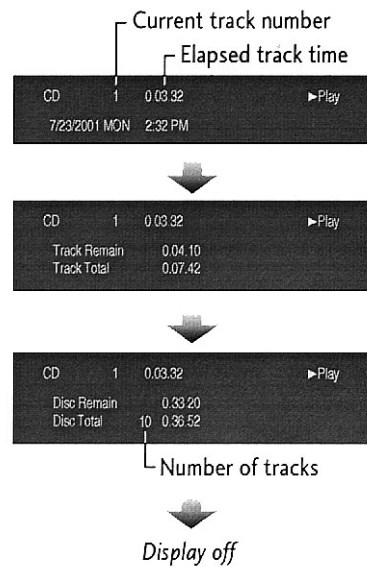


* This display is also shown when a VR mode disc is loaded.

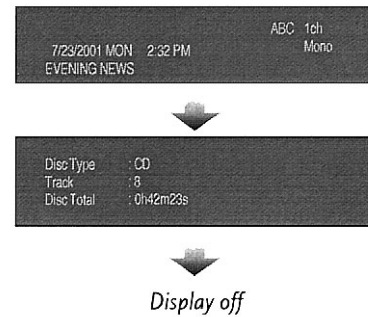
*2 – The '! mark denotes that the contents are scrambled with CPRM security technology.

Example of CD media:

On-screen data while playing a disc:



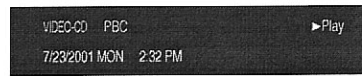
On-screen data while a disc is stopped:



Example of Video-CD media:

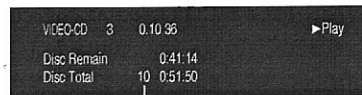
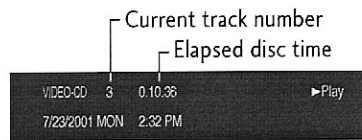
On-screen data while playing a disc:

- Video CD playing in PBC mode

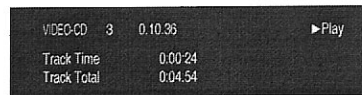


Display off

- Video CD playing in non-PBC mode



Number of tracks (10)



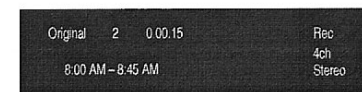
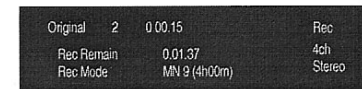
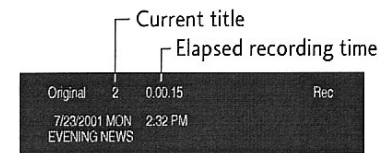
Display off

On-screen data while a disc is stopped:



Display off

Example of Recording to DVD-R or DVD-RW media:



Timer recording only

Display off

Note: The on-screen data automatically disappears after 150 minutes.



Additional information may appear on-screen under the following conditions:

- Within the *Recording* or *Stopped* data screen, a *One Time Rec* or *Can't Record* message may appear. These messages occur when the TV program is copy-controlled or contains copy-controlled information.
- On the *Recording* display, the total recording time in parenthesis assumes the disc is 12cm/4.7GB and calculates the value per the recording settings.
- The *Stop* on-screen data for Video-format media becomes the same as DVD-Video once the disc is finalized.
- If Frame Search is ON, the frame number appears next to *elapsed time* when the disc is paused.
- Recording and playback times for TV recordings are approximately 0.1 % shorter than the actual time. This disparity is due to the slightly different frame rates between television broadcasts and DVD technology.

Note: Transfer frame rate lists the amount of video and audio information recorded on the disc. However, this rate is not an indication of picture or audio quality.

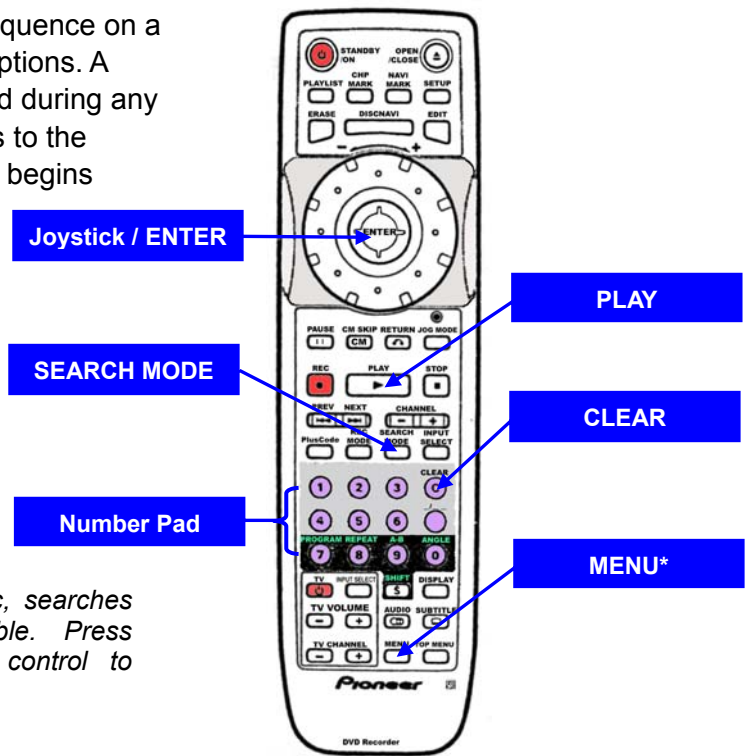
5.0 OTHER PLAYBACK FEATURES

In addition to the features detailed in the first chapter within this manual, the PRV-9000 provides advanced features for prosumer and professional users. This chapter reviews functions and abilities beyond standard operation. Skip forward to Chapter 6 to begin operating the recorder.

Note: When playing DVD discs, the player or the disc may disallow a particular function. If a function is unsupported or disallowed, either a  (player) or a  (disc) appears on-screen.

5.1 Disc Searches

To locate a certain point or sequence on a disc, use one of the Search options. A disc can be playing or stopped during any searches. The recorder jumps to the specified area of the disc and begins playback.



* Depending upon the disc, searches using the menu is possible. Press **MENU** on the remote control to check for this feature.

Follow the directions below to initiate a search.

1. Press the **SEARCH MODE** button to initiate a search.
2. Continue pressing **SEARCH MODE** to select an option.
 - Title (DVD only)
 - Chapter/Track
 - Time (DVD and Video CD only)
 - OFF

3. Enter the title/chapter/track number or the time (H, MM, SS).
 - *Numbers enter from the right to the left thus the first number entered appears on the far right (SS) then is forced towards the left (H) field with each number added.*
 - *Title: enter the number – Title 2 = 2*
 - *Chapter/Track: enter the number(s) – Chapter 12 = 1, 2*
 - *Time: enter the entire number including zeros when appropriate*
 - *45 minutes in to material = 4, 5, 0, 0*
 - *1 hour, 15 minutes, 20 seconds = 1, 1, 5, 2, 0*
4. Press **PLAY** or **ENTER** to begin playback.

Note: If searching by frame, the recorder pauses on the specified frame and waits for a PLAY or other command before continuing.

5.2 Time & Frame Search Guidelines

When issuing a time search, playback may begin slightly before or after the indicated time. The PRV-9000 is programmed to jump to the closed full frame. In DVD technology, this full frame is known as an I frame. The recorder checks before and after the selected point on the disc for the closed I frame then jumps to that frame.

To issue a time search to DVD-Video and Video-format media, the disc must be playing. The recorder ignores the command if the disc is stopped.

If Frame Search is ON, add a frame number to the end of the time search. The frame number needs to be between 0 and frame 24 for the U.S. standard NTSC (30 frames/per second) video. For example, 22 minutes, 10 seconds and 5 frames is entered as 2, 2, 1, 0, 0, 5.

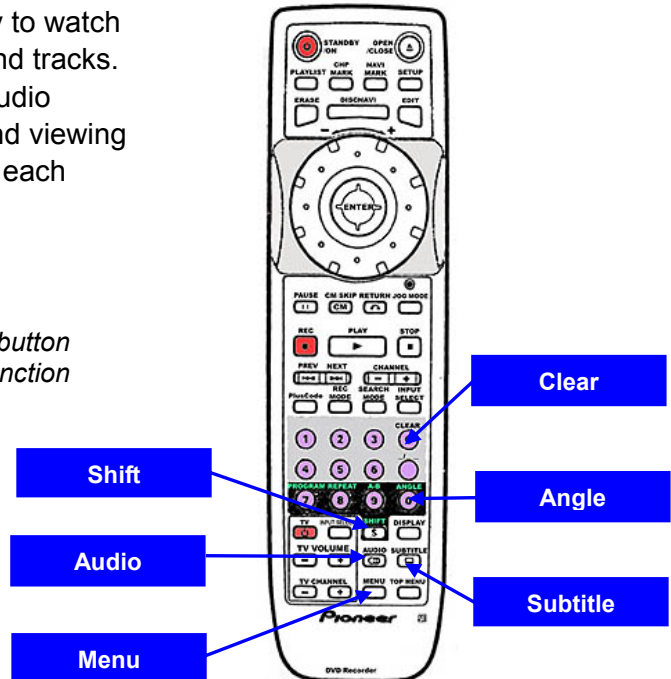
When using Frame Search with film material, the recorded rate is 24 frames/per second. The difference between the NTSC video rate of 30/fps and film's 24/fps may cause an exact frame search to fail. Film's playback rate causes frame-count inaccuracies.

Note: If searching by frame, the recorder pauses on the specified frame and waits for a PLAY or other command before continuing.

5.4 Change Playback Options

Playback options provide a way to watch video with altered views or sound tracks. The options include subtitles, audio soundtracks, audio channels and viewing angles. This section addresses each option separately.

*Note: Hold down the **SHIFT** button to access the (black-barred) function button, **ANGLE**.*



5.4.1 Switch Subtitles

Many DVD-Video discs include subtitles with one or more language. The disc jacket or case lists available languages and subtitle information. Subtitles can be selected before and during playback.

*Note: Some material only allows switching subtitles from the disc menu. Press **MENU** on the remote control to check for subtitle options.*

1. Load a disc into the recorder.
Disc may be playing or stopped.
2. Press **SUBTITLE** to reveal the first available option.
3. Continue pressing **SUBTITLE** to scroll through the subtitle options.
The current subtitle is shown on-screen and in the front panel display.
4. Hold down **SUBTITLE** and press **CLEAR** to switch OFF subtitles.

Note: To set subtitle preferences, refer to Chapter 9: INITIAL SETUP MENU, section 9.1.7 Language Settings.

5.4.2 Switch Audio Channels

Many DVD-Video discs include soundtracks with multiple languages or sound effects. The disc jacket or case lists available languages. When playing a DVD-Video disc (Video formatted and including DVD-R/RW media) recorded

with two or more soundtracks, the recorder supports switching between soundtracks during playback.

Note: Some material only allows switching soundtracks from the disc menu. Press MENU on the remote control to check for soundtrack options.

Some discs provide both Dolby Digital and DTS soundtracks. Selecting DTS limits playback to digital audio output with analog audio unsupported. To listen to a DTS soundtrack, connect a DTS decoder to one of the recorder's digital ports. For more information, refer to the Chapter 2: CONNECTIONS, section 2.2.4 *Connect to Other A/V Sources – Satellite/Cable*.

1. Press **AUDIO** to view the current audio channel.
2. Continue pressing **AUDIO** to scroll through the options.




3. Release the **AUDIO** button to select the displayed option and hide the options menu.

Note: Some discs cause the recorder to momentarily interrupt playback when changing the audio language. Neither the disc nor the recorder is defective.

When playing a Dual Mono recording on a VR formatted disc in Dolby Digital, the audio channel is locked at the current setting. Set *Dolby Digital Out* to *Dolby Digital* ► *PCM* or listen via the analog outputs to switch channels.

For additional information, return to Chapter 2: GETTING STARTED, section 4.1.3 *Set the Digital Audio Output*.

5.4.3 Switch Camera Angles

Some DVD Video discs feature scenes shot from more than a single view. Refer to the disc jacket or sleeve for details. Discs marked with a  indicate that one or more angles are available for one or more scenes.

Follow the directions below to change the angle when available.

1. Press **SHIFT** on the remote control.
2. Press **ANGLE** to change the camera view.

If the disc is paused when the buttons are pressed, playback starts again from the new viewing angle. If the disc is set to repeat play when the buttons are pressed then the repeat command is cancelled.

5.4.4 Set to Repeat Playback

A PRV-9000 can play back all or portions of a disc as well as loop material. The repeat options are as follows:

- Repeat one or more chapters on a DVD
- Repeat one or more titles on a DVD
- Repeat tracks/chapters/titles from a program list
refer to the following section for program list creation
- Play back disc contents (any DVD or CD media)
- Repeat individual tracks on a CD
- Repeat individual tracks on a Video-CD

Note: While playing a disc, pressing REPEAT (SHIFT + 8/REPEAT button) also adds the command.

Follow the directions below to loop disc playback.

1. Press **SHIFT** on the remote control.
2. Press **A-B** once at the beginning of the section for loop playback.
3. Press **A-B** again at the end of the sequence to loop.
Playback immediately jumps back to the selected starting point and plays the looped segment continuously.
4. Press **CLEAR** to return to normal playback.

Note: The beginning and ending points must be within the same title when looping material on a DVD disc.

The REPEAT and LOOPING functions are unavailable on CD media or a Video-CD disc if the recorder is playing from a program list/PBC mode. For more information regarding Program Lists, refer to the following section.

To repeat a sequence once without using the REPEAT function, follow the directions below.

1. Press **SHIFT** on the remote control.
2. Press **A-B** once at the beginning of the section for loop playback.

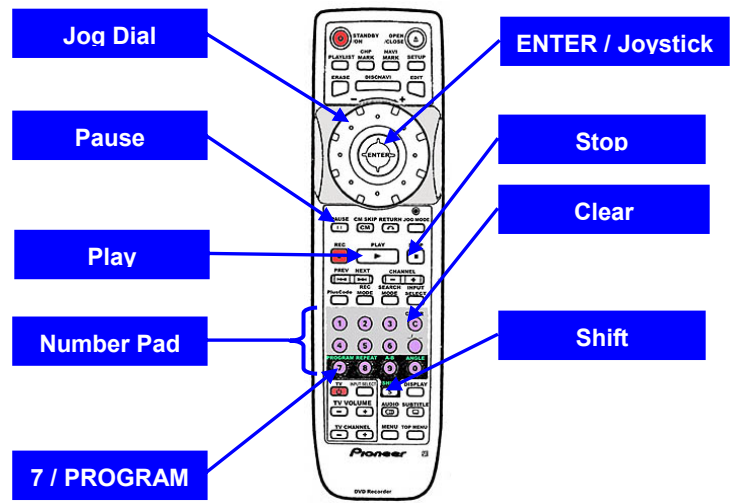
3. Press **PLAY** at the end of the sequence to jump back to the beginning of the section for loop playback.
The recorder repeats the segment but continues beyond the end of the looped sequence.

5.5 Create a Program (Play) List

Build a Program List to play tracks, chapters or titles in a pre-programmed series.

To add a Program List, use combinations of the following buttons:

- Jog Dial
- Pause
- Play
- Stop
- Numbers
- Clear
- Shift



Note: Program Lists are unavailable for unfinalized VR formatted discs.

A Program List may contain up to 24 list entries. Each List entry can be a track/chapter/title number or a pause.

5.5.1 DVD Program List

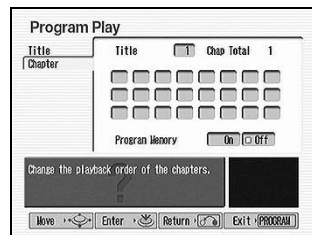
The Program Memory retains Program Lists for a maximum of 24 discs with each List containing up to 24 entries. The supported DVD disc formats are as follows:

- DVD-ROM
- DVD-R
- DVD-RW – video format
- DVD-RW – VR format (media must be finalized before playback)

Note: All standard commands such as track/chapter/title skipping and scanning are available during List programming.

The directions below provide step-by-step instructions to create a Program List for a DVD-R or DVD-RW disc.

1. Load a disc in to the recorder.
The disc may be playing, paused or stopped. If the disc is playing, the picture appears in the lower right corner of the screen.
2. Press the **SHIFT** button on the remote control.
3. Press **PROGRAM** (7 on the number pad) to access Program Play List.
4. Use the joystick to highlight **Title** or **Chapter**.

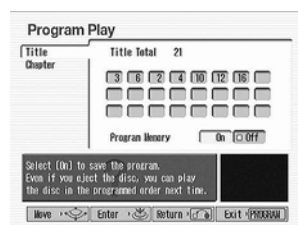


If selecting Chapter, use the joystick to move up to enter the title number in the appropriate box. press Enter to select that title. All chapters for the Program List entry must come from this title.

5. Use the joystick to move to the first Program List number field if the cursor is not in the proper location.
6. Enter a title/chapter number for this program list.
 - *title/chapter 8: press 8 on the number pad then press ENTER*
 - *title/chapter 16: press 1 and 6 then press ENTER*

Note: To add a pause instead of a title or chapter, press the PAUSE button for a Program List entry instead of entering a title/chapter number on that line.

7. Press **ENTER** after each number entered on a Program List entry field.



8. Continue adding numbers to complete the Program List.
9. Use the joystick to move the cursor down to *Program Memory*.
10. Select **ON** to activate the Program Memory and save the program list.
Each time this disc is loaded, the recorder automatically recalls the Program List.
11. Press **PLAY** to begin Program List playback.
*To play the List at a later time, press **SHIFT**, then **PROGRAM**.*

To view the Program List, press **SHIFT** then **PROGRAM** on the remote control.

To add a pause between List entries, press the **PAUSE** button instead of a number button then press **ENTER** to add the pause. If there is already a number in that space, all entries after that point are forced down one step in the List. Add pauses anywhere except as the first step or the last step in a Program List. After a pause, press **PLAY** to resume/continue playback.

To delete an entry from the Program List, position the cursor over the entry then press **CLEAR**. All following entries move up by one entry line. To delete a Program List, stop the disc playback then press **CLEAR**. Unless the Program List is stored in the recorder's memory, the List is also erased when the disc is removed or the recorder's power is turned OFF (standby mode).

To insert a line within a Program List, position the cursor over the desired slot and enter the title/chapter/track. Press **ENTER** to store the entry and to force all following entries to drop down by one step.

To cancel a playing Program List without stopping the disc playback, press **CLEAR**. The disc continues playing from the current sequence but the List entries are ignored.

Occasionally during List playback, the start of a non-programmed chapter briefly appears on screen. This is not a malfunction but a part of the process to change from the end of one chapter to the next programmed chapter.

To add a currently playing title/chapter/track to the Program List, press **SHIFT** then hold down the **PROGRAM** button for at least two seconds. If the Program List is not already present, the recorder creates a new List with the current sequence as the first entry. For DVDs, if the recorder last created a Program List by title then the new List is also by title. If the disc has never had a Program List then the recorder creates a Chapter Program List.

Note: All chapters in a Program List must be within the same title.

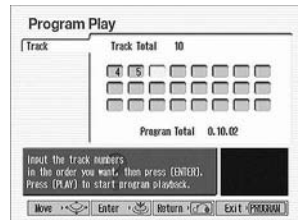
To delete a stored Program List for a DVD, access the program menu (press **SHIFT** then **PROGRAM**) and change the Program Memory option to OFF.

A Program List may have up to 24 entries. The PRV-9000 stores up to 24 Program Lists in the recorder's memory.

5.5.2 CD Program List

The Program Memory retains Program Lists for a maximum of 24 discs with each List containing up to 24 entries. The directions below provide step-by-step instructions to create a Program List for a CD or Video-CD disc.

1. Place a disc in the recorder.
The disc may be playing, paused or stopped. If the disc is playing, the picture appears in the lower right corner of the screen.
2. Press **SHIFT** on the remote control.
3. Press **PROGRAM** (**Z** on the number pad).
4. Enter the track number for this Program List.
 - For track: press 8 on the number pad then press **Enter**
 - For track 16: press 1 and 6 then press **Enter**
5. Press **ENTER** after each complete track number.
6. Continue entering all sequences for this List.



7. Press **PLAY** to begin playback of the Program List tracks.
*To play the List at a later time, press **SHIFT**, then **PROGRAM** to exit the menu.*

To view the Program List, press **SHIFT** then **PROGRAM** on the remote control.

To add a pause between List entries, press the **PAUSE** button instead of a number button then press **ENTER** to add the pause. If there is already a number in that space, all entries after that point are forced down one step in the List. Add pauses anywhere except as the first step or the last step in a Program List. After a pause, press **PLAY** to continue playback.

To delete an entry from the Program List, position the cursor over the entry then press **CLEAR**. All following entries move back by one step. To delete a Program List stop the disc playback then press **CLEAR**. Unless the Program List is stored in the recorder's memory, the List is also erased when the disc is removed or the recorder's power is turned OFF (standby mode).

To insert an entry within a Program List, position the cursor over the desired slot and enter the title/chapter/track. Press **ENTER** to store the entry and to force all following entries to advance by one step.

To cancel a playing Program List without stopping the disc playback, press **CLEAR**. The disc continues playing from the current sequence.

To add a currently playing title/chapter/track to the Program List, press **SHIFT** then hold down the **PROGRAM** button for at least two seconds. If a Program

List is present, then the recorder creates a new list with the current sequence as the first entry.

To delete a stored Program List for a CD, access the program menu (press **SHIFT** then **PROGRAM**) and change the Program Memory option to OFF.

A Program List may have up to 24 entries. The PRV-9000 stores up to 24 Program Lists in the recorder's memory.

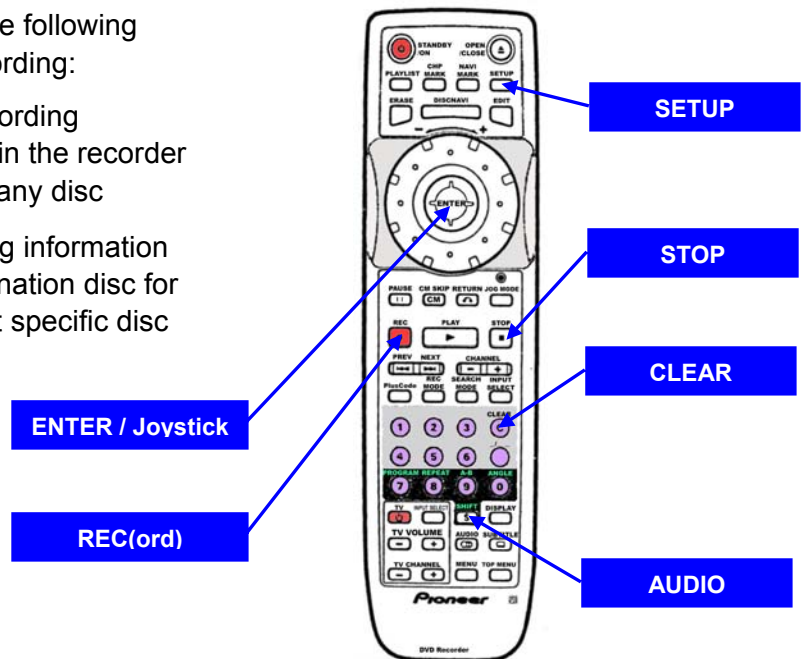
6.0 RECORDING FUNCTIONS & OPTIONS

The Pioneer PRV-9000 Pro DVD-Video Recorder is a stand-alone set-top unit that can make DVD-Video discs with the press of a single button and creates the disc in *real time*. Recordings are made using either write-once DVD-R or re-recordable DVD-RW discs that are compatible with most DVD-Video players and DVD-ROM drives. In DVD-Video mode, maximum program capacity is either one hour or two hours per disc, and up to 99 separate video segments (titles) can be recorded. The PRV-9000 Pro DVD-Video Recorder can automatically generate a DVD title menu that can be used to access any recorded title on a DVD-R compatible DVD-Video player similar to how movie titles are used. Analog and digital A/V inputs allow easy connection to both legacy and current video sources. The recorder outputs include component, Y/C and composite video signals. This chapter addresses recording features for the PRV-9000.

6.1 Timer Recording

The PRV-9000 provides the following two methods for timer recording:

- **Standard** – timer recording information is stored in the recorder for later recording to any disc
- **Disc** – timer recording information is stored on the destination disc for later recording to that specific disc



Timer recordings have a higher priority than the *Auto Rec(ord)* function. A timer recording command interrupts an Auto Rec session with Auto Rec resuming after the timer recording is complete. For more information about Auto Rec refer to later in this chapter, section 6.3.1 *Record from an External Component*.

The PRV-9000 recorder supports up to 8 timed recording sessions scheduled up to one month in advance. The timer may also be set to record every day or every week at a specified time.

Approximately two minutes before a timer program begins, the recorder's power automatically switches ON. Pressing Standby/ON at this point stops the recording session.

The instructions below apply to both Standard and Disc timer recording; however, the example screen-shots are taken from a Standard timer recording session.

1. Load a recordable disc in to the recorder.
If loading an unformatted DVD-RW disc, it is automatically formatted as a VR disc. This process requires approximately 40 seconds.
2. Press **SETUP** to display the Setup menu.
If disc timer recording is active, the first menu item is Disc Timer Rec.



Figure 6-1: Timer Recording Setup Menu

3. Confirm *Timer Rec* is highlighted on the menu or highlight *Disc Timer Rec* if the disc timer option is active.
4. Press **ENTER** to call the menu.
Timer Recording program appears on screen with 8 available entry lines.

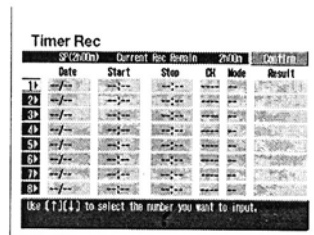


Figure 6-2: Up to 8 Timer Recording sessions

5. Begin entering information for the timer recording(s).
 - Move the joystick left/right to move the cursor left/right.
 - Move the joystick up/down to scroll through options within that line.
 - Press **ENTER** to retain the program line information.
 - Press **CLEAR** to erase the current entry.
6. Select a date up to one month in advance or choose a daily/weekly option.
7. Set the Recording Start time.
8. Set the Recording Stop time.

9. Choose the channel (CH) to be recorded.
 - *Channel 2 through 69*
 - *Channel 1 through 125 for antenna reception channels*
 - *Channel 1 through 125 for cable reception channels*
 - *From an external output*
10. Set the recording mode.
 - *VR disc format – SP – standard, recording equivalent to level 21*
 - *VR disc format – MN – manual, recording level 1 through 32*
 - *VR disc format/DV input – any setting other than MN 1 through MN 8*
 - *Video disc format – set to SP (V1 and V2 is unavailable) then press the REC MODE button afterwards to see the recording mode*



Pressing ENTER or moving the cursor back to the program number field before inputting all information on that line, erases all fields.

11. Press **ENTER** to complete entry lines.
12. Press **SETUP** to exit the menu once all timer recordings are entered.
13. Switch the unit to Standby before timer recording is scheduled to begin.
The timer indicator on the recorder's front panel lights when the unit is switched to Standby. A blinking light indicates that the disc is un-recordable or that no disc has been loaded.
Note: Timer recording fails if the recorder is left ON rather than in Standby.

Audio is recorded according to the settings on the TV or other display device (Stereo, Mono or SAP). Select the audio using the Audio button before switching the recorder to Standby.

If *Optimize Disc* is active (ON) during a timer recording, the PRV-9000 adjusts the recording quality to fit as much of the sequence as possible on to the disc. However, if the timer entry is still too long for the available disc space, the *Time Over* message appears.

If a timer entry overlaps another entry, the message *Duplicate*, appears next to the entry.

6.1.1 Disc Timer Recording

The Disc Timer feature allows up to eight recording entries to be saved to the disc rather than to the recorder. This function is convenient for storing consecutive weekly episodes on to a single DVD-RW disc (VR format).

Because the Timer is stored on the disc, the recording program activates automatically every time the disc is loaded in to the recorder. Follow the directions below to prepare a disc for storing a timer recording program. If the disc is already prepared for disc timer recording, skip to Program A Disc Timer Recording in the instructions below.

Note: Before programming for disc timer, set the disc to VR format.

Prepare Media for Disc Timer Programming:

1. Load a recordable disc in to the recorder.
If loading an unformatted DVD-RW disc, it is automatically formatted as a VR disc. This process requires approximately 40 seconds.
2. Press **SETUP** to display the Setup menu.
If disc timer recording is active, the first menu item is Disc Timer Rec.
3. Highlight *Disc Setup* from the Setup menu by using the joystick.
4. Confirm that *Basic* is highlighted.
5. Use the joystick to move to *Disc Timer Rec* on the *Basic* submenu.
6. Set *Disc Timer Rec* to ON.
*Use the joystick to highlight ON then press **ENTER**.*

Note: Ejecting the disc before programming at least one complete entry causes the Disc Timer Rec option to revert automatically to OFF.

7. Press **SETUP** to exit the Disc Setup menu.

Program A Disc Timer Recording:

1. Load a recordable disc in to the recorder.
If loading an unformatted DVD-RW disc, it is automatically formatted as a VR disc. This process requires approximately 40 seconds.
2. Press **SETUP** to display the Setup menu.
If disc timer recording is active, the first menu item is Disc Timer Rec.
3. Confirm that *Disc Timer Rec* is highlighted on the menu.
4. Press **ENTER** to access the *Disc Timer Rec* menu.
The Timer Recording program appears on screen with 8 entry lines available.
5. Select an entry line by moving the joystick down/up.
6. Use the joystick to access an entry line.

7. Begin entering information for the timer recording(s).
 - *Move the joystick left/right to move the cursor left/right.*
 - *Move the joystick up/down to scroll through options within that line.*
 - *Press **ENTER** to retain the program information.*
 - *Press **CLEAR** to erase the current entry.*
8. Select a date up to one month in advance or choose a daily or weekly option.
9. Set the recording Start time.
10. Set the recording Stop time.
11. Choose the channel (CH) to be recorded.
 - *Channel 2 through 69*
 - *Channel 1 through 125 for antenna reception channels*
 - *Channel 1 through 125 for cable reception channels*
 - *From an external output*
12. Set the recording mode.
 - *VR disc format – SP – standard, recording equivalent to level 21*
 - *VR disc format – MN – manual, recording level 1 through 32*
 - *VR disc format/DV input – any setting other than MN 1 through MN 8*
 - *Video disc format – set to SP (V1 and V2 is unavailable) then press the REC MODE button afterwards to set the recording mode.*
13. Press **ENTER** to save each entry line.
14. Activate the *Confirm* option to check required disc space if necessary. *See the following section for details.*
15. Press **SETUP** to exit the menu once all disc timer sessions are entered.
16. Switch to Standby before timer recordings are scheduled to begin. *The timer indicator on the recorder's front panel lights when the unit is switched to Standby. A blinking light indicates that the disc is un-recordable or that no disc has been loaded.*

Note: Timer recording fails if the recorder is left ON rather than in Standby.

Another option is to use the VCR Plus+ feature to program a timer recording. For additional information on this feature, refer to Chapter 6: RECORDING FUNCTIONS & OPTIONS, section 6.2 *VCR Plus+ Program System*.

Use a Disc With a Disc Timer Program:

1. Load the disc with a disc timer program in to the unit.
RESERVED appears in the display panel while the Disc Timer Rec option automatically switches to ON.
2. Switch the recorder to Standby.

Turn OFF a Disc Timer Program:

1. Press **SETUP** to display the Setup menu.
If disc timer recording is active, the first menu item is Disc Timer Rec.
2. Highlight *Disc Setup* from the Setup menu.
3. Set *Disc Timer Rec* to OFF (from the Basic menu).
4. Press **SETUP** to exit the Disc Setup menu.

Disc timer recordings become active when a disc with at least one disc timer program is loaded in to the recorder. Disc timer programs also become active when the Disc Timer Rec option is set to ON. When a disc timer program activates, any standard timer recording setting are turned OFF.

Ejecting the disc or changing the Disc Timer Rec option to OFF activates the standard timer program(s) when available. Loading an unformatted disc or a disc without a disc timer program deactivates the option.

Note: Disc timer programming is unavailable on a protected disc. For more information, refer to Chapter 7 EDITING FUNCTIONS & OPTIONS, section 7.4.12 Protecting/Unprotecting an Original Title.

6.1.2 Check Available Disc Space

To confirm that all timer entries will fit on to the loaded disc, follow the directions below.

1. Load the disc with a disc timer program in to the unit.
RESERVED appears in the display panel while the Disc Timer Rec option automatically switches to ON.
2. Press **SETUP** to access the Setup menu.
3. Confirm that *Disc Timer Rec* is highlighted on the menu.
4. Press **ENTER** to access the option.
5. Use the joystick to move up to *Confirm*.

6. Press **ENTER** to calculate the disc space needed for the timer recordings already present.
7. Verify that Rec OK appears next to each timer recording entry.
If the timer program is too long for the disc then Time Over appears next to the entry. However, the timer entry records as much of the program as possible until the disc is full.
8. Make adjustments as necessary.
9. Press **ENTER** to confirm adjusted lines.
10. Press **SETUP** to exit the Timer Program screen and return to the main menu.

With a daily or weekly program, the *Rec OK* message appears next to the last entry that can fit on the loaded disc (up to a maximum of one month in advance).

If *Optimize Disc* is active (ON) during a timer recording, the PRV-9000 adjusts the recording quality to fit as much of the sequence as possible on to the disc. However, if the timer entry is still too long for the available disc space, the *Time Over* message appears.

6.1.3 Check Timer Recording Details

To verify that a timer program is ready to record, refer to the directions below.

1. Stop the recorder.
2. Press **FUNCTION** on the front panel of the recorder until *PROGRAM 1* appears in the display.
If there are no timer programs, PROGRAM NON appears in the display.
3. Turn the Smart Jog on the front panel to display the timer information.

PROGRAM 1
DATE 8<WED>
START 11:15am
STOP 1:15pm
MODE SP 2 _{CH}

4. Wait ten seconds for the data to disappear, returning the recorder to normal operation.

6.1.4 Edit Timer Recording Settings

Refer to the following guidelines when editing a Timer program:

- Previous timer recording program(s) may not be in progress
- Disc tray can be empty or contain a disc
- Return to the number field to lock in changes
- Check available disc space after changes

To edit a timer recording setting, follow the directions below.

1. Power ON the recorder.
2. Press **SETUP** to reveal the Setup menu.
3. Select *Timer Rec* from the menu or select *Disc Timer Rec* if the disc timer option is active.
The Timer Recording program appears on screen with 8 entry lines available.
4. Make your changes to one or more line entries.
5. Press **SETUP** to exit the menu.
6. Set the recorder to Standby prior to the next timer recording selection.

6.1.5 Extend a Timer Recording in Progress

Follow the directions below to adjust the stopping point of a timer recording session after the program begins recording.

1. Press and hold the **REC** button for approximately three seconds.
The timer program appears on screen.
2. Press **REC** to extend the recording session by 30 minutes.
3. Continue pressing **REC** to extend the recording session.
Each button-press equals an additional 30 minutes with a maximum recording time up to six hours depending upon your media format and the recording mode.
4. Wait three seconds while the recorder registers the changes and automatically closes the menu.

6.1.6 Stop a Timer Recording in Progress

To stop a timer program already in progress, follow the instructions below.

1. Press and hold the **REC** button for approximately three seconds.
When the indicator turns off, the program is cancelled but recording continues.
2. Press **Stop** to end the recording session.
It may require as much as 30 seconds to stop the recording process.

Approximately two minutes before a timer program begins, the recorder's power automatically switches ON. Pressing Standby/ON during this period stops the recording session but does not cancel the timer program.

6.1.7 Cancel Timer Recording

A Timer Program may be cancelled any time prior to the recording start time. Follow the directions below to cancel a timer recording program.

1. Press **SETUP** to access the setup menu.
2. Select *Timer Rec* from the menu or select *Disc Timer Rec* if the disc timer option is active.
The Timer Recording program appears on screen.
3. Move the cursor to highlight the timer program number to be deleted.
4. Press **CLEAR** to delete the timer program entry.

When the recorder is in Standby with the timer indicator lit, switching ON the recorder keeps the timer program from recording the selection but does not cancel the timer program.

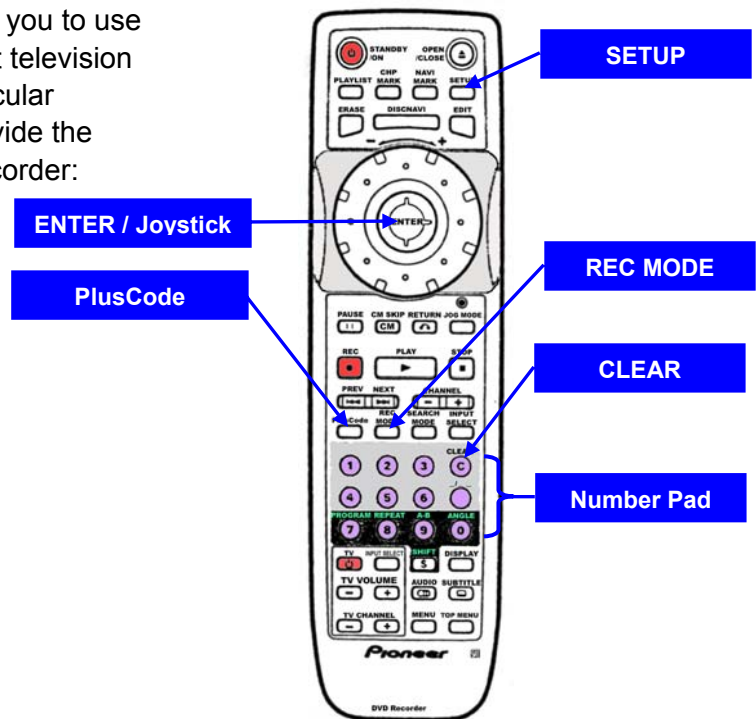
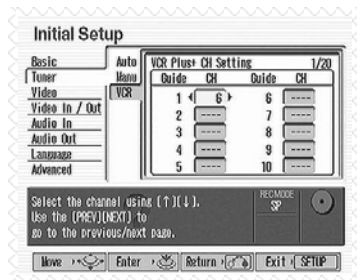
Approximately two minutes before a timer program begins, the recorder's power automatically switches ON. Pressing Standby/ON at this point stops the recording session but does not cancel the timer program. Press and hold the **REC** button for three seconds to cancel the timer program.

To cancel a timer recording when the unit is locked, press and hold the **STOP** button on the front panel for three seconds to unlock the recorder. Then, press and hold the **REC** button for three seconds to cancel the timer program.

6.2 VCR Plus+ Programming System

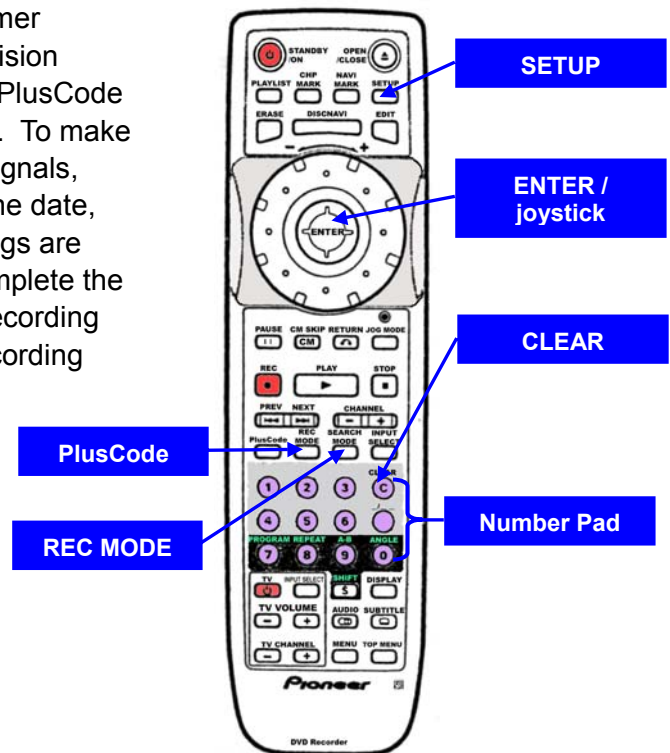
The VCR Plus+ system allows you to use special codes included in most television channel guides to record particular broadcasts. These codes provide the following information to the recorder:

- Date of broadcast
- Broadcast Channel
- Start time
- End time



6.2.1 VCR Plus+ Automatic Timer Recording

VCR Plus+ makes programming timer recordings very simple. Most television guides publish VCR Plus+ system PlusCode numbers with their program details. To make a timer recording from broadcast signals, input the code for that program. The date, start/stop times, and channel settings are automatically programmed. To complete the timer recording settings, select a recording mode, the quality level, and the recording frequency.



The directions below include images of the on-screen displays for a Standard recording however the instructions apply to both Standard and Disc timer recording.

1. Load a recordable disc in to the recorder.
If loading an unformatted DVD-RW disc, it is automatically formatted as a VR disc. This process requires approximately 40 seconds.
2. Press the **PlusCode** button to display the VCR Plus+ menu screen.
3. Enter the PlusCode programming code using the number pad.
 - *To erase the last digit entered, press the **CLEAR** button.*
 - *To correct a PlusCode, Rec Mode, or Rec Times setting (after pressing **ENTER**), press the **RETURN** button on the remote.*
4. Press **REC MODE** to change the recording quality and adjust the times.
 - *VR format discs – switch between SP and MN recording (MN setting requires an additional choice of a quality level)*
 - *Video format discs – although V1 and V2 are unavailable, leave at the SP setting then use REC MODE to select a quality level*
5. Select the frequency option using the joystick (moving left/right).
Frequency options are Once, Daily, and Weekly.
6. Press **ENTER** to confirm the new settings.
Program details flash on the bottom of the screen then the menu automatically closing after three seconds.

Note: If the guide channels still require set up, the recorder prompts you to select the television channel broadcasting the program.
7. Select the channel if necessary by moving the joystick left/right.
Channel options scroll through the field.
8. Press **ENTER** to confirm the settings.
9. Switch the recorder in to Standby before the recording is due to start.

To check or change a program, follow the steps below:

1. Press **SETUP** to access the Setup menu.
2. Press **ENTER** to display the timer programming screen.
3. Review and adjust programs as needed.
4. Press **SETUP** to exit the menu.
5. Place the recorder in Standby mode prior to the program start time.

To confirm that all timer entries will fit on the loaded disc, follow the steps below.

1. Use the joystick to highlight *Confirm* on the Timer Program screen.
2. Press **ENTER** to calculate the disc space needed for the recordings.
3. Verify that Rec OK appears next to each timer recording entry.
If the timer program is too long for the disc then Time Over appears next to the entry. However, the timer entry records as much of the program as possible until the disc is full.

With a daily or weekly program, the *Rec OK* message appears next to the last entry that can fit on the loaded disc (up to a maximum of one month in advance).

If *Optimize Disc* is active (ON) during a timer recording, the PRV-9000 adjusts the recording quality to fit as much of the sequence as possible on to the disc. However, if the timer entry is still too long for the available disc space, the *Time Over* message appears.

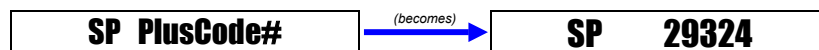
6.2.2 Program With VCR Plus+ When the Power is OFF

The recorder can be in Standby mode when entering VCR Plus+ program codes. The following guidelines apply to recording with VCR Plus+ codes.

- Guide channels must be programmed in to the recorder before using a VCR Plus+ codes.
- The recording mode is locked when using VCR Plus+ program codes.
- VCR Plus+ codes are valid with *Once* (single-session) recordings only. *Daily* and *Weekly* timer recordings are unavailable with this feature.

To program in VCR Plus+ codes while the recorder is powered OFF (Standby mode), follow the directions below.

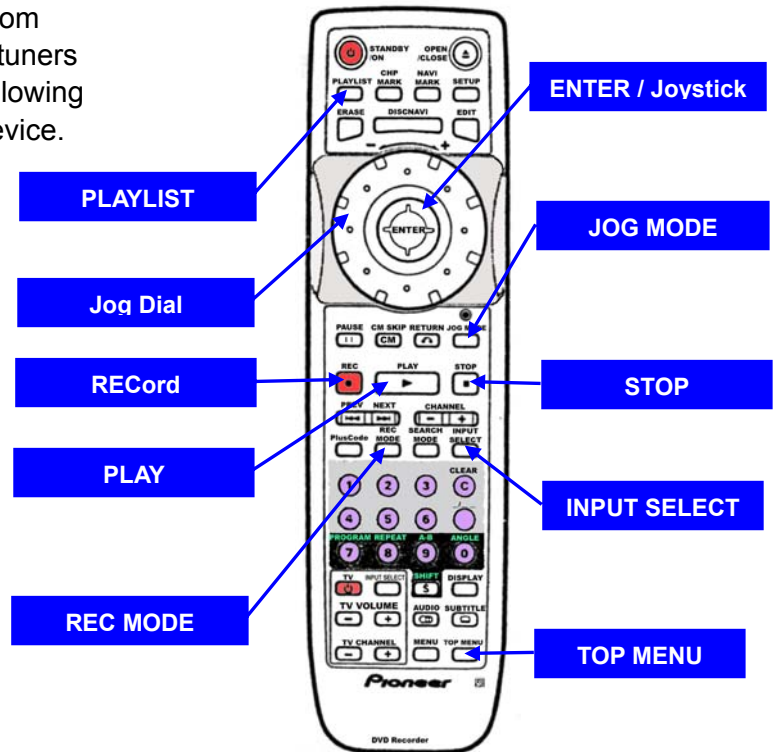
1. Press the **PLUSCODE** button.
The front panel displays the current recording mode and prompts the user to enter a code.
2. Input the number using the number pad on the remote control.
*To erase the last digit entered, press **CLEAR**.*



3. Press **ENTER** to register the code.
The display shows the timer settings: Date > Start Time > End Time > Recording Mode/Channel
 - If *CODE ERROR* appears on the display, check the PlusCode and return to step 1 above.
 - If *CANNOT RECORD* appears on the display, the PlusCode is correct. However, there may be another reason for the failure such as a previous timer program set for that time period.

6.3 Record From an External Input

The PRV-9000 accepts input from external components, satellite tuners and DV output devices. The following sections address each input device.



Picture disturbance in the recording may occur in the following situations

- source component pauses playback
- source component plays an unrecorded segment
- power fails in the source device
- the DV cable is disconnected

Although cables are seated properly and the settings are correct, the recorder is subject to the following limitations:

- The recorder is only compatible with DV-format (DVS-SD) camcorders.
- *Digital* satellite tuners and *Digital* VHS video recorders are incompatible.

- The recorder allows one camcorder interaction at a time.
- Controlling the recorder with equipment connected through the DV IN/OUT port is unavailable. Controlling a second PRV-9000 connected to this port is also not an option.
- A few camcorders fail to accept commands sent through the DV IN/OUT port. Some camcorders may ignore particular commands sent through this port. Check with the camcorder's manufacturer for support information.
- The recorder outputs DVD video from the DV IN/OUT port; passing through signals from the built-in TV tuner, CD, Video CD and other equipment is unavailable.
- Copy-protected or copy-once DVD signals are blocked from passing out through the DV IN/OUT port.
- Although digital camcorders may record as stereo 16-bit/48kHz or twin-stereo tracks of 12-bit/32kHz, the recorder only records a single stereo track. Set DV Input to Stereo1 or Stereo2.
- Audio output from the DV IN/OUT port is limited to 16-bit.
- Audio input through the DV IN/OUT port must be 32kHz or 48kHz rather than 44.1kHz.

6.3.1 Record From an External Component

Follow the directions below to record from an external component such as a standard camcorder or a VCR. Skip to the next section to record from digital camcorders.

1. Connect the external component to the recorder.
Refer to the chapter on Connections for port information.
2. Power up both devices.
3. Press **INPUT SELECT** repeatedly to scroll through input ports.

Input Port	On-Screen Display
Built-in Tuner	(Channel number)
INPUT 1	L1 (S-Video)
INPUT 2/AUTO REC	L2 (BNC)
INPUT 3 (front panel)	L3
DV IN/OUT	DV

4. Leave the selection highlighted.

5. Begin recording.

When recording from DV In/Out, the recorder automatically pauses recording if the signal is missing or interrupted. For example, the recorder pauses during blank sections of a digital camcorder tape.

Check the Audio In settings for External Audio, Dual Mono Recording and DV Input when recording any sequence. Often audio errors are traced to incorrect Audio In settings rather than to a failure of the device.

Note: If the source material is copy-guarded, the recorder ignores the request.

6.3.2 Record From A Digital Camcorder

Before recording from a digital camcorder, set the audio input for the DV IN/OUT. Use the recorder's remote to control both devices.

Refer to the following information when recording from a digital camcorder:

- source signal must be in the DVS-SD format
- verify that your camcorder accepts commands from the recorder's remote
- a PRV-9000 DVD recorder cannot control a second PRV-9000 (added with a DV cable)
- the recorder ignores commands sent remotely through a component connected to the DV IN/OUT port
- the recorder ignores commands to duplicate copy-protected material but does play back the protected data
- date and time information from a DV cassette is non-transferable

To record material from a digital camcorder, follow the directions below.

1. Connect the digital camcorder to the front panel DV IN/OUT port.
2. Verify that the camcorder is set to video transfer (VTR) mode.
3. Set recording features.
 - *MN1 though MN 8 is unavailable when recording from DV IN/OUT*
 - *Audio is 2ch Dolby Digital when recording from DV IN/OUT*
4. Check the DV audio input settings.
 - *Choose between Stereo1 (original audio) and Stereo2 (overdub)*
 - *Set the DV Input from the Initial Setup menu, sub-menu Audio In*
 - *Verify your settings for Audio In (External & Dual-Mono Recording)*

5. Press **DISCNAVI** (VR format discs) or **TOP MENU** (Video format discs).
The DISCNAVI or Title List screen appears.
6. Press **PLAYLIST** to toggle between **Original** and **Playlist**.
Set to Original for VR formatted discs.
7. Select **DV Record** from the menu.
Note: The DV Record is only available when the digital camcorder is in VTR mode and has a tape loaded.
8. Scan through the camcorder tape to locate the necessary segment.
 - *For best results, pause the playback before beginning to record.*
 - *If supported, use the recorder's remote buttons (STOP, PLAY, PAUSE and jog dial) to control the camcorder.*
9. Press **ENTER** to begin recording.

Note: Pressing the DISCNAVI or RETURN buttons while recording does not exit the DV Recording menu screen.

If the signal to the recorder is interrupted, the recording pauses. Recording is also paused if the recorder detects a copy-protected signal. Recording continues when the copy-protected sequence ends.

To pause or stop the recording, select **Rec Pause** or **Rec Stop** from the menu. The camcorder continues to play back the tape but the recorder responds to the menu selection.

If the recording is re-started after stopping the camcorder, the recorder may miss the first few seconds of the sequence. Use the PAUSE button on the camcorder until the recorder is active so that the entire sequence is captured. Recording begins automatically when the camcorder's PAUSE button is released.

When recording in Video mode, the final recorded frame may stay on-screen a few seconds after pressing the Rec Stop.

6.3.3 Record From a Satellite Tuner

To connect a satellite tuner or other kind of set-top box to the PRV-9000, use the recorder's INPUT 2/AUTO REC (BNC) port. Recording can start and stop automatically if the satellite tuner provides a timer recording option. For devices without a built-in recording timer, add an external timer.

After programming an auto-start recording, the PRV-9000 begins recording as soon as a signal from the tuner is detected. The recorder may lag a few

seconds behind the actual time so adjust the timer program for this slippage. When the signal ceases, the recorder stops recording.

Follow the directions below to record from a satellite tuner or other device.

1. Set the timer on the satellite tuner.
Refer to the device's operating instructions for assistance.
2. Switch the satellite tuner's power to OFF (or in to Standby).
3. Load a recordable disc in to the recorder.
4. Verify Audio In options are at the desired settings.
For more information, refer to Chapter 9: INITIAL SETTINGS MENU, section 9.1.5 Audio In Settings.
5. Press **REC MODE** to set the recording mode.
Refer to Chapter 4: GETTING STARTED, section 4.10 Initializing Recording Modes.
6. Press and hold **FUNCTION** on the recorder's front panel for approximately three seconds.
The recorder returns to Standby and the AUTO REC indicator lights. The recorder turns ON then OFF in sync with the satellite tuner.

The auto-start function is unavailable in the following situations:

- recorder is already recording a program
- loaded disc is full or other than recordable media
- loaded disc is protected
- loaded disc already contains the maximum number of titles (99)
- another timer recording program is already in progress
- timer program supercedes a auto-start program
auto-start automatically launches after the timer program is complete

6.3.4 Record From the DV Output Port

To record from a non-copy-protected DVD disc to a camcorder, use the DV IN/OUT port on the recorder's front panel. Follow the directions below to record from a disc to a camcorder.

1. Connect the camcorder to the DV IN/OUT port.
2. Load the source disc.
3. Scan to the segment to be recorded.

4. Start recording on the camcorder.
Refer to the manufacturer's operating instructions for assistance.
5. Press **PLAY** to begin disc playback.
6. Press **STOP** to halt disc playback.
7. Stop the camcorder.

6.4 Recorder Lock-Out

The command lock-out feature is operated from the front panel only. To lock out commands from the remote control as well as from the front panel, follow the directions below.

1. Switch the recorder in Standby.
2. Press and hold the **STOP** button on the front panel for three seconds.
When the recorder is locked, the Lock Indicator (on front panel) blinks twice.

Note: If a command is sent when the recorder is locked, the indicator flashes twice after each attempt to send a command.

3. Press and hold the **STOP** button on the front panel for an additional three seconds to unlock the recorder.

To cancel a timer recording when the unit is locked, press and hold the **STOP** button on the front panel for three seconds to unlock the recorder. Then, press and hold the **REC** button for three seconds to cancel the timer program.

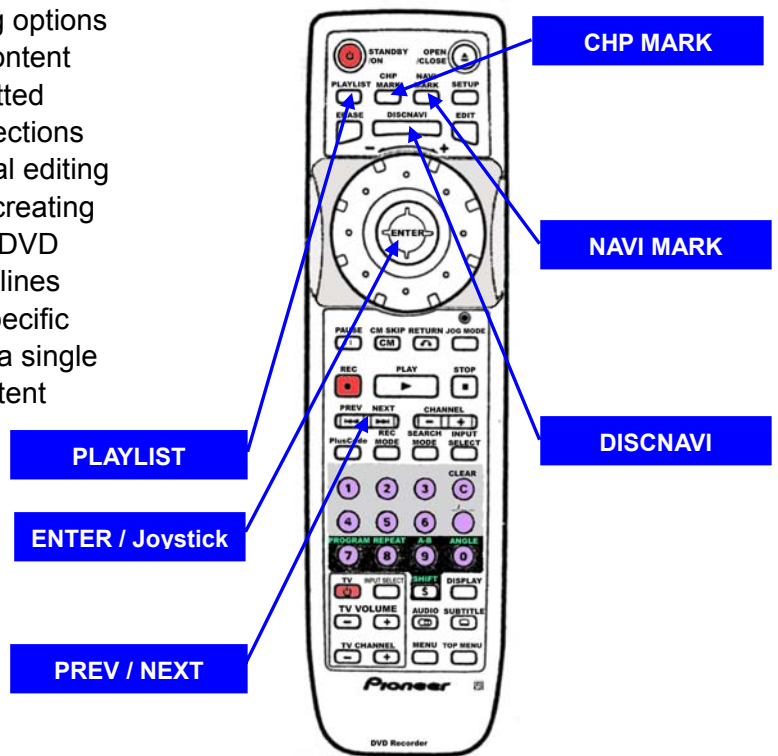
7.0 EDITING FUNCTIONS & OPTIONS



The PRV-9000 provides editing options for the original content or for content copied (Playlist) to a VR formatted DVD-RW disc. The following sections provide instructions and general editing feature information. Being as creating titles and chapters is up to the DVD author, the steps provide guidelines and suggestions rather than specific directions. Each disc supports a single Playlist so add all possible content before editing the Playlist.



DISCNAVI button



CHP MARK

NAVI MARK

DISCNAVI

PLAYLIST

ENTER / Joystick

PREV / NEXT

7.1 General Information



Edits made to Original content change the actual material on the source disc. For example, erasing a title from the original content delete the material thus freeing space on the disc for additional recordings.

When editing a Playlist, the material remains on the disc. For example, erasing a title from the Playlist tells the recorder to skip that title during playback but the material is still available for later edits.

DVD titles consist of one or more chapters. When a title is inserted in to a Playlist, all the chapters within that title also appear on a Playlist.

A Part is a portion of the original material or Playlist content. Adding a part to the Playlist creates a new title consisting of a section (i.e. part) from an original title. Erasing a *part* removes that segment of a title from the original and/or Playlist content.

An example of a professional use for showing a Playlist rather than the Original content is within a shopper's kiosk. If disc content includes upcoming product specials and sales announcements, the data can be pulled in to the Playlist but skipped after the information no longer applies. However, the data remains on the disc as a record of the store's activity.

7.2 Add Chapter Marks



The PRV-9000 supports up to 999 chapter markers per disc for original or Playlist content. Chapter marks, used primarily for search functions, can be placed anywhere within original or Playlist content during recording or playback sessions. When editing for chapter (or title) start and end points (frames), allows for some frame deviation when erasing, adding and moving parts.

Note: For detailed information regarding I/P/B frames, refer to the DVD FAQ website (<http://dvddemystified.com/dvdfaq.html>).

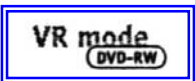
1. Play the title (Original or Playlist).
Press **PLAYLIST** to toggle between original and Playlist playback.

Note: Chapter markers can also be added during recording sessions.

2. Press **CHP MARK** at the point to start a new chapter.
A chapter mark icon (Ⓢ) appears on-screen.

Note: During Playlist playback, there may be a momentary pause between edit points. This is not a malfunction but part of the segment processing.

7.3 Edit With DISCNAVI



Use DISCNAVI (Disc Navigator) to build and edit a Playlist. DISCNAVI also provides a way to record material from a digital camcorder, to play individual titles, to erase titles and make other changes to Original content.

Note: To edit using DISCNAVI, the recorder must be stopped.

To move around the disc using DISCNAVI, follow the directions below.

1. Press **DISCNAVI** on the remote control to reveal the navigation menu.
 - Press **DISPLAY** to reveal more detailed title information for each title.
 - Use the **PREV/NEXT** buttons to scroll through the menu pages if there are more than six titles on the disc.
 - Press **DISCNAVI** a second time to exit the menu.
2. Press **PLAYLIST** to switch between playback sources, Original or Playlist.



The tabs at the top of the screen indicate the source. The left side of the screen lists the DISCNAVI functions.

3. Choose **Chapter** to switch to the chapter view.
*Use the joystick to highlight Chapter then press **ENTER** to open the submenu. If necessary, press the RETURN button to access the DISNAVI menu on the left side of the screen.*
4. Select the title that contains the necessary chapters.
The main portion of the screen reveals thumbnails of the chapters within the selected title.
5. Proceed to the following sections for editing functions using DiscNavi.

7.3.1 Change the DISCNAVI Title Thumbnail



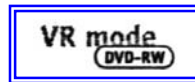
In the DISCNAVI menu, each title and chapter is listed with a thumbnail picture taken from the beginning of the title or chapter. If the title thumbnail is ineffective to represent that segment, change the still picture to another image from within the title. Only title thumbnails can be changed, this feature is unavailable for chapter thumbnails.

Follow the directions below to change a title thumbnail.

1. Play the title (Original or Playlist content).
2. Press **NAVI MARK** to capture the current image as the new thumbnail.
The image represents the title in the DISCNAVI menu for original and Playlist content.
3. Press **DISCNAVI** to return to the DiscNavi menu.

Note: To change the default image capture point, refer to Chapter 9: INITIAL SETUP MENU, section 9.2.5 NAVI MARK.

7.3.2 Play A Chapter From DISCNAVI



Follow the steps below to play a chapter from within the DISCNAVI menu.

1. Press **DISCNAVI** to access the menu.
2. Press **Playlist** to change to the Playlist menu if necessary.
3. Use the joystick to scroll to Chapter.
If necessary, press the RETURN button to access the DISNAVI menu on the left side of the screen.
4. Press **ENTER** to select the Chapter view.
5. Press **ENTER** to select the current title or enter a new title number.
If a title has been selected previously, skip this step.
6. Scroll to the appropriate chapter (or title).
7. Press **PLAY** to begin playback.

7.3.3 Create a Name For a Title



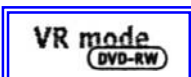
Names (title labels) may be up to 64 characters consisting of letters, numbers and a limited series of symbols. Title names may be associated with the original source or to a Playlist. A predetermined name is assigned to the title, however, pressing the ERASE button removes one character at a time. Some systems reduce the character quantity to the standard alphabet and the digits 0 through 9.

Note: Discs formatted on a different recorder limit the character sets.

To create a name for a title, follow the steps below.

1. Press the **DISCNAVI** button to access the menu.
2. Press **Playlist** to change to the Playlist menu if necessary.
3. Use the joystick to scroll to Title Name.
If necessary, press the RETURN button to access the DISNAVI menu on the left side of the screen.
4. Press **ENTER** to access the characters menu.
5. Press **ERASE** repeatedly to delete the existing 'name' (optional).
Press ERASE to remove each auto-assigned character.
6. Use the joystick to drop down from the name field to the characters.
Move left to select either Capitals or lowercase letters if necessary.
7. Highlight the first character for the title name.
8. Press **ENTER** to lock in the character.
The selection appears in the field above.
9. Continue selecting all characters for the title name.
 - *Scroll down to the Delete button to remove the tentative name if necessary. Press ENTER to confirm the deletion.*
 - *Scroll down to the SPACE button to add spacing between characters. Press ENTER to confirm the space.*
10. Scroll down to the **SET** button to lock in the title name.
11. Press **ENTER** to save the name and return to the DISCNAVI menu.
12. Press **DISCNAVI** to exit the menu.

7.3.4 Create a Playlist Title



Creating a new Playlist title copies the entire title from the original source to the Playlist. The title appears in the Playlist with the original chapter markers. However, Playlist chapter markers are unaffected if chapter markers are

added to the original material after the Playlist is created. Playlists support up to 99 titles.

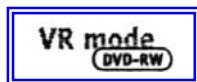
Follow the direction below to add a title to the Playlist.

1. Press the **DISCNAVI** button to access the menu.
2. Press **PLAYLIST** to change to the Playlist menu if necessary.
3. Select **Make Title** from the DISCNAVI Playlist menu.
4. Scroll to the appropriate Playlist line if necessary.
If the Playlist is empty, make a title at the beginning of the Playlist.
If there are titles already on the Playlist, choose where to insert the title.
5. Highlight the Original title to add to the Playlist.
6. Press **ENTER** to select the title.
The added title appears in the Playlist.

For information about only adding parts of a title, refer to Chapter 7: EDITING FUNCTIONS & OPTIONS, section 7.4.9 *Add Part of a Title to a Playlist*.

Note: During Playlist playback, there may be a momentary pause between edit points. This is not a malfunction but part of the segment processing.

7.3.5 Copy a Playlist Title



Use the Copy Playlist Title function to paste a copy of the title to any line on the Playlist.

1. Press the **DISCNAVI** button to access the menu.
2. Press **PLAYLIST** to change to the Playlist menu if necessary.
3. Use the joystick to access the menu on the left side of the screen.
4. Scroll down to **Copy** on the Playlist menu.
5. Press **ENTER** to initiate the command.
6. Use the joystick to highlight the title to be copied.
7. Press **ENTER** to confirm the title selection.
8. Scroll to the location for the copy of the title.
9. Press **ENTER** to copy the title and update the Playlist.
10. Press **DISCNAVI** to exit the menu.

7.3.6 Move a Title/Chapter



The PRV-9000 supports moving chapters and titles within a Playlist. Follow the steps below to move a title or to move a chapter within a title.

Move a Title:

1. Press the **DISCNAVI** button to access the menu.
2. Press **Playlist** to change to the Playlist menu if necessary.
3. Use the joystick to access the menu on the left side of the screen.
4. Scroll down to **Move** on the Playlist menu.
5. Press **ENTER** to initiate the move command.
6. Use the joystick to choose the title to be moved.
7. Press **ENTER** to confirm the title.
8. Use the joystick to select the new location for the title.
9. Press **ENTER** to confirm the move and to update the Playlist.
10. Press **DISCNAVI** to close the menu.

Move a Chapter:

1. Press the **DISCNAVI** button to access the menu.
2. Press **Playlist** to change to the Playlist menu if necessary.
3. Use the joystick to access the menu on the left side of the screen.
4. Switch to the Chapter view.
5. Scroll down to **Move** on the Playlist menu.
6. Press **ENTER** to initiate the move command.
7. Use the joystick to choose the chapter to be moved.
8. Press **ENTER** to confirm the chapter.
9. Use the joystick to select the new location for the chapter.
The chapter may only be moved within that title.
10. Press **ENTER** to confirm the move and to update the Playlist.
11. Press **DISCNAVI** to close the menu.

7.3.7 **Combine Two Chapters In To a Single Chapter**



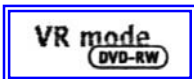
The **Combine** function merges two *adjacent* chapters (Playlist or Original) in to a single chapter. The two chapters must be in the same title. Chapters created from erasing a segment or part between them cannot use this function.

To combine to adjacent chapters, follow the directions below.

1. Press the **DISCNAVI** button to access the menu.
2. Press the **PLAYLIST** button to switch to the Playlist screen if needed.
3. Use the joystick to move to the menu on the left side of the screen.
4. Scroll to **Chapter** to display the chapter view.
5. Press **ENTER** to confirm the chapter view.
6. Select **Combine** from the menu.
7. Use the joystick to choose the dividing line between the two chapters.
8. Press **ENTER** to combine the chapters in to one chapter.
9. Press **DISCNAVI** to exit the menu.

Note: This function is unavailable if there is only one chapter in a title.

7.3.8 **Erase a Title/Chapter**



When a title or chapter is erased from the Playlist, the title/chapter is only deleted from the Playlist rather than from the original content. Material erased from the original content is lost.

Erasures of over one minute in duration (dependent upon recording levels) increase the recording time available on the disc. Available recording time is unaffected when segments removed are less than one minute in duration.

Erase a Title:

1. Press the **DISCNAVI** button to access the menu.
2. Press **Playlist** to change to the Playlist menu if necessary.
3. Select **ERASE** from the appropriate DISCNAVI menu.
Original or Playlist
4. Use the joystick to select the title to be erased.
5. Press **ENTER** to delete the title and reveal the updated title list.

Erase a Chapter:

1. Press the **DISCNAVI** button to access the menu.
2. Press **Playlist** to change to the Playlist menu if necessary.
3. Use the joystick to switch to Chapter view.
4. Press **ENTER** to confirm Chapter view.
5. Select **ERASE** from the appropriate DISCNAVI menu.
Original or Playlist
6. Use the joystick to select the chapter to be erased.
7. Press **ENTER** to delete the chapter and reveal the updated title list.

7.3.9 Add Part of a Title to a Playlist



To define a portion of the Original title as a new title in the Playlist, follow the directions below.

1. Press the **DISCNAVI** button to access the menu.
2. Press **Playlist** to change to the Playlist menu if necessary.
3. Select **Add Part** from the Playlist DISCNAVI menu.
4. Scroll to the appropriate Playlist line if necessary.
If the Playlist is empty, add the segment at the beginning of the Playlist. If there are titles already on the Playlist, choose where to insert the title.
Note: The segment may be added as a chapter to an existing title.
5. Use the **PLAY**, **PAUSE** and **CM SKIP** buttons as well as the jog dial to find the start point of the segment/part.
6. Press **ENTER** to mark the start point.
7. Use the **PLAY**, **PAUSE** and **CM SKIP** buttons as well as the jog dial to define the end point of the segment/part.
8. Press **ENTER** to mark the end point.
Jump between the start and end points to fine-tune the selection if necessary.
9. Select **OK** to save the additional part.
10. Press **DISCNAVI** to exit or press **RETURN** to reveal the Playlist screen.

7.3.10 Erase a Part of a Title



Deleting a part of the Playlist erases nothing from the original material. However, any portion of material deleted from the original source is lost from both the original disc and the Playlist. Erasures of over one minute in duration (dependent upon recording levels) increase the recording time available on the disc. Available recording time is unaffected when parts removed are less than one minute in duration.

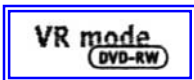
To delete or erase a portion from the Original content or from a Playlist, follow the directions below.

1. Press **DISCNAVI** to access the menu.
2. Press **Playlist** to change to the Playlist menu if necessary.
3. Select **Erase Part** from the menu.
4. Use the **PLAY**, **PAUSE** and **CM SKIP** buttons as well as the jog dial to locate the start point of the segment/part to be removed.
5. Press **ENTER** to confirm the start point for the unnecessary segment.
6. Use the **PLAY**, **PAUSE** and **CM SKIP** buttons as well as the jog dial to locate the end point of the segment/part to be removed.
7. Press **ENTER** to confirm the end point for the unnecessary segment.
Jump between the start and end points to fine-tune the selection if necessary.

Note: When erasing content from the Original material, segments less than five seconds in duration are unavailable for deletion.

8. Select **Preview** to verify the part to be removed before continuing.
The selected segment plays in the end point window. Previews begin three seconds prior to the start point and stop three seconds after the end point.
9. Select **OK** to erase the segment/part.
A chapter marker automatically replaces the erased segment/part.
10. Press **DISCNAVI** to exit or press **RETURN** to reveal the Playlist screen.

7.3.11 Erase All Titles



Deleting the unprotected titles from the Playlist erases nothing from the original material. However, any portion of material deleted from the original source is lost from both the original disc and the Playlist. For more information on protecting titles, refer to the following section in this manual.

To delete all titles from the original content or from the Playlist, follow the directions below.

1. Press **DISCNAVI** to access the menu.
2. Press **Playlist** to change to the Playlist menu if necessary.
3. Select **Erase All** from the menu.
4. Press **ENTER** to confirm the removal of all unprotected titles.

7.3.12 Protecting/Unprotecting an Original Title



To protect the original content (title) from accidental edits or deletion, follow the instructions below. To edit the material, *unprotect* the title.

1. Press **DISCNAVI** to access the menu.
*If the menu is on the Playlist tab, press the **Playlist** button to access the Original DISCNAVI menu.*
2. Use the joystick to highlight **Protect** on the Original DISCNAVI menu.
3. Press **ENTER** to activate the *protect* function.
4. Use the joystick to highlight the title to protect (or unprotect).
5. Press **ENTER** to select the title.
A padlock icon appears (or disappears from) in the upper right corner of the title thumbnail.

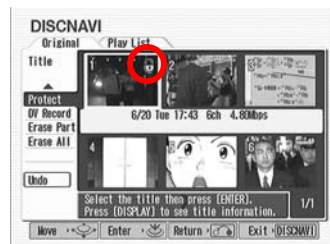


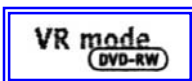
Figure 7-1: protected title (1) has a padlock icon in the upper right corner of the thumbnail.

6. Press the **DISCNAVI** button to exit the menu.



Changing the *protection status* locks previous edits thus **UNDO** is unavailable immediately after the change. The **UNDO** command is also unavailable for reversing a *protection change*.

7.3.13 Reverse an Edit



If an action is taken in error, to *reverse* the change or edit, use the Undo command on the DISCNAVI menu. The number of Undo actions is limited to the last three edits. It is unimportant whether the screen displays the Original or Playlist menu when the Undo command is sent; Undo reverses the last edit.

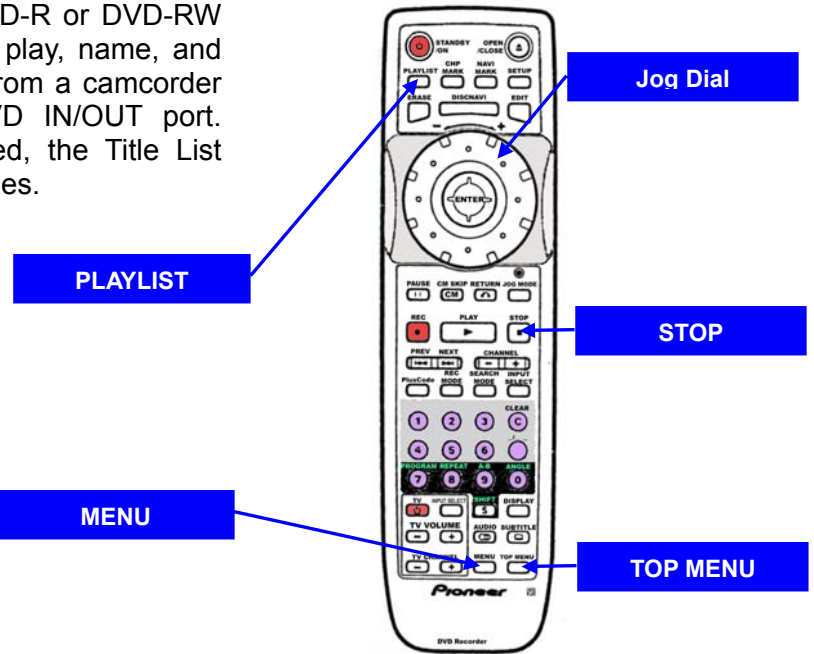
The following limitations apply to the PRV-9000's Undo command.

- Undo is unavailable for recordings
- If the disc is ejected, Undo is unavailable
- If the recorder is switched to Standby, Undo is unavailable
- The protect/unprotect function ignores Undo commands
- Undo is unavailable for finalized or initialized discs
- Undo is unavailable after using the Preview function with the Record Mode screen or the Rec NR setting

Note: Undo is available after exiting the DSICNAVI menu.

8.0 TITLE LIST MENU

When working in Video format (DVD-R or DVD-RW media), use the Title List menu to play, name, and erase titles or to capture material from a camcorder connected to the front panel DVD IN/OUT port. However, once the disc is finalized, the Title List menu limits the options to playing titles.



8.1 Access the Title List Menu

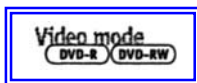


To access the Title List menu, follow the directions below.

1. Press **TOP MENU** or **MENU** to display the Title List.
*If the disc is not finalized, the menu provides multiple functions.
If the disc is finalized, the menu provides a list of titles to play.*
2. Use the joystick to move around the screen and highlight selections.
3. Press **ENTER** to activate the highlighted option.
4. Press **TOP MENU** or **MENU** again to exit the Title List.

Other controls for the Title List are shown at the bottom of the screen.

8.2 Play a Title from the Title List Menu



To play a title from this menu, follow the directions below.

1. Press **TOP MENU** or **MENU** to display the Title List.
*If the disc is not finalized, the menu provides multiple functions.
If the disc is finalized, the menu provides a list of titles to play.*

2. Use the joystick to highlight a title.
3. Press **ENTER** to play the highlighted title.

8.3 Name a Title from the Title List Menu

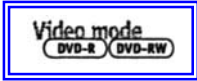


To name a title in this menu, follow the directions below.

1. Press **STOP** if a disc is playing.
2. Press **TOP MENU** or **MENU** to display the Title List.
*If the disc is not finalized, the menu provides multiple functions.
If the disc is finalized, the menu provides a list of titles to play.*
3. Scroll to **Title Name** in the Title List menu.
4. Use the joystick to choose the title to be named.
5. Press **ENTER** to select the title and access the characters chart.
6. Press **ERASE** repeatedly to delete the existing 'name' (optional).
Press ERASE to remove each auto-assigned character.
7. Use the joystick to drop down from the name field to the characters.
Move left to select either Capitals or lowercase letters if necessary
8. Select the first character for the title name.
The selection appears in the field above. Names may be up to 24 characters (letters and/or numbers) in length.

Note: Discs formatted on a different DVD recorder limits the character set.
9. Press **ENTER** to lock in the character.
10. Continue selecting all characters for the title name.
 - *Scroll down to the Delete button to remove the tentative name if necessary. Press ENTER to confirm the deletion.*
 - *Scroll down to the SPACE button to add spacing between characters. Press ENTER to confirm the space.*
11. Scroll down to the **SET** button to lock in the title name.
12. Press **ENTER** to save the name and return to the menu.
13. Press **TOP MENU** or **MENU** again to exit the Title List.

8.4 Erase a Title from the Title List Menu

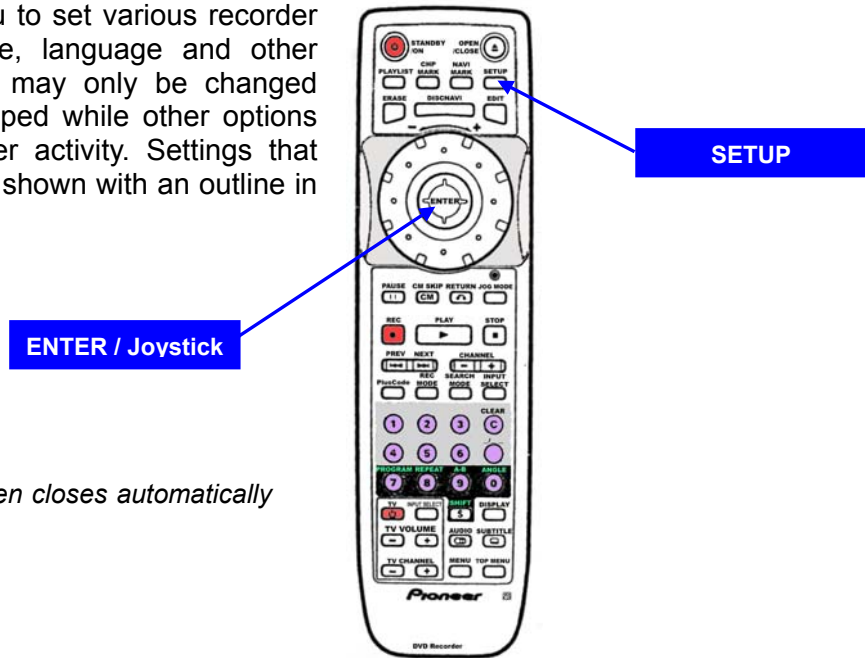


Before a disc is finalized, titles recorded on the disc may be erased. Follow the directions below to erase a title from a recorded disc.

1. Press **STOP** if a disc is playing.
2. Press **TOP MENU** or **MENU** to display the Title List.
*Press **ERASE** and skip to step 4 if there is only one title on the disc.*
3. Scroll to **Erase Title** in the Title List menu.
4. Use the joystick to choose the title to be erased.
5. Press **ENTER** to erase the title and update the Title List.
6. Press **TOP MENU** or **MENU** again to exit the Title List.

9.0 INITIAL SETUP MENU

Use the Initial Setup menu to set various recorder options for sound, picture, language and other features. Some settings may only be changed when the recorder is stopped while other options are unaffected by recorder activity. Settings that require a stopped disc are shown with an outline in the Initial Setup menu.



Note: The Setup menu screen closes automatically after 20 minutes of inactivity.

To access the Initial Setup menu, follow the directions below.

1. Press the **SETUP** button on the remote control.
2. Use the joystick to scroll down to **Initial Setup** on this menu.
3. Press **ENTER** to access the Initial Setup menu.
4. Use the joystick to scroll through the sub-menu and review settings.
5. Make changes as needed, pressing **ENTER** after a change.
6. Press **SETUP** to close the menu.

9.1 Basic Settings

Besides programming the clock, discussed in Chapter 4: GETTING STARTED, section 4.1.1 *Setting The Clock*, use the Initial Setup Menu for the following options.

- Optimized Rec(ording) – default setting: OFF
- Tuner – Auto Channel, Manual CH, VCR Plus+
- Video – TV Screen Size, Screen Size for Rec, Still Pictures
- Video In/Out – Component, DV Link

- Audio In – External Audio, Dual Mono Recording, DV Input, Tuner Level
- Audio Output – Digital, Dolby Digital, DTS, 96kHz PCM, MPEG
- Language – OSD, Audio, Subtitles, Auto-Language, DVD Menu, Other

9.1.1 **Optimized Rec** (default: OFF)

If a timer program launches but there is insufficient space on the disc (VR format), the recording cuts off when the disc is filled. To avoid losing the end of the recording, set **Optimized Rec** to ON. The recorder automatically adjusts the recording quality levels to fit the entire session in to the available disc space. This function is only available when recording in the VR mode.

You may notice a reduction in picture quality if the recorder must fit excessive amounts of material in a limited space. If the setting is already at the lowest available level (MN 1 on standard recording or MN 9 when using the DV Input) but there is still insufficient space, the recording remains at the lowest available setting and cuts off when the disc is full.

The Optimize Recording feature only compensates for one timer program.

9.1.2 **Tuner Settings**

Tuner settings refer to the following options:

- Auto Channel – default: Antenna
- Manual CH – default: n/a
- VCR Plus+ CH – default: n/a

For details on the tuner settings, refer to the appropriate section within Chapter 4: GETTING STARTED, earlier in this manual.

9.1.3 **Video Settings**

Video Setup provide settings for the following options:

- TV Screen Size – default: 16:9 (Wide)
- Screen Size for Rec – default: 4:3
- Still Picture – default: Auto

TV Screen Size:

For wide-screen televisions and other display devices, leave the setting at the default (16:9). When playing software recorded in conventional (4:3) format,

the display device determines how the material is presented. For your display device's options, refer to the operating instructions.

For conventional devices, choose between *4:3 Letterbox* and *4:3 Pan & Scan*. In Letterbox format, the display shows black bars at the top and bottom of the screen but none of the original content is hidden. Pan & Scan follows the main action on the screen but the sides of the original is lost.

Screen Size for Rec:

When recording in Video mode, set the recording aspect ratio to suit the material (16:9 Widescreen or 4:3 Pan & Scan). Set to **Auto** to record broadcast programs. The recorder synchronizes the recording setting to the initial broadcast setting.

Note: With the Auto setting, aspect ratios are locked from the recording starting point till the end of that session.

Still Picture:

The recorder uses one of two processes when displaying a still frame (or field) from a DVD disc. The default (Auto) setting automatically chooses the best setting for each image.

- Frame – produces a sharp image but may have some jitter
- Field – produces a stable image with little jitter but not as sharp an image as a frame

9.1.4 Video In/Out Settings

Video In/Out provides settings for the following options:

- Component – default: Interfaced
- DV Link – default: Auto

Component:

Use this setting only when connecting a display device using the recorder's component video port. If the display device supports progressive-scan component video, set *Progressive* for the highest quality picture. Leave the setting at *Interface* for all other devices.

On the Auto Progressive setting, 16:9 aspect ratios play with progressive-scan turned ON, while 4:3 aspect ratios turn this scan method OFF.



Switching to Progressive when the display device does not support the function causes the picture to fail. From the front panel, hold down the PAUSE button and press FL DIMMER. This combination sets the recorder's video output to the

default setting (Interface).

Compatibility with progressive-scan devices:

Not all high-definition display devices support progressive-scan through this recorder. Artifacts may appear in the picture. If problems occur when using 525 progressive-scanning, switch the connection to the standard definition (Interface) output. If problems persist, please contact your dealer or a Pioneer Authorized Service Center.

This recorder is compatible with the following Pioneer display devices:

- Plasma: PDP-502MX, PDP-505HD
- Projection: Pro-700HD, Pro 710HD, Pro-720HD, Pro-610HD, Pro-620HD,
Pro-510HD, Pro-520HD, SD-641HDS, SD-643HDS, SD-582HDS,
SD-533HDS, SD-532HDS

DV Link:

Leave the setting for the DV Link to the default (Auto) whenever possible. However, if the audio and/or video signal from a digital camcorder (using the DV IN/PUT port) is corrupted or failing, try setting the DVD Link setting to OFF.

With this option set to OFF, some camcorders may still be incompatible with the recorder when connecting with a DV cable.

9.1.5 Audio In Settings

Audio In provides settings for the following options:

- External Audio – default: Stereo
- Dual Mono Recording – default: L
- DV Input – default: Stereo1
- Tuner Audio Level – default: Standard

External Audio:

The default setting (Stereo) supports standard stereo external sources. If each channel carries a separate soundtrack, change to Dual Mono. Refer to the following section for information on the Dual Mono Recording setting.

Dual Mono Recording:

When recording a dual-mono signal in Video or VR level MN32 (does not apply if recording through the DV input) mode from an external source, record either the L (left) or R (right) audio channel.

Using VR mode with the level set to something other than MN32 causes both channels to record, thus supporting channel switching during playback.

DV Input:

If the camcorder uses 32kHz/12-bit sound when connected to the recorder's DV IN/OUT port on the front panel, this option must be set. The default setting is Stereo1.

Some digital camcorders have two stereo tracks for audio, real-time sound and overdubbing after shooting a scene. The Stereo1 setting selects the track recorded while shooting. Stereo2 uses the overdubbed sound track.

Tuner Audio Level:

If the audio from the display device's built-in tuner seems louder than the volume during disc playback, adjust this setting to Minimum. However, the default setting is the standard volume.

9.1.6 Audio Out Settings

Audio Out provides settings for the following options:

- Digital – default: ON
- Dolby Digital – default: Dolby Digital
- DTS – default: OFF
- 96kHz PCM – default: 96kHz to 48kHz
- MPEG – default: MPEG to PCM
- Audio DRC – default: OFF

Digital Out:

Unless there is a specific need for this feature to be turned OFF, leave the setting to ON (default).

Note: Optical and coaxial outputs may only be switched as a set.

Dolby Digital Out:

For detailed information on Dolby Digital output, please refer to Chapter 4: GETTING STARTED, section 4.1.3 *Setting the Digital Audio Output*.

DTS Out:

There are four points to keep in mind when using DTS Out.

- Noise is output when playing a DTS disc with a non-DTS-compatible amplifier.
- A DTS DVD-Video disc is missing analog audio output signals.
- When playing a DTS audio CD, noise comes through the analog port although the DTS Out is OFF.
- To play a DTS audio CD, verify that Stereo is active. Use the **AUDIO** button to adjust the setting if necessary.

96kHz PCM Out:

The default setting is *96kHz > 48kHz*. For more information, refer to Chapter 4: GETTING STARTED, section 4.1.3 *Setting the Digital Audio Output*.

MPEG Out:

The default setting is *MPEG > PCM*. For information on this option, refer to Chapter 4: GETTING STARTED, section 4.1.3 *Setting the Digital Audio Output*.

Audio DRC:

When watching Dolby Digital DVDs at a low volume, lower level sounds may drop out. This dropping also can affect low-level dialog. Switching ON Audio DRC (Dynamic Range Control) can bring up the low sounds while controlling the high peaks. The sound variations adjust to the recorded material.

The available settings have the following effects:

- ON – balances dynamics
- OFF – leaves original dynamics intact
- Max – ‘squashes’ dynamics

Audio DRC is ineffective when listening to a disc through the digital output if the *Dolby Digital Out* option is set to *Dolby Digital*. Adjust the dynamic range from the AV amplifier/receiver to correct this situation.

9.1.7 Language Settings

Language provides settings for the following options:

- OSD – default: English
- Subtitle – default: English
- Auto – default: ON
- DVD Menu – default: w/ Subtitle Language
- Subtitle Display – default: ON
- Subtitle Off – default: Selected Subtitle
- Other – default: n/a

OSD Language:

The Open Software Description (OSD) format/language is a specification for *eXtensible Markup Language (XML)* that provides a way to distribute software on a disc. The PRV-9000 displays OSDs in English or French with the default being English.

Audio Language:

If the selected language is on a disc, the recorder automatically plays the disc in that language. The Auto Language option may affect this setting.

The PRV-9000 supports switching between languages any time during disc playback. Use the **AUDIO** button to switch languages. Switching languages during playback has no effect on the Audio Language setting.

For languages other than English (default) or French, select Other. The Other setting is described later in this chapter.

Subtitle Language:

If the specified subtitle language is on the disc, the recorder automatically plays the discs with that series of subtitles. The Auto Language option may affect this setting.

The PRV-9000 supports switching between subtitle languages any time during DVD disc playback. Use the **SUBTITLE** button to switch subtitle languages. Switching languages during playback has no effect on the Subtitle Language setting.

For languages other than English (default) or French, select Other. The Other setting is described later in this chapter.

Auto Language:

When set to ON (default), Auto Language plays the default language for the DVD disc. For example, a French movie would play French dialog without subtitles. If the Subtitle Language option is set to something other than the default subtitle setting on the disc, the recorder displays any subtitles in the selected subtitle language. Movies in a foreign tongue show subtitles in your selected language.

To play discs only in your selected audio and subtitle language(s), turn the Auto Language setting to OFF.

For Auto Language to function properly, the Audio Language and Subtitle Language settings must be identical. Switching languages during playback is supported but has no effect on these settings.

Note: Some discs fail to recognize the Auto Language function. Use the AUDIO and SUBTITLE buttons to make language selections.

DVD Menu Language:

Some discs provide disc menus in multiple languages. Use the DVD Menu Language option to set the language for the disc menus. The default setting for this option locks the menu language to the Subtitle Language setting.

For languages other than English or French, select Other. The Other setting is described later in this chapter.

Subtitle Display Language:

With the Subtitle Display Language turned ON, the recorder sets the display according to the selections made in Subtitle Language and in Auto Language. To hide subtitles, change this setting to OFF but review the following section for special case situations.

The available settings have the following effects:

- ON – subtitles shown in Subtitle/Auto Language settings
- OFF – subtitles are hidden
- Assist Subtitles – reveals any additional subtitles recorded on a disc

Subtitle Off:

Although the Subtitle Display setting is switched to OFF, some discs still show the subtitles. If the subtitles display, choose from the following options to work with the situation.

- With Audio – shown in audio Language setting
- Selected Subtitle – shown according to Subtitle Language setting
- Refer to disc content producer for alternatives

Other Languages:

To choose a language from the disc other than English or French, follow the directions below.

1. Access the appropriate Initial Setup menu.
Refer to the beginning of this chapter for assistance if necessary.
2. Use the joystick to highlight **Other** from the language list.
This option appears under DVD Menu Language, Audio Language, and Subtitle Language submenus.
3. Press **ENTER** to confirm your selection.
4. Scroll to the appropriate language or use the number pad to select the number corresponding to that language.
For language options, refer to the Language Chart in Chapter 11.
5. Press **ENTER** to confirm the language selection and exit the menu.

9.2 Advanced Settings

The Initial Setup menu provides advanced setting in a submenu. The submenu offers the following advanced setting:

- Content Lock (a.k.a. Parental Lock) – default: Level 8
- On Screen Display – default: ON
- Angle Indicator – default: ON
- Frame Search – default: OFF
- Navi Mark – default: 0 seconds
- Start Rec on DVD-R – default: Manual (press twice)

- Chapter Interval – default: 3 minutes
- Remote Control Set – default: Recorder1

9.2.1 **Content Lock (a.k.a. Parental Lock)**

Some DVD Video discs provide a content or parental lock for mature viewing material. Level 8 is the most permissible level with Level 1 being the most restrictive.

If the recorder is set to a more restrictive level than the disc level, the recorder asks for a password before playing the disc. There is no default password. Refer to the next section to add a password.

Add/Change the Lock Level:

To change the Parental/Content Lock level, follow the directions below.

1. Access the Initial Setup menu.
Refer to the beginning of this chapter for assistance if necessary.
2. Confirm that Parental Lock is highlighted.
3. Press **ENTER** to confirm your selection or simply use the joystick to move to the next submenu.
4. Use the joystick to highlight Level Change.
5. Press **ENTER** to confirm your selection or simply use the joystick to move to the next submenu..
6. Use the number pad to input the numeric password if necessary, pressing **ENTER** to confirm a number.
7. Use the joystick to lock or unlock levels.
8. Press **ENTER** to set the Parental/Content Lock level and return to the previous menu.

Add a Password:

When changing the Parental Lock for the first time (or after resetting the recorder), there is no password assigned. When prompted to enter the password, use the numberpad to assign a 4-digit code. This code becomes the registered password.

Some discs restrict only certain scenes. If the password is not entered, the disc plays but skips over the questionable segments.

If you forget the password, reset the recorder. Resetting the recorder erases the current password and leaves the entry blank. Refer to Chapter 4: GETTING STARTED, section 4.1.9 *Return to Default Settings*.

Change a Password:

To change the password, refer to the instructions below.

1. Access the Initial Setup menu.
Refer to the beginning of this chapter for assistance if necessary.
2. Highlight Advanced to reveal the submenu.
3. Use the joystick to highlight Parental Lock.
4. Continue using the joystick to highlight Password Change.
5. Press **ENTER** to confirm your selection.
6. Enter the current 4-digit password.
7. Press **ENTER** to confirm your entry.
8. Create a new 4-digit password.
9. Press **Enter** to register the new password.

9.2.2 On Screen Display

With the On-Screen display set to the default (ON), the recorder shows on-screen displays for Play, Stop, etc. To hide these displays, change this option to OFF.

9.2.3 Angle Indicator

When playing a DVD Video disc with multiple angles, an icon appears on-screen when additional angles are present. To hide the on-screen indicator, turn this feature OFF.

9.2.4 Frame Search

The frame number remains hidden when a DVD disc is *paused* and *search by frame number* is unavailable. Turning this feature ON reveals the frame number and supports a search by frame number. The default is set to OFF.

9.2.5 **Navi Mark**

Within DISCNAVI, a thumbnail image of the content represents each title. The default (0 seconds) setting captures the first recorded frame to create the thumbnail. The standard capture point can be changed to a frame at 30 seconds or a frame at three minutes. If the recording session is shorter than the capture point set with the Navi-Mark function, the capture defaults back to 0 seconds for this particular segment.

This option also determines where the program's auto-name is taken from: at one minute, three minutes or ten minutes. These settings correspond to the thumbnail captures.

- Thumbnail capture: 0 seconds – Auto-named at 1 minute
- Thumbnail capture: 30 seconds – Auto-named at 3 minutes
- Thumbnail capture: 3 minutes – Auto-named at 10 minutes

9.2.6 **Start Rec on DVD-R**

When recording to DVD-R media, press the **RECORD** button twice to begin recording. Change the setting to Auto (press once) to record in the same manner as with DVD-RW discs. Being as DVD-R media is write-once technology, this feature allows you to verify that the proper type of media (*write-once* or *multi-write*) is loaded for the current recording session.

*Note: In the Auto (press once) setting, the recorder requires up to three seconds to begin recording after the **REC** button is pressed.*

9.2.7 **Chapter Interval**

When recording in Video mode, chapter marks are added every three minutes (default setting). Available settings are as follows:

- every 3 minutes (default)
- every 5 minutes
- every 10 minutes
- No Separation (function turned OFF)

9.2.8 **Remote Control Set**

If multiple Pioneer DVD recorders are within the same room, set the *Remote Control Set* function for the number of recorders. So that each remote control corresponds to its own recorder, set each recorder/remote control pair to a different ID.

The PRV-9000 has three recorder IDs available, Recorder1, Recorder2 and Recorder 3. When set to Recorder2 or Recorder3, the remote control mode appears on the front panel.

Note: Setting the ID on the recorder locks out the remote control until the remote's ID is changed to match the recorder.

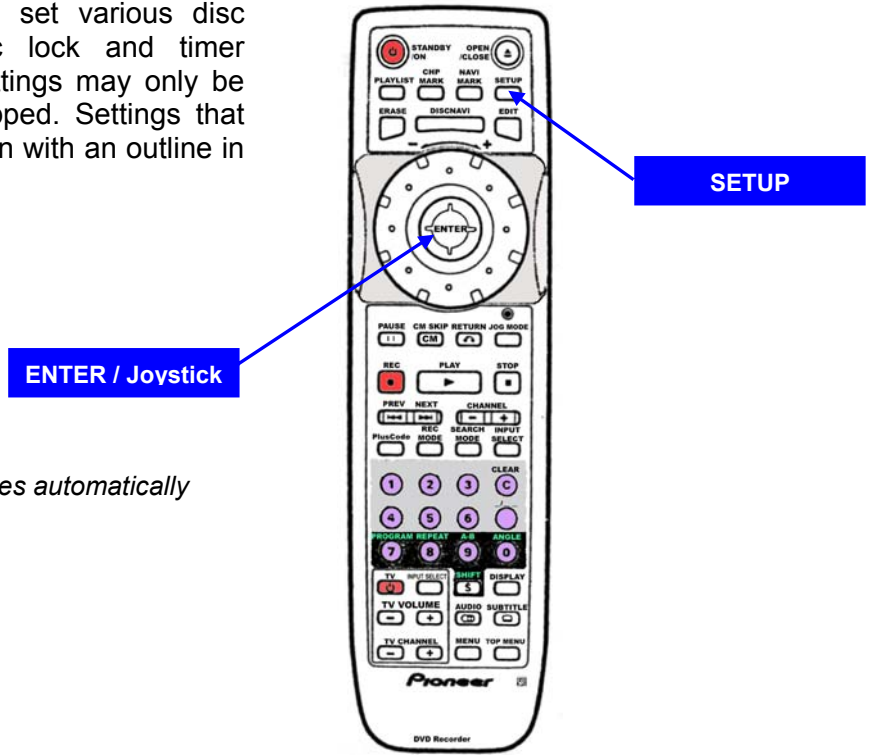
Follow the directions below to change the setting on the remote control.

1. Press and hold the **RETURN** button.
2. Press the number that corresponds to the recorder ID (1, 2 or 3).
3. Verify that the JOG MODE Indicator lights.
This indicator lights when the remote control ID is changed.
4. Confirm that the remote control number displayed on the front panel matches the recorder ID.
Check this number if the remote fails to control the recorder.

If using a single recorder in a room, this function is unnecessary.

10 DISC SETUP MENU

Use the Disc Setup menu to set various disc options for disc format, disc lock and timer recording programs. Some settings may only be changed when the disc is stopped. Settings that require a stopped disc are shown with an outline in the Initial Setup menu.



Note: The Setup menu screen closes automatically after 20 minutes of inactivity.

To access the Disc Setup menu, follow the directions below.

1. Press the **SETUP** button on the remote control.
2. Use the joystick to scroll to *Disc Setup*.
3. Press **ENTER** to access the Disc Setup menu.
4. Use the joystick to scroll through the sub-menu and review settings.
5. Make changes as needed, pressing **ENTER** after a change.
6. Press **SETUP** again to close the menu.

10.1 Basic Disc Setup

The basic settings available under the Disc Setup menu including the following:

- Disc Timer Recording – default: OFF
- Input Disc Name – default: n/a
- Protect Disc – default: OFF

10.1.1 Disc Timer Recording Function

To enable disc timer recording on the loaded disc, set this function to ON. For detailed information on using this feature, refer to Chapter 6, RECORDING FUNCTIONS & OPTIONS, section 6.1.1 *Disc Timer Recording*.

10.1.2 Input Disc Name

Use the Input Disc Name function to assign a name to the disc. A disc name appears when the disc is loaded and when displaying disc information.

Names (VR format – up to 64 characters, Video format – up to 24 characters) may consist of letters, numbers and/or a limited series of symbols. Some systems reduce the number of characters to the standard alphabet and to the digits 0 through 9. Press the ERASE button to delete a character if necessary.

Note: Discs formatted on a different recorder limit the character sets.

To create a name for a disc, follow the steps below.

1. Press the **SETUP** button to access the main menu.
2. Use the joystick to select *Disc Setup*.
3. Press **ENTER** to confirm the selection.
4. Use the joystick to highlight *Input Disc Name*.
5. Press **ENTER** to access the character menu.
6. Use the joystick to drop down from the name field to the characters.
Move left to select either Capitals or lowercase letters if necessary.
7. Select the first character for the disc name.
The selection appears in the field above.
8. Press **ENTER** to lock in the character.
9. Continue selecting all required characters.
 - *Scroll down to the Delete button to remove the tentative name if necessary. Press ENTER to confirm the deletion.*
 - *Scroll down to the SPACE button to add spacing between characters. Press ENTER to confirm the space.*
10. Scroll down to the **SET** button to lock in the name.
11. Press **ENTER** to save the name and return to the previous menu.

10.1.3 Protect Disc

The Protect Disc function prevents a disc from accidental erasing, editing or writing over an existing recording. To unlock a disc for edits, set to OFF.



A protected disc may STILL be initialized which erases any existing content from the disc.

10.2 Initialize Disc

The Initialize settings available under Disc Setup include the following options:

- VR Format – default: n/a (DVD-RW only)
- Video Format – default: n/a (DVD-RW only)

10.2.1 VR Format Disc

Follow the directions below to initialize a VR-formatted disc.

1. Press the **SETUP** button to access the main menu.
2. Use the joystick to highlight *Disc Setup*.
3. Press **ENTER** to access the menu.
4. Use the joystick to highlight *Initialize*.
5. Select the *VR Disc* sub-menu.
6. Choose *Start* from the VR sub-menu.
7. Press **ENTER** to begin formatting the DVD-RW disc.



Formatting the disc erases any existing content.

10.2.2 Video Format Disc

Follow the directions below to initialize a Video-formatted disc.

1. Press the **SETUP** button to access the main menu.
2. Use the joystick to highlight *Disc Setup*.
3. Press **ENTER** to access the menu.

4. Use the joystick to highlight *Initialize*.
5. Select the *Video Disc* sub-menu.
6. Choose *Start* from the Video sub-menu.
7. Press **ENTER** to begin formatting the DVD-RW disc.



Formatting the disc erases any existing content.

10.3 Finalize Disc Settings

The Finalize settings available under Disc Setup include the following options:

- Finalize – default: n/a
- Undo Finalize – default: n/a

10.3.1 Finalize Disc

Follow the directions below to finalize a disc (VR or Video).

1. Press the **SETUP** button to access the main menu.
2. Use the joystick to highlight *Disc Setup*.
3. Press **ENTER** to access the menu.
4. Use the joystick to highlight *Finalize*.
5. Select *Finalize* on the sub-menu.
6. Choose *Start* from the finalize sub-menu.
7. Press **ENTER** to begin finalizing the disc and exit the menu.

10.3.2 Undo Finalized Disc

To edit or record additional material on to a finalized DVD-RW disc (finalized on another recorder), you must first *Undo* the finalization. The Undo Finalize command is unavailable in the following situations.

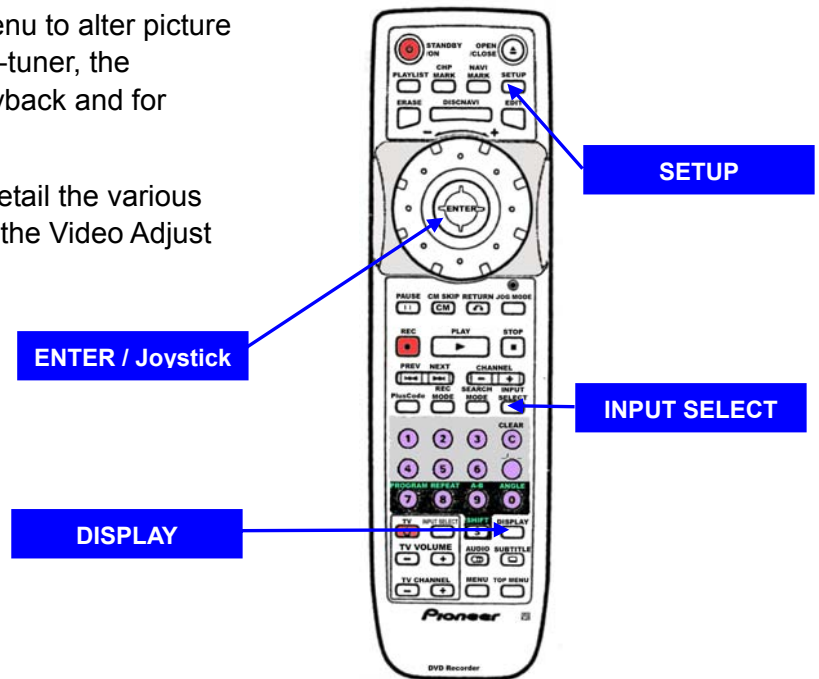
- Disc was finalized on the current recorder rather than another recorder
- Disc is DVD-R media

1. Press the **SETUP** button to access the main menu.
2. Use the joystick to highlight *Disc Setup*.
3. Press **ENTER** to access the menu.
4. Use the joystick to highlight *Finalize*.
5. Select *Undo Finalize* on the sub-menu.
6. Choose *Start* from the Finalize sub-menu.
7. Press **ENTER** to begin to un-finalizing the disc and exit the menu.

10.4 Video Adjust Menu

Use the Video Adjust menu to alter picture quality for the built-in TV-tuner, the external inputs, disc playback and for recording

The following sections detail the various settings available under the Video Adjust menu.



10.4.1 Set Picture Quality for Tuner and External Inputs

Use the Picture Creation option to set picture quality for the built-in TV tuner and the external inputs. There are multiple preset values suitable for various sources and devices. As an alternative, create up to three setting groups for your specific equipment.

Follow the directions below to specify picture quality settings on a TV tuner or other external inputs.

1. STOP any disc playback on the recorder.

2. Press **SETUP** to access the menu.
3. Use the joystick to highlight *Video Adjust* on the Setup menu.
4. Press **ENTER** to confirm your selection.
5. Press **ENTER** to select the first option, *Picture Creation*.
6. Use the joystick to scroll left and right to change the preset option.
The six preset options are as follows:
 - **TV Program** – suitable for general broadcasts
 - **VCR** – suitable for video cassettes
 - **LDP** – suitable for Laserdiscs (LDs)
 - **Memory1** – user preset 1
 - **Memory2** – user preset 2
 - **Memory3** – user preset 3
7. Press **INPUT SELECT** to toggle between the built-in TV tuner and the external inputs when/if necessary.
8. Press **ENTER** to select the preset and continue with adjustments.

10.4.2 Create Personalized Settings

There are three user presets available for saving personalized picture quality settings. Follow the directions below to create user-specific settings.

1. STOP any disc playback on the recorder.
2. Press **SETUP** to access the menu.
3. Use the joystick to highlight *Video Adjust* on the Setup menu.
4. Press **ENTER** to confirm your selection.
5. Press **ENTER** to select the first option, *Picture Creation*.
6. Select one of the three user presets (Memory1, Memory2, or Memory3).
7. Use the joystick to highlight *Detailed Settings*.
8. Select the picture quality to be adjusted.
 - **Prog. Motion** – adjusts motion and still-picture quality when using progressive scans (only setting available when using DV IN/OUT)
 - **3-D Y/C** – adjusts brightness/color separation
 - **Detail** – adjusts how sharp edges appear
 - **White AGC** – automatically adjusts white level

- **White Level** – adjusts intensity of white
 - **Black Level** – adjusts intensity of black
 - **Hue** – adjusts overall balance between red and green
 - **Chroma Level** – adjust how rich colors appear
9. Move the joystick left/right to adjust the current picture quality.
 10. Press **ENTER** to lock in the new picture quality.
 11. Repeat steps 8 through 10 until all changes are locked in.
 12. Press **SETUP** to register the settings and exit the menu.

*Note: To see more of the picture during adjustments, select a setting and press **ENTER**.*

10.4.3 Set Noise Reduction for Recording

To improve the recorded picture quality, change both the brightness and the color noise reduction levels. Use the Preview feature to see how adjustments effect recordings.

Follow the instructions below to adjust the noise level for recordings.

1. STOP any disc playback on the recorder.
Must be an unfinalized recordable disc
2. Press **SETUP** to access the menu.
3. Use the joystick to highlight *Video Adjust* on the Setup menu.
4. Press **ENTER** to confirm your selection.
5. Use the joystick to highlight *Rec NR*.
6. Press **INPUT SELECT** to toggle between built-in TV tuner and external inputs when/if necessary.
7. Select the setting to be adjusted.
 - **Rec YNR** – applied to video signal brightness component
 - **Rec CNR** – applied to video signal color component
8. Adjust settings with left/right joystick movements.
9. Scroll to *Play Qual* to preview current settings.
10. Select a playback option to view recording.
11. Use joystick to highlight *Preview* on the menu.
12. Press **ENTER** to view recording with picture quality adjustments.

13. Press **ENTER** to return to the settings screen after viewing.
14. Press **SETUP** to exit the menu.

10.4.4 Set Picture Quality for Disc Playback

This settings determines how the picture appears when playing from a disc. Follow the directions below to adjusting the picture quality for a disc.

Change a Preset Settings Group:

1. Press **SETUP** on the remote control.
Disc may be playing or paused.
2. Use the joystick to highlight *Video Adjust* on the Setup menu.
3. Press **ENTER** to confirm your selection.
4. Use the joystick to change the setting.
 - **TV (CRT)** – suitable for most cathode-ray tube televisions
 - **PDP** – suitable for plasma display panels
 - **Professional** – suitable for professional monitors
 - **Memory1** – user preset 1
 - **Memory2** – user preset 2
 - **Memory3** – user preset 3
5. Press **ENTER** to lock in the change(s).
6. Press **SETUP** to register the settings and exit the menu.

Create a Personal Settings Group:

There are three user presets available for saving personalized picture quality settings. Follow the directions below to create a group of settings.

1. Press **SETUP** on the remote control.
Disc may be playing or paused.
2. Use the joystick to highlight *Video Adjust* on the Setup menu.
3. Press **ENTER** to confirm your selection.
4. Use the joystick to change the setting.
 - **TV (CRT)** – suitable for most cathode-ray tube televisions
 - **PDP** – suitable for plasma display panels

- **Professional** – suitable for professional monitors
 - **Memory1** – user preset 1
 - **Memory2** – user preset 2
 - **Memory3** – user preset 3
5. Use the joystick to highlight *Detailed Settings*.
 6. Select the picture quality setting to be adjusted.
 - **Prog. Motion** – adjusts motion and still-picture quality when using progressive scans (disc content is unaffected)
 - **Detail** – adjusts how sharp edges appear
 - **White Level** – adjusts intensity of white
 - **White AGC** – White Automatic Gain Control
 - **Black Level** – adjusts intensity of black
 - **Black Setup** – for correction of floating black color
 - **Hue** – adjusts overall balance between red and green
 - **Chroma Level** – adjusts how rich colors appear
 - **3D YC** – compensates for misalignments of brightness (Y) and color (C) components
 7. Use the joystick to adjust the select picture quality setting.
 8. Press **ENTER** to lock in the change(s).
 9. Press **SETUP** to register the settings and exit the menu.

*Note: To see more of the picture during adjustments, select a setting and press **ENTER**.*

11 ADDITIONAL INFORMATION

This section provides the following general information.

- Installation and moving hints
- On-screen messages
- Language Code list
- Disc handling guidelines
- Disc formats
- Screen sizes
- General Maintenance Issues
- General specifications
- Brief glossary

11.1 Installation & Moving Hints

Please use the following guidelines when installing the PRV-9000.

- Use in a well-ventilated room
- Place on a solid, flat level surface
- Avoid exposing to high temperatures, humidity, or direct sunlight
- Install in a relatively dust-free, smoke-free environment as possible
- Locate away from the top of other equipment such as amplifiers or other components that become hot
- Move away from televisions or monitors if experiencing signal interference
- Avoid covering with a cloth or other material that may prevent proper cooling
- Verify that all four supports under the unit are touching the mounting surface

To move the recorder, follow the directions below:

1. Remove the disc from the recorder if present.
2. Close the disc tray.
3. Press **STANDBY/ON** to switch power to Standby.
4. Wait until the message in the display window changes from Power OFF to the date and time (if this information is programmed in to the unit).
5. Disconnect the power cord.

Never lift or move the unit during recording or playback. Discs rotate at a high speed and may be damaged or damage the optics within the chassis.

11.2 On-Screen Messages

The following chart provides message which may appear on-screen.

Message	Explanation / Action
<i>Initializing disc. Please wait a moment.</i>	Loading a blank DVD-RW disc causes the recorder to initialize the disc first.
<i>XX seconds before recording stops. Please wait a moment.</i>	In Video mode, recording is in 30-second blocks. When sending a Stop command, the unit continues recording until reaching the end of the block.
<i>You cannot record on this disc. Undo the finalization.</i>	The disc, finalized on a non-Pioneer recorder, must be un-finalized before editing or recording may being..
<p><i>Any of the following:</i></p> <ul style="list-style-type: none"> ✓ <i>Cannot play because the disc is incompatible.</i> ✓ <i>You cannot record on this disc.</i> ✓ <i>Cannot read CPRM information.</i> ✓ <i>Cannot prepare for recording.</i> ✓ <i>Could not record information to disc.</i> ✓ <i>Cannot edit.</i> ✓ <i>Could not initialize disc.</i> ✓ <i>Could not finalize successfully.</i> ✓ <i>Could not undo finalization successfully.</i> ✓ <i>Could not cancel the disc protection setting successfully.</i> 	The disc may be dirty or damaged. Take out the disc, clean it and retry. If the error persists, use a new disc. If the error appears with the new disc as well, please contact a Pioneer Service Center.
<i>This source is copy-protected.</i>	The video source is copy-protect and may not be recorded.
<p><i>Either of the following:</i></p> <ul style="list-style-type: none"> ✓ <i>Cannot record because the disc is not CPRM compatible.</i> ✓ <i>This source cannot be recorded with the Video mode.</i> 	This video source is copy-once protected. Use DVD-RW (VR format) disc with CPRM for recording.
<i>Incorrect CPRM information.</i>	The recorder failed to read the CPRM information. Check with a Pioneer Service Center for assistance.

Message	Explanation / Action
<p><i>Either of the following:</i></p> <ul style="list-style-type: none"> ✓ No DV input. ✓ Cannot preview because there is no DV input. 	<p>The DV IN/OUT port fails to detect a signal. This may appear when a blank section of tape is playing from the connected camcorder.</p>
<p><i>Either of the following:</i></p> <ul style="list-style-type: none"> ✓ When recording the DV input, the recording level is automatically set to 9. ✓ The recording level has been temporarily set to 9 for the DV Input. 	<p>Recording levels 1 through 8 are not available when recording from the DV IN/OUT port.</p>
<p><i>Audio follows [Dual Mono Recording] setting because the recording level is 32.</i></p>	<p>When recording (Video mode or VR set to level 32) from an external input, audio is recorded in Linear PCM format. Record using the left or right channel rather than both channels.</p>
<p><i>Repairing the disc. Please wait a moment.</i></p>	<p>During recording the power was cut. This message appears when power is restored.</p>
<p><i>Could not repair the disc.</i></p>	<p>The recorder is unable to repair the disc after power was cut. The contents of the recording are lost.</p>
<p><i>Incompatible region number.</i></p>	<p>The disc's region code is incompatible with the recorder's region code(s) thus the disc fails to play.</p>
<p><i>Any of the following:</i></p> <ul style="list-style-type: none"> ✓ Cannot record any more titles. ✓ You cannot do this edit with the currently loaded disc. ✓ Cannot add any more chapter marks. 	<p>The disc data control limit or the maximum number of chapters/titles has been reached. Erase title/chapters or combine chapters.</p>

11.3 Language Code List

The following chart provides the available languages and accompanying codes.

Language	Code	Language	Code	Language	Code
Japanese (ja)	1001	Hausa (ha)	0801	Qechua (qu)	1721
English (en)	0514	Hindi (hi)	0809	Rhaeto-Romance (rm)	1813
French (fr)	0618	Croatian ((hr)	0818	Kinundi (m)	1814
German (de)	0405	Hungarian (hu)	0821	Romanian (ro)	1815
Italian (it)	0920	Armenian (hy)	0825	Kinyarwanda (rw)	1823
Spanish (es)	0519	Interlingua (ia)	0901	Sanskrit (sa)	1901

Language	Code	Language	Code	Language	Code
Dutch (nl)	1412	Interlingua (ie)	0905	Sindhi (sd)	1904
Russian (ru)	1821	Inupiak (ik)	0911	Sangho (sg)	1907
Chinese (zh)	2608	Indonesian (in)	0914	Serbo-Croatian (sh)	1908
Korean (ko)	1115	Icelandic (is)	0919	Sinhalese (si)	1909
Greek (el)	0512	Hebrew (iw)	0923	Slovak (sk)	1911
Afar (aa)	0101	Yiddish (ji)	1009	Slovenian (sl)	1912
Abkhazian (ab)	0102	Japanese (jw)	1023	Samoa (sm)	1913
Afrikaans (af)	0106	Georgian (ka)	1101	Shona (sn)	1914
Amharic (am)	0113	Kazakh (kk)	1111	Somali (so)	1915
Arabic (ar)	0118	Greenlandic (kl)	1112	Albanian (sq)	1917
Assamese (as)	0119	Cambodian (km)	1113	Serbian (sr)	1918
Aymara (ay)	0125	Kannada(kn)	1114	Siswati (ss)	1919
Azerbaijani (az)	0126	Kashmiri (ks)	1119	Sesotho (st)	1920
Bashkir (ba)	0201	Kurdish (ki)	1121	Sundanese (su)	1921
Byelorussian (be)	0205	Kirghiz (ky)	1125	Swedish (sv)	1922
Bulgarian (bg)	0207	Latin (la)	1201	Swahili (sw)	1923
Bihari (bh)	0208	Lingala (ln)	1214	Tamil (ta)	2001
Bislama (bi)	0209	Leothian (lo)	1215	Telugu (te)	2005
Bengali (bn)	0214	Lithuanian (lt)	1220	Tajik (tg)	2007
Tibetan (bo)	0215	Latvian (lv)	1222	Thai (th)	2008
Breton (br)	0218	Melagasy (mg)	1307	Tigrinya (ti)	2009
Catalan (ca)	0301	Maori (mi)	1309	Turkmen (tk)	2011
Corsican (co)	0315	Macedonian (mk)	1311	Tagalog (tl)	2012
Czech (cs)	0319	Malayalam (ml)	1312	Setswana (tn)	2014
Welsh (cy)	0325	Mongolian (mn)	1314	Tonga (to)	2015
Danish (da)	0401	Moldavian (mo)	1315	Turkish (tr)	2018
Bhutani (dz)	0426	Marathi (mr)	1318	Tsonga (ts)	2019
Esperanto (eo)	0515	Malay (ms)	1319	Tatar (tt)	2020
Estonian (et)	0520	Maltese (mt)	1320	Twi (tw)	2023
Basque (eu)	0521	Burmese (my)	1325	Ukrainian (uk)	2111
Persian (fa)	0601	Nauru (na)	1401	Urdu (ur)	2118
Finnish (fi)	0609	Nepali (ne)	1405	Uzbek (uz)	2126
Fiji (fj)	0610	Norwegian (no)	1415	Vietnamese(vi)	2209
Faroese (fo)	0615	Occitan (oc)	1503	Volapuk (vo)	2215
Frisian (fy)	0625	Oromo (om)	1513	Wolof (wo)	2315
Irish (ga)	0701	Oriya (or)	1518	Xhosa (sh)	2408
Scots-Gaelic (gd)	0704	Panjabi (pa)	1601	Yoruba (yo)	2515
Galician (gl)	0712	Polish (pl)	1612	Zulu (zu)	2621
Guarani (gn)	0714	Pashto, Pushto (ps)	1619		
Gujarati (gu)	0721	Portuguese (pt)	1620		

11.4 Disc-Handling Guidelines

When holding discs of any type, avoid leaving fingerprints, smears or scratches on the recording surface. Hold the disc by the edges or supported from the center hold.

Avoid scratching the labeling side of the disc as well as the recording side. Although not as fragile as the recording layer, scratches can still affect the media.

To remove fingerprints and dust, use a cloth soaked in alcohol or a commercially available CD/DVD disc cleaning material to wipe away smudges. Never use other chemicals to clean a disc. Do NOT wipe with circular strokes. Wipe lightly from the center out to the edge using straight strokes.

Cracked or warped discs may damage the recorder. If a disc breaks inside of the unit, pieces are likely to strike the optics.



When storing discs, place carefully in a jewel-case or disc jacket. Avoid storing discs in locations subject to temperature extremes, moisture and direct sunlight. To avoid warping, avoid stacking discs. Discs are best maintained when stored upright.




Do NOT glue or use stickers on a DVD disc. Labels may unbalance the disc causing it to fail or even to break. Label glue may slip or melt in extreme cases.




Use the appropriate marking pen to write on the labeling side of the disc. Pencils, ballpoint pens and other sharp-tipped writing instruments may damage the reflectivity of a disc. Refer to your place of purchase for assistance.

Non-standard disc shapes are unusable on this device. These non-standard shapes include hearts, diamonds, polygons, etc.



11.5 Screen Sizes & Disc Formats





When viewing on a standard TV or monitor

Disc (screen) format	Setting	Appearance
16:9 	4:3 (letter box) 	Shown in widescreen with black bars on the top and bottom of the screen
	4:3 (Pan & Scan) 	Sides of program are cropped with altered picture filling screen

Disc (screen) format	Setting	Appearance
4:3 	16:9 (Wide) 	Appears squished so set to either 4:3 viewing setting (Letterbox or Pan & Scan)
	4:3 (Letterbox) 4:3 (Pan & Scan) 	Image is correct in either screen size

When viewing on a widescreen TV or monitor

Disc (screen) format	Setting	Appearance
16:9 	16:9 (Wide) 	Picture remains unaltered

Disc (screen) format	Setting	Appearance
4:3 	16:9 (Wide) 	Appears squished so set to either 4:3 viewing setting (Letterbox or Pan & Scan)
	16:9 Wide)  	The television or monitor determines image borders or stretches image to fill screen (refer to TV or monitor's owner's manual)

11.6 General Maintenance Issues

Usually it is best to have the unit serviced by an authorized Pioneer Service Center; however, some in-house maintenance is possible. The following sections provide directions for minor in-house maintenance.

11.6.1 Cleaning Pickup Lens

The recorder's lens should remain clean during normal use. However, if the dust or dirt adhere to the lens, use an untreated, soft, lint-free cloth to gently wipe the visible side of the lens.

Although lens cleaners designed for CD players are commercially available, Pioneer does NOT recommend for cleaning this device.

11.6.2 Clearing Condensation

Condensation may form inside the unit if it is brought from a cool environment in to a warm room, or if the temperature rises suddenly in the room. Condensation may temporarily impair recorder performance. Leave the recorder alone for approximately an hour to adjust to a temperature change.

11.7 General Specifications

General

System DVD-Video, DVD-R/RW, Video-CD, CD
 Power requirements 120 V, 50/60 Hz
 Power consumption 65 W
 Power consumption in standby mode 2 W (FL off)
 Weight 7.0 kg
 Dimensions 420 (W) x 108 (H) x 377 (D) mm
 Operating temperature +5°C to +35°C
 Operating humidity 5% to 85% (no condensation)
 TV format NTSC

Recording

Recording format DVD VideoRecording
 DVD-VIDEO
 Recordable discs DVD-ReRecordable
 DVD-Recordable
 Video recording format
 Sampling frequency 13.5MHz
 Compression format MPEG
 Audio recording format
 Sampling frequency 48kHz
 Compression format Dolby Digital or Linear PCM
 (uncompressed)

Recording time

DVD-RW (VR mode)
 Standard (SP) Approx. 2 hours
 Manual rate (MN) Approx. 1-6 hours
 DVD-R/RW (Video mode)
 V1 Approx. 1 hour
 V2 Approx. 2 hours

Tuner

Receivable channels
 VHF 2-13ch
 UHF 14-69ch
 CATV C2-C125ch

Timer

Programs 1 month/8 programs
 Clock Quartz lock (12-hour digital display)
 Power off memory Approx. 48 hours

Input/Output

VHF/UHF antenna input/output terminal VHF/UHF set
 75 Ω (F-shape connector)
 Video input Input 2 (rear), 3 (front)
 Input level 1 Vp-p (75 Ω)
 Jack (Input 2) BNC jack
 Jack (Input 3) RCA jack
 Video output Output 2
 Output level 1 Vp-p (75 Ω)
 Jack (Output 2) BNC jack
 S-Video input Input 1 (rear), 3 (front)
 Y (luminance) - Input level 1 Vp-p (75 Ω)
 C (color) - Input level 265 mVp-p (75 Ω)
 Jacks 4 pin mini DIN
 S-Video output Output 1
 Y (luminance) - Output level 1 Vp-p (75 Ω)
 C (color) - Output level 265 mVp-p (75 Ω)
 Jack (Output 1) 4 pin mini DIN
 Component video output
 Output level Y: 1.0 Vp-p (75 Ω)
 P_r, P_b: 0.7 Vp-p (75 Ω)
 Jacks BNC jacks
 Audio input Input 1,2 (rear), 3 (front) L/R
 Input level
 During audio input 2 V rms
 (Input impedance: more than 22 kΩ)
 Jacks RCA jacks
 Audio output Output 1,2 L/R
 During audio output 2 V rms
 (Output impedance: less than 1.5 kΩ)
 Jacks RCA jacks
 Control input/output Mini jack 1 each
 DV input/output 4 pin (i.LINK/IEEE 1394 standard)

Supplied accessories

Remote control 1
 Dry cell batteries (AA/R6P) 2
 Power cable 1
 Operating Instructions 1
 Warranty card 1

Note: The specifications and design of this product are subject to change without notice, due to improvement.

11.8 Brief Glossary

This section provides a short glossary for terms and acronyms used within this manual.

Analog Audio

An electrical signal that directly represents sound. Compare this to digital audio that can be an electrical, signal but is an indirect representation of sound. See also *Digital Audio*.

Aspect Ratio

The width of a television screen relative to its height. Conventional TVs are 4:3 (screen being close to square) while wide-screen models are 16:9 (screen close to twice as wide as the height)

Chapter

A title on a DVD is divided in to smaller segments called chapters. See also *Title*.

Digital Audio

An indirect representation of sound by numbers. During recording, the sound is measured at discrete intervals (44, 100 times a second for CD audio) by an analog-to-digital converter. The converter generates a stream of numbers that represent the sound. On playback, a digital-to-analog converter generates an analog signal based on these numbers. See also *Sampling Frequency* and *Analog Audio*.

Dolby Digital

With multi-channel audio, this high-quality surround sound system is used in many modern movie theaters.

DTS

DTS (Digital Theater System) is a surround sound system similar in quality to Dolby Digital.

Dynamic Range

The difference between the softest and the loudest sounds possible in an audio signal without distortion or white-noise. Dolby Digital and DTS soundtracks are capable of a wide dynamic range thus are popular in movie theaters.

MPEG Audio

MPEG is an audio format used on Video CDs and some DVD discs. The PRV-9000 can convert MPEG audio to the CPM format for wider compatibility with digital recorders and AV amplifiers. See also *PCM*.

MPEG Video

MPEG video format is used for Video CDs and DVDs. Video CD uses the older MPEG-1 standard while DVD uses the higher-quality MPEG-2 standard.

Optical Digital Output

A port or jack that carries digital audio signals as light pulses. The special optical cord may be purchased from most audio dealers.

PCM (Pulse Code Modulation)

PCM is the most common system of encoding digital audio on to CDs and DAT sources. PCM provides excellent quality but requires excessive amounts of data when compared to formats such as Dolby Digital and MPEG Audio. For compatibility with digital audio recorders (CD, MD, and DAT) and AV amplifiers with digital inputs, the PRV-9000 can convert Dolby Digital and MPEG Audio in to PCM. See also *Digital Audio*.

PBC (PlayBack Control)

PBC is a system to navigate a Video CD through on-screen menus recorded onto the disc. An example of a disc using this technology is a karaoke disc where the disc is not normally played from beginning to end.

Progressive Scan Video

Also called non-interlaced Video, progressive scan is a method of updating all lines in a displayed picture in a single pass. The picture is more stable and flicker-free unlike an interlaced video image.

PureCinema

Video on a DVD disc may be videotaped material (originally shot on video) or film footage (originally shot on film stock). Video source has a frame rate of 30 frames/second, compared to film with a frame rate of 24 frames/second. This recorder converts film material to 60 frames/second (in progressive scan mode). PureCinema adjusts the picture quality comparable to a cinema screen. To check a sequence for origination (videotape or film), display the transfer rate. If a pound sign (#) appears above the transfer rate data then the segment is from a film source.

Regions (DVD only)

Regions associate discs and players/recorders with a particular area of the world. This unit only plays discs with compatible region codes. The recorder's region code is stamped on the back panel close to the serial number. Some discs are compatible with more than one region.

Sampling Frequency

Sampling frequency refers to the rate at which sound is measured when being turned in to digital audio data. Higher rates equal better sound quality. However, more digital information generates with the higher rates. Standard CD Audio has a sampling frequency of 44.1kHz, which translates to 44,100 samples (measurements) per second. See also *Digital Audio*.

Title (DVD only)

A title is a collection of chapters on a DVD disc. See also *Chapter*.

Track

Audio CDs and Video CDs use tracks to divide content on a disc. The DVD equivalent is called a chapter. See also *Chapter*.

For additional technological words and terms, refer to the DVD FAQ website. (Author: Jim Taylor <http://dvddemystified.com/dvdfaq.html>)

12 TROUBLESHOOTING

The following sections deal with common errors and specific problems when working with advanced recording devices such as the PRV-9000 DVD recorder.

12.1 General Issues

If you are unable to see a picture or hear the audio through the DV In/Out jack, check the following points:

- Copy-protected source material is blocked from output through the DV jack.
- Check the cable between the camcorder or other DV device and the PRV-9000.
- Toggle the power (turn power Off then On again) to the DV device.
- Switch the audio input.
- Verify that the Linear PCM audio is set to a value other than 96 kHz.

12.2 Timer Recording Issues

Although the timer is set, the recorder fails to record under the following conditions:

- No discs is loaded
- Non-recordable disc is loaded
- Loaded disc is protected (*see section, Protect/Unprotect an Original Title*)
- Loaded disc already contains the maximum number of titles (*99 titles*)

Entering a timer program is unavailable during the following situations:

- Recording is already taking place
- Clock is not set
- Selected recording time has already passed
- Eight timer programs already exist

If two or more programs overlap, the following actions occur:

- Earlier program takes priority
- As the earlier program finishes, the later timer program begins recording

(transition requires approximately 30 seconds)

- Programs set to start recording at the same time causes the recorder to give priority to the program entered first
(ex: program line entry 4 and 7 start at the same time, program 4 begins recording)

Confirmation is unavailable during the following situations:

- No discs is loaded
- Non-recordable disc is loaded
- Loaded disc is protected *(see section 7.4.12 Protecting/Unprotecting an Original Title)*
- Loaded disc already contains the maximum number of titles *(99 titles)*

*Note: If the disc is damaged, the recording may be incomplete or unsuccessful. The Confirm field may indicate that the sequence has recorded properly (**Rec OK**) however the recording can be defective.*

12.3 DV Recording Issues

DV, also known as IEE 1394-1995 and i.LINK[®], supports input/output for audio, video, data and control signals on a single cable.

One of the following messages may appear on-screen when using the DV IN/OUT port.

- **No DV camera connected**
The camcorder is not connected properly or the camcorder is switched OFF.
- **DV camera is recording**
The camcorder is recording already so recording from the camcorder is impossible.
- **Can't connect more than one DV camera at the same time**
The recorder's DV port supports a single camcorder at any given time.
- **No tape in the DV camera**
A tape is missing from the camcorder.
- **DV camera is recording or is record-paused**
The camcorder is in camera-mode or record-pause mode rather than in VTR.
- **DV camera playback canceled**
Playback unexpectedly stops due to the tape running out or some other similar occurrence.

- **Cannot operate the DV camera**
The recorder fails to control the camcorder, turning the camera OFF then ON again may solve the problem.
- **Could not operate the DV camera**
The recorder fails to control the camcorder because this feature is unsupported.

If the picture or sound fails to come through the DV IN/OUT port, check for the following conditions:

- Source signal is copy-protected
- DV cable is loose or improperly seated
- Connected equipment needs the power cycled to recognize the recorder (turn the equipment's power OFF then ON again)
- Audio Input is improperly set
- Linear PCM audio is set to something *other* than 96kHz

12.4 DV Editing Issues

Segments less than 5 seconds in duration may not be deleted from the Original material. For additional help with editing, refer to the following section or contact your Pioneer representative.

12.5 Frequently Asked Questions (FAQ)

1. *Why won't the recorder turn ON?*

- Make sure that the recorder is connected properly. Reseat the power cord if necessary.

2. *What happened to the picture (picture missing)?*

- Check that cables are connected properly.
- Confirm that the monitor or AV receiver is set to the correct input(s).
- Verify that the disc is NTSC media.
- The recorder may be set to Progressive-Scan with an incompatible television or monitor. Press and hold the **PAUSE** button then press **FL DIMMER** to reset to Interface.

3. Why does the disc automatically eject after closing the disc tray?

- Confirm that the disc is aligned in the tray properly with the label facing up.
- Remove the disc and clean the recording/recorded surface.
- Verify that the region code is compatible with the PRV-9000 recorder.

4. Why won't my disc play?

- The media surface may contain dust or smudges. Clean the disc and retry.
- Verify that a region code on the disc matches the region code on the recorder.
- Check that the disc is aligned properly on the tray and that the label facing up.
- Condensation may have formed within the recorder. Allow the unit to stabilize at the current room temperature for one to two hours before attempting to play the disc.

5. Where did my settings go?

- If the unit is unplugged or there is a power failure while the recorder is ON, all settings return to the original default values. Returning the recorder to Standby mode before unplugging the unit saves your settings.

6. Why did my screen go blank at the same time that all the buttons stopped working?

- The recorder has a command conflict. Press the STOP button on the front panel of the unit and restart playback.

7. What does this symbol, , mean?

- The symbol means that the operation you want to perform is unavailable on that disc. The recorder is functioning properly.

8. What does this symbol, , mean?

- The symbol means that the recorder prohibits the operation you want to perform. The recorder is functioning properly.

9. Why did the remote control stop working?

- Change the angle to test the operating range.
- When this recorder is connected to other Pioneer devices through the CONTROL IN/OUT ports, point the remote control at the other device(s).
- The remote control's ID number must match the recorder's ID number.

- Replace the battery in the remote control. When the battery runs down, the ID number automatically resets to ID1.

10. Why is the sound distorted/missing?

- Adjust the volume control for the television, monitor or AV device.
- Sound is removed during pauses, scans, or slow motion play. Press PLAY to resume normal playback with sound.
- DTS discs require a DTS decoder or DTS-compatible receiver to play back. Connect a DTS device to the recorder and retry.
- If adding a DTS device, verify that the DTS Output option is set to ON.
SETUP > Audio > DTS Output > ON
- Some 96kHz discs do not output audio through Digital Out. Switch the receiver/amplifier's input to analog.
- Verify that the audio cable connections and reseat if necessary.
- Check that cable contacts are clean.

11. Why is the picture from my external input distorted?

- If the video signal from the external component is copy-protected, the recorder is unable to relay the signal accurately. Connect the component directly to the viewing device.

12. How do I return the screen to normal when it's stretched out horizontally/vertically?

- The recorder's input automatically switches into wide mode to match the input signal when necessary. If the connected device is incompatible with ID-1, set the component to output a 4:3 aspect ratio.
- Change the TV Screen Size setting to match the media (disc setting).
- Check the aspect ratio setting on the monitor or AV receiver.

13. Why won't the disc I made on the PRV-9000 play on my (other manufacturer's) DVD player?

- Material recorded in Video mode must be finalized before being able to play is on a different DVD device.
- Some DVD players are unable to read recordable media. Check with the manufacturer for recordable media compatibility issues.
- Material recorded on a VR formatted disc is playable on devices marked with the RW Compatibility symbol.



- Discs recorded with copy-once material are banned from playing on other devices.

14. Why is the picture so dark and/or distorted during playback?

- When a copy-protected disc is played on the recorder but connected to the television/monitor via a VCR, the picture fails to display correctly. Connect the recorder directly to the viewing device.

15. How can I control my TV using the PRV-9000's remote control?

- Verify that your television allows other remote controls to operate the set.
- Select the appropriate code for your make of TV. Refer to Chapter 4: GETTING STARTED, section 4.1.7 *Setting the Remote to Control a TV*.

16. Why can't I record a particular program?

- Check for available recordable space on the disc. Read Chapter 6: RECORDING FUNCTIONS & OPTIONS, section 6.1.2 *Check Available Disc Space*.
- Verify that there are less than 99 titles and less than 999 chapters on the disc (Original titles and chapters only for a VR disc).
- Confirm that the source material is not copy-protected.
- Check that the disc is not copy-protected.
- Set the recorder's built-in TV tuner to the appropriate channel rather than setting the channel from the television tuner.
- When recording to a Video format disc, programs that are copy-once protected cannot be recorded. Use a VR formatted disc for copy-once material.
- Verify that separate recording sessions did not overlap.
- Check for power interruptions during the recording session.

17. Why is my frame search/time search failing?

- The Frame Search option is still set to OFF. To set this option to ON, refer to Chapter 9: INITIAL SETUP MENU, section 9.2.4 *Frame Search*.
- Searches only work with DVD media. Verify that the disc is a DVD-ROM or DVD-R/RW disc.

18. Why doesn't my camcorder (connected through the DV IN/OUT port) produce a picture or any sound?

- The cable may be loose or disconnected. Check the cable seating.
- Disconnect then reconnect the cable to clear any interference.
- Verify that the source material is not copy-protected or copy-once protected.

- Try switching the DV Link option to OFF. For assistance, refer to Chapter 9: INITIAL SETUP MENU, section 9.1.4 *Video In/Out Settings*.
- Try toggling the DV Input. For assistance, refer to Chapter 9: INITIAL SETUP MENU, section 9.1.5 *Audio In Settings*.
- Switch OFF both the camera and the recorder then power up together.
- Confirm that the audio is set to 32kHz or 48kHz before recording. The 44.1kHz recording sampling frequency is unsupported.

19. Why doesn't the picture and audio transfer from the recorder to my camcorder when I use the DV IN/OUT port?

- The cable may be loose or disconnected. Check the cable seating.
- Disconnect then reconnect the cable to clear any interference.
- Stop the disc (in the recorder) then restart playback.
- Verify that only one digital camcorder is connected to the recorder.
- Switch OFF both the camera and the recorder then power up together.
- Recording Audio/Video through the DV port from CDs, Video CDs, the built-in TV tuner or an external component is unsupported.
- Verify that the source material is not copy-protected or copy-once protected.

20. What do I do to control my camcorder using the PRV-9000's remote?

- Some camcorders are not compatible with this remote. Check with the camcorder manufacturer for details.

21. Can I play my recordable discs in a regular DVD player?

- Generally, DVD-R and DVD-RW discs recorded in Video mode are playable on many manufacturers' players but the media must be finalized first. This process *fixes* the contents thus making the material readable to various players as DVD Video discs.
- DVD-RW discs recorded in VR mode are playable on some players. Check with the player's manufacturer for compatibility information.

Note: The RW compatibility symbol () indicates that the device recognizes material recorded on a DVD-RW VR-formatted disc.

22. Is editing a DVD like editing a video tape?

- No. When editing a video tape, you need one video deck to play the original tape and another to record the edits. With DVD, make a Playlist to play what you want, when you want it. On playback, the recorder only shows the specified segments from the disc.

For additional information or assistance please contact the Support group at Pioneer Electronics (USA), Inc.

Email: dvdv@pnmt.com

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201/327-6400 (NJ)

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