PROTRON
More for your money

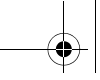PD-DVR100

DVD Recorder

User's Manual

Protron PD-DVR100 DVD Recorder User's Manual.

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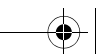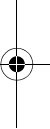
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Trademarks

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Ontario, CA 91761

Printed in China

Product Cautions

TO PREVENT POSSIBLE DANGER, ELECTRIC SHOCK, AND OTHER INJURIES WHEN HANDLING YOUR DVD RECORDER, PLEASE BE AWARE OF OF ALL WARNINGS AND SAFETY PRECAUTIONS LISTED BELOW.
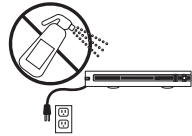
Never spill any liquid of any kind on the device.

Never insert anything into the device, where objects can come into contact with high voltage nodes or damage internal components.

Do not attempt to service the device yourself. Opening or removing covers exposes high voltage nodes and other hazards. Refer all servicing to qualified service personnel.

Do not touch the device or antenna during thunderstorms. Unplug the device during thunderstorms or if it will not be used for extended periods. Failure to do so may result in electric shock or fire.
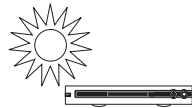
Before cleaning the device, unplug it from the wall. Use a damp cloth for cleaning. Never use liquid or aerosol cleaners.

To prevent overheating and ensure reliable operation, place the device only in a well ventilated location. Avoid cramped or inadequately ventilated locations.

Note: Read all safety and operating instructions before operating your new DVD recorder.

Conformity and Compliance

FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception (this can be determined by turning the device off and on), the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and the receiver.

- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

Caution:

To comply with the limits for an FCC Class B computing device, the user should use the shielded signal cable and power cord supplied with the unit. The FCC warns that changes or modifications of the unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Radio Frequency Interference Statement

Warning:

This is a Class B product. In a domestic environment this product may cause radio interference, in which case the user may be required to take adequate measures.

Canadian DOC Notice for Class B Computing Devices

This digital apparatus does not exceed the Class B limits for radio noise emissions from a digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.

CE Marking and Declaration of Conformity

This device complies with the requirements of related European standards, which include the following:

- Emission: EN 55022, EN 61000-3-2, EN 61000-3-3

- Immunity: EN 50082-1

- Safety: EN 60950 Low-Voltage Directive (73/23/EEC)

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Introduction

Congratulations on purchasing your new Protron DVD Recorder!

With a television tuner and three audio/video inputs, you can record television broadcasts and video signals from other devices on DVD, for up to 360 minutes of recorded video on each DVD.

Further, with a progressive scan component video output and 5.1 channel surround sound, your DVD recorder can play back DVDs with the highest quality available. And it can even play music, video, and photo CDs.

Features

- Records on DVD+R/RW media
- Up to 360 minutes of recorded video on a 4.7GB DVD (SLP mode)
- 3 S-Video/composite video inputs with corresponding stereo audio inputs
- 4-pin IEEE 1394 (i.LINK/FireWire) input
- TV tuner input/output
- Plays DVD, DVD±R/RW, CD-ROM, CD-R/RW, Audio CD (CD-DA), MP3 CD, Video CD (VCD), Super Video CD (SVCD), and Kodak Picture CD media
- Displays media files (MP3, WMA, JPEG, MPEG, AVI, DAT/VCD) stored on data CDs
- Multi-angle video playback
- 10-bit, 525-line digital video converter
- 24-bit, 96kHz digital audio converters for high fidelity sound
- 5.1 channel surround sound
- Audio formats supported: Dolby Digital, DTS, MPEG-2, PCM
- Progressive scan component video output for crisp, flicker-free video
- S-Video output
- Composite video output
- Digital optical audio output
- Digital coaxial audio output
- Stereo audio output

Unpacking Your New DVD Recorder

Before using your new DVD recorder, you should unpack the contents of the box and check to make sure everything is present and undamaged.

To unpack the player:

1. Open the box. Remove the recorder and styrofoam pads.

2. Remove the remote control from the recess in the left styrofoam pad.

3. Remove the styrofoam pads and plastic bag enclosing the player and set it aside.

4. Check to ensure the items indicated below are included in the box. If any items are missing or damaged, contact the seller immediately.
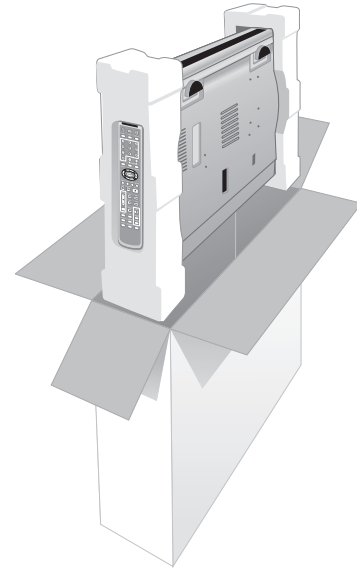
Remote Control

RCA Cables
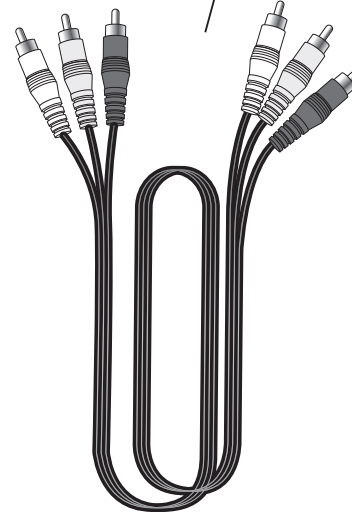
2 AAA Batteries
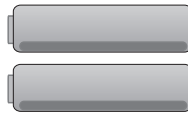
5. Install the included AAA batteries in the remote.
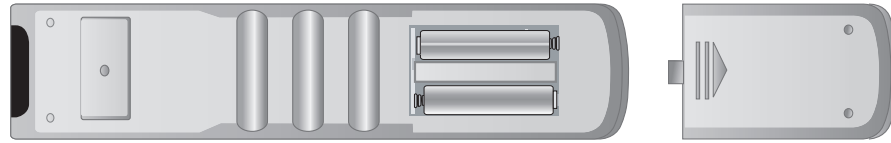
6. Place the recorder in its intended position and connect the power cable to a wall socket.
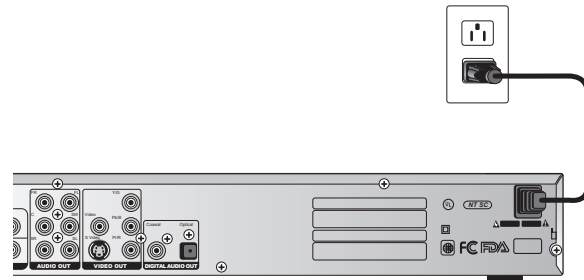
Connecting the Recorder to Other Devices

There are numerous connections on the rear of the recorder that may be used to connect to other devices for video and audio playback and recording.

Connecting to a Display Using Component Video

Component video offers higher quality than all other video outputs on the recorder. In addition, you can configure the component video output to transmit progressive scan video, which offers crisp, flicker-free video.

The Y, Pb, and Pr outputs in the VIDEO OUT block on the rear of the recorder are the recorder's component video outputs.

To connect to a display using component video:

1. Using three RCA cables, connect the Y, Pb, and Pr outputs in the VIDEO OUT block on the rear of the recorder to the corresponding component video inputs on the display.

2. If you would also like to connect the audio output to the display, connect the FR (right) and FL (left) outputs in the AUDIO OUT block on the rear of the recorder to the display's audio input.

3. If you have connected the audio output to the display, go to the Setup menu, select the Playback sub-menu and set Analog Audio Output to 2 CH (see "Playback" on page 36).

4. In the Setup menu, select the General sub-menu and set Video Output Format as appropriate for your display (see "General" on page 35).

5. Also in the General sub-menu, set Progressive/Interlace as desired.

    Note: Progressive scan *only* works with component video connections to displays that support it. Check to ensure your display supports progressive scan before configuring the recorder to use it.

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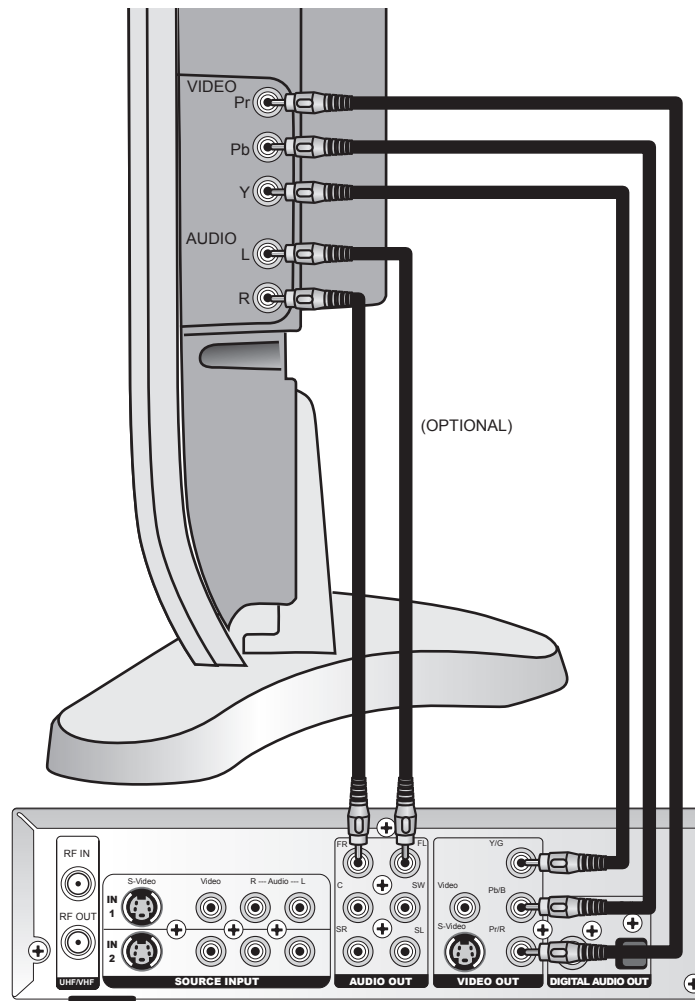
Connecting to a Display Using S-Video

S-Video offers higher quality than composite video, but lower quality than component video. The S-Video output is located in the VIDEO OUT block on the rear of the recorder.

To connect to a display using S-Video:

1. Using an S-Video cable (not included), connect the S-Video output in the VIDEO OUT block on the rear of the recorder to the display's S-Video input.

2. If you would also like to connect the audio output to the display, connect the FR (right) and FL (left) outputs in the AUDIO OUT block on the rear of the recorder to the display's audio input.

3. If you have connected the audio output to the display, go to the Setup menu, select the Playback sub-menu and set Analog Audio Output to 2 CH (see "Playback" on page 36).

4. In the Setup menu, select the General sub-menu and set Video Output Format as appropriate for your display (see "General" on page 35).

5. Also in the General sub-menu, set Progressive/Interlace to Interlace.
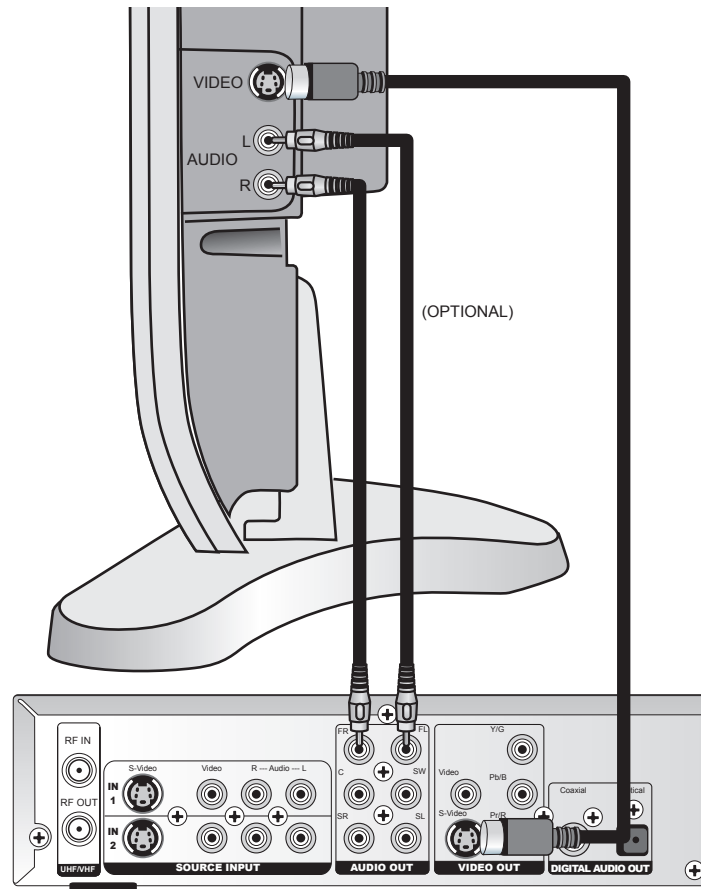
Connecting to a Display Using Composite Video

Composite video is the most common video connection, but offers lower quality than either S-Video or component video. The yellow Video output in the VIDEO OUT block on the rear of the recorder is the recorder's composite video output.

To connect to a display using composite video:

1. Using an RCA cable, connect the Video output in the VIDEO OUT block on the rear of the recorder to the display's composite video input.

2. If you would also like to connect the audio output to the display, connect the FR (right) and FL (left) outputs in the AUDIO OUT block on the rear of the recorder to the display's audio input.

3. If you have connected the audio output to the display, go to the Setup menu, select the Playback sub-menu and set Analog Audio Output to 2 CH (see "Playback" on page 36).

4. In the Setup menu, select the General sub-menu and set Video Output Format as appropriate for your display (see "General" on page 35).

5. Also in the General sub-menu, set Progressive/Interlace to Interlace.
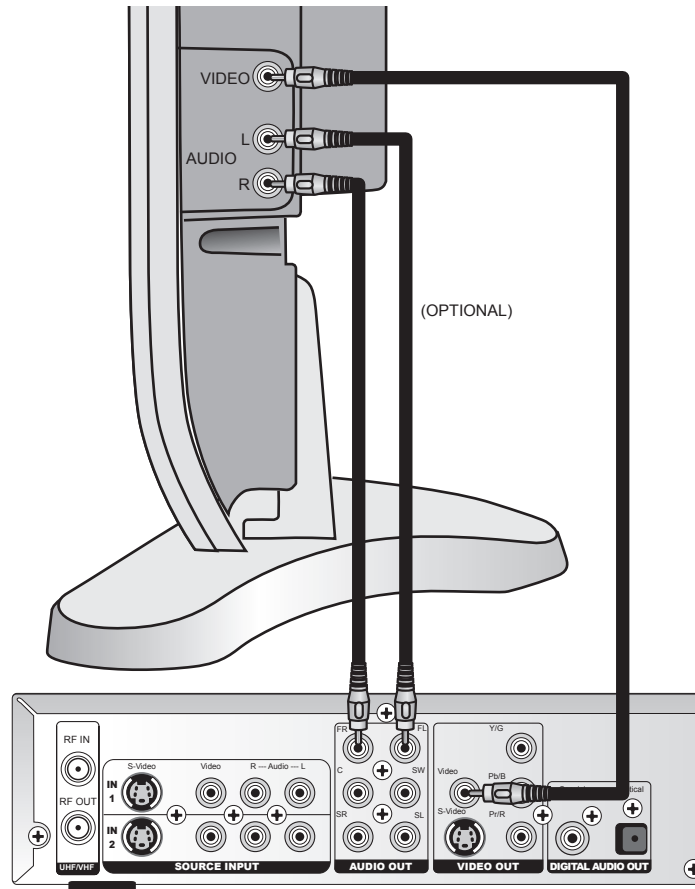
Connecting to a Television Signal Source

The RF IN jack on the rear of the recorder is the recorder's television signal input. When a signal is connected to RF IN, you can record it to DVD.

The RF OUT jack allows you to connect to another device the same television signal connected to RF IN.

To connect a television signal to the recorder:

1. Using a coaxial cable (not included), connect the signal source to the RF IN jack on the rear of the recorder.

2. If you would like to connect the same signal source to another device as well, use another coaxial cable to connect the RF OUT jack to the other device.

3. In the Setup menu, select the Channel Scan sub-menu and set Tuner Input Source as appropriate (see "Channel Scan" on page 39).
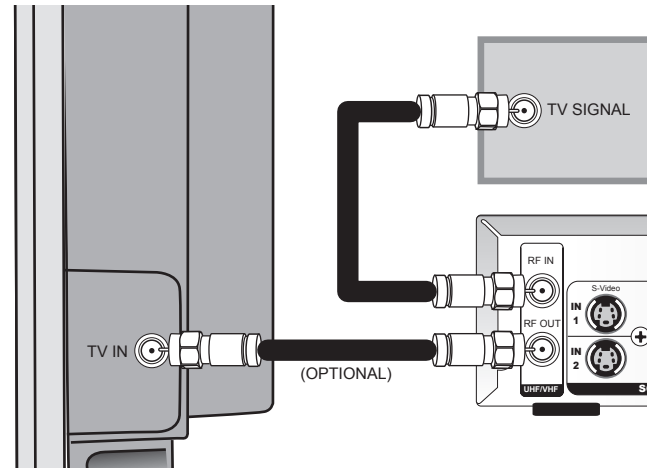
Connecting to a 5.1 Channel Audio System

The AUDIO OUT block on the rear of the recorder contains the recorder's 5.1 channel surround sound outputs.

To connect to an audio system using 5.1 channel surround sound:

1. Using six RCA cables, connect each of the outputs in the AUDIO OUT block on the rear of the recorder—FR (front right), FL (front left), C (center), SW (subwoofer), SR (surround right), and SL (surround left)—to the corresponding audio system inputs.

2. In the Setup menu, select the Playback sub-menu and set Analog Audio Output to 5.1 CH (see "Playback" on page 36).

3. Also in the Playback sub-menu, select Speaker Setting and select the desired 5.1 channel output settings (see "Speaker Setting" on page 37).
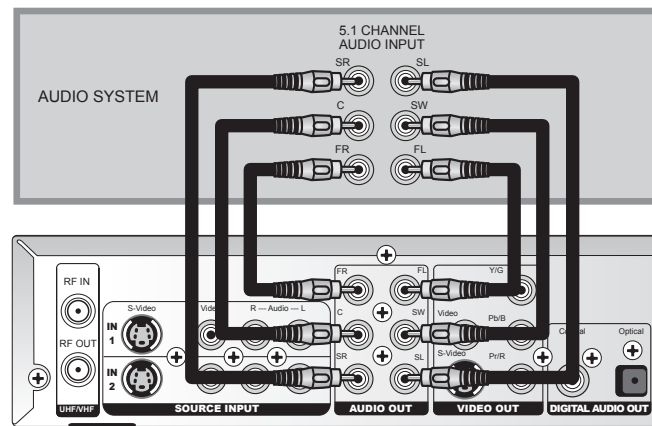
Connecting to a Stereo Audio System Using an Analog Connection

The FR (right) and FL (left) outputs in the AUDIO OUT block on the rear of the recorder are the recorder's analog stereo audio outputs.

To connect to an audio system using analog stereo sound:

1. Using two RCA cables, connect the FR (right) and FL (left) outputs in the AUDIO OUT block on the rear of the recorder to the audio system's analog stereo audio input.

2. In the Setup menu, select the Playback sub-menu and set Analog Audio Output to 2 CH (see "Playback" on page 36).
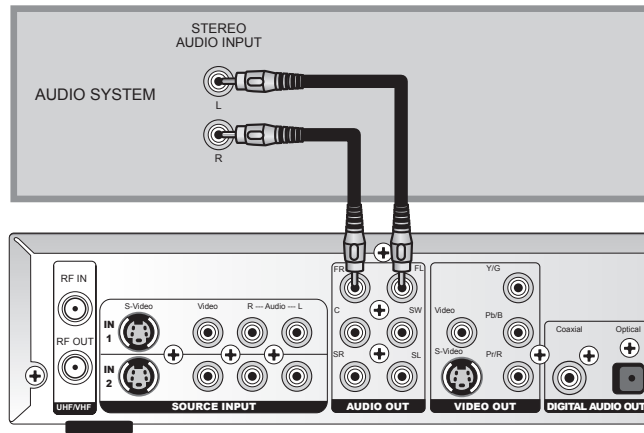
Connecting to a Stereo Audio System Using a Digital Connection

There are two digital audio outputs in the DIGITAL AUDIO OUT block on the rear of the player: Coaxial and Optical.

To connect to an audio system using coaxial digital audio:

1. Using a coaxial digital cable (not included), connect the Coaxial connector in the DIGITAL AUDIO OUT block on the rear of the recorder to the audio system's coaxial digital audio input.

2. In the Setup menu, select the Playback sub-menu and set Digital Audio Output as appropriate (see "Playback" on page 36).
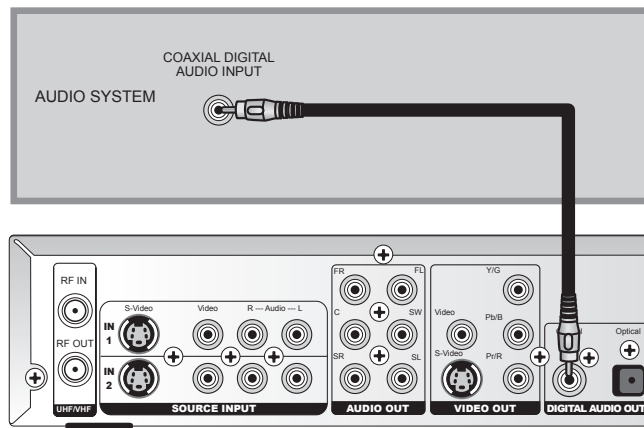
To connect to an audio system using optical digital audio:

1. Remove the plastic lens protectors from the Optical connector in the DIGITAL AUDIO OUT block on the rear of the recorder and from the audio system's optical digital audio input.

2. Using a optical digital cable (not included), connect the Optical connector on the recorder to the audio system's optical input.

3. In the Setup menu, select the Playback sub-menu and set Digital Audio Output as appropriate (see "Playback" on page 36).

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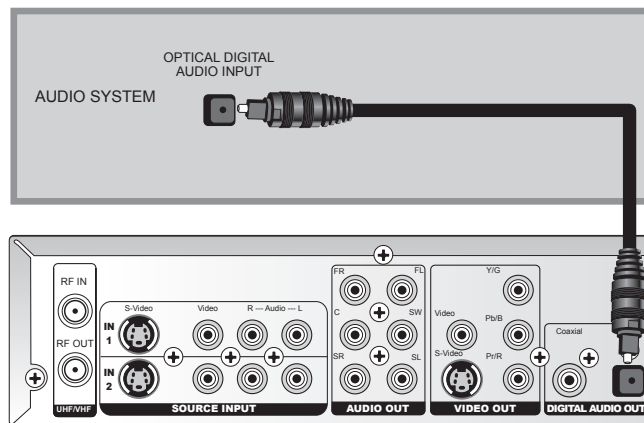
Connecting Other Audio/Video Sources to the Recorder

There are three audio/video inputs on the recorder, one on the front and two on the rear. Each has an S-Video input, a composite video input, and a stereo audio input.

In addition, there is a 4-pin IEEE 1394 (i.LINK/FireWire) input on the front of the recorder.

You can record the video signal from any one of these sources to DVD.

To connect a digital audio/video (IEEE 1394) source to the recorder, use an IEEE 1394 cable to connect the device to the DV IN input on the front of the recorder.
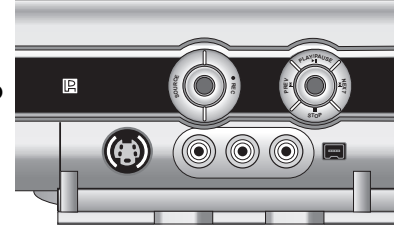
To connect analog audio/video sources to the recorder:

1. Select an audio/video input from the three available on the recorder.

   Note: You should use the input on the front of the recorder for non-permanent connections, such as to a camcorder when transferring its recorded video to DVD.

2. If you would like to use S-Video, which offers higher quality video than composite, connect an S-Video cable (not included) between the video source and the S-Video input in the input block selected in step 1 above.

   If you would like to use composite video, connect an RCA cable between the video source and the Video input in the input block selected in step 1 above.

3. Using two RCA cables, connect the audio source to the L (left—white) and R (right—red) inputs in the input block selected in step 1 above.
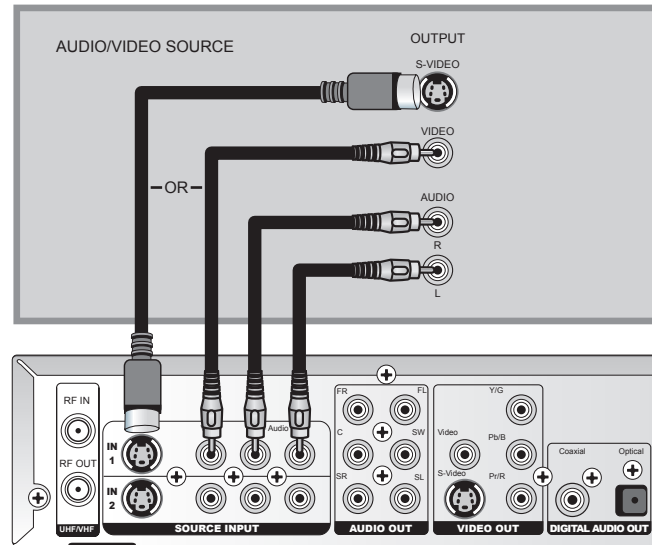
Using the Recorder for the First Time

Before using your new DVD recorder, you will need to set the clock and, if you have connected a television signal, scan the signal spectrum to disable weak channels.

To set the clock:

1. Turn the recorder on.

2. Press **SETUP** to enter the Setup menu.

3. Use ▲ and ▼ to select the Clock sub-menu and press **ENTER**.

4. Use ▲ and ▼ to select Date and press **ENTER**.

5. Enter the current date using the keypad.

    Alternatively, you can select each digit individually by pressing ◄ and ►, then adjust it by pressing ▲ and ▼.

6. Press **ENTER** to set the date.

7. Use ▲ and ▼ to select Time and press **ENTER**.

8. Enter the current time using the keypad.

    Alternatively, you can select each digit individually by pressing ◄ and ►, then adjust it by pressing ▲ and ▼.

9. Press **ENTER** to set the time.

```
�](  SYSTEM SETUP - CLOCK

            Date (mm/dd/yy)              1 2 / 0 1 / 0 3
            Time (hh:mm:ss)              1 2 : 0 0 : 0 0
```

To scan the television signal spectrum:

1. Ensure the recorder is on and enter the Setup menu with the **SETUP** button.

2. Use ▲ and ▼ to select the Channel Scan sub-menu and press **ENTER**.

3. Ensure the Tuner Input Source is set correctly (see "Channel Scan" on page 39 for a full description of the choices).

    Note: If you are connecting directly to a cable television wall outlet, contact your cable company to find out which system is in use in your area. IRC will work with most systems.

4. Use ▲ and ▼ to select Scan Channels and press **ENTER**.

```
�](  SYSTEM SETUP - CHANNEL SCAN

            Tuner input source            Air        ▼
            Scan channels                         SCAN
            Modify channel information            EDIT
```

The recorder will scan the signal spectrum and display its progress as it does so.

Operating the Recorder

Turning the Recorder On and Off

Once the recorder is attached to a power outlet, you can turn it on and off by pressing the ⏻ button on the front of the recorder or on the remote.

Inserting a Disc

The receptacle for DVDs and CDs is located on the front of the player.

To insert a disc:

1. Press the ⏏ button on the front of the player or on the remote to open the receptacle.

2. Place the disc on the tray.

3. Press the ⏏ button again to close the receptacle.

Understanding the LCD Readout

The LCD readout on the front of the recorder displays information about the current disc, playback, and recording. When the recorder is off, the readout shows the current time.

REPEAT ALL A-B   CHANNEL   🔊dts   ⫿⫿D   ⏱ REC ANGLE   PROGRAM
MP3   🄿 🄽   AM   RANDOM
S V CD ▶ ‖   *1888:88:88*   PM   Su MoTu We
DVD   PBC   L / R   Th Fr Sa

The following is a brief description of each of the indicators on the LCD readout. Consult the sections in this manual on disc playback and recording for more detailed information.

Indicator	Indication
REPEAT ALL/A-B	The recorder is in a repeat mode: • REPEAT—Repeating a chapter/track/file • REPEAT ALL—Repeating all chapters/tracks/files on the disc • REPEAT A-B—Repeating an arbitrary section of the audio/video
MP3/SVCD/DVD	The current disc type: • MP3—MP3 CD • SVCD—Super Video CD • VCD—Video CD • CD—Audio CD or CD-ROM • DVD—DVD or DVD-R/RW or DVD+R/RW
🄿 🄽	The current video output format: • 🄿 —PAL • 🄽 —NTSC
▶	The recorder is playing the current disc.
‖	The current disc is paused.

Indicator	Indication
PBC	Playback control is on (Video CDs). When playback control is on, the Video CD's menu will be available.
CHANNEL	The input source is set to Tuner. The two digits immediately below CHANNEL will indicate the current channel number.
▣dts	DTS multi-channel sound is enabled.
□□D	Dolby Digital multi-channel sound is enabled.
⏱	Recording(s) have been scheduled (see "Scheduling Recordings" on page 17).
REC	The recorder is recording.
ANGLE	There are multiple camera angles available for the DVD video currently playing.
AM/PM	When the time is showing on the readout, these indicate AM or PM.
L/R	The audio channel used for Audio CD and Video CD playback: • L/R—stereo sound • L—left channel mono • R—right channel mono
PROGRAM	The recorder is playing back a programmed sequence.
RANDOM	The recorder is playing back chapters/tracks/files in a random sequence.
Su/Mo/Tu/We/Th/Fr/Sa	The current day of the week

Bringing Up the On-Screen Display

The On-Screen Display (OSD) displays and allows you to to change information about the current disc and playback. To bring up the OSD, press the **DISPLAY** button on the remote.

Accessing the Setup Menu

The Setup menu allows you to configure the operation of the recorder. You can change video, audio, television, and language settings, and control access to mature programming. See "Configuring the Recorder" on page 35 for more information. To access the Setup menu, press the **SETUP** button on the remote.

Using the Remote Control

The remote control can be used to control every aspect of the recorder's operation and includes more functionality than the controls on the recorder itself.
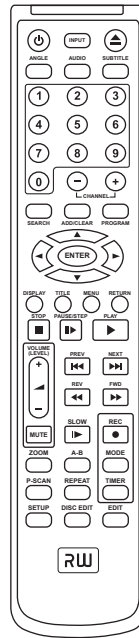
The following is a list of all buttons on the remote and their functions:

Button	Function
⏻	Turns the player on and off (standby)
INPUT	Cycles through the signal sources: Tuner, AV1, AV2, AV3, DV (IEEE 1394) and the current disc (if a disc is inserted)
⏏	Ejects the disc
ANGLE	Cycles through the camera angles available on the disc
AUDIO	Cycles through the audio channels available on the disc
SUBTITLE	Cycles through the subtitle channels available on the disc
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪	Used to enter numbers and navigate directly to a specified track (CDs), chapter (DVDs), or photo (photo CDs)
− + CHANNEL	Changes the television channel
SEARCH	Brings up the search display, which you can use to jump to a location on the current disc

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Button	Function
ADD/CLEAR	Adds a selection to the program playlist or removes a selection from the playlist
PROGRAM	Brings up the Program menu, which allows you to program playback sequence
▲ ◄ ► ▼	Used to navigate menus
ENTER	Confirms the current selection or entry
DISPLAY	Brings up the On-Screen Display (OSD), which displays and allows you to change current playback information
TITLE	Returns to the Title menu
MENU	Returns to the previous menu viewed on the disc When playing a Video CD, this button turns playback control on and off. When playback control is on, any menu on the disc will be available.
RETURN	Returns to the menu When navigating directories on a data CD, this button navigates up one level.
STOP ■	Stops playback
PAUSE/STEP ‖►	Pauses playback. When playback is paused, pressing this button steps forward one frame at a time.
PLAY ►	Begins or resumes normal playback
VOLUME (LEVEL) + ◄ —	Adjusts the audio volume
PREV ◄◄	Returns to the previous chapter, track, photo, or media file
NEXT ►►|	Skips to the next chapter, track, photo, or media file
REV ◄◄	Fast reverses the audio/video. Pressing this button cycles through the fast reverse speeds.
FWD ►►	Fast forwards the audio/video. Pressing this button cycles through the fast forward speeds.
MUTE	Mutes the audio
SLOW ‖►	Slows down playback. Pressing this button repeatedly cycles through the slow play speeds.
REC ●	Begins recording. See "Recording Video Manually" on page 17 for more information.

Button	Function
ZOOM	Zooms in on the picture. Pressing this button repeatedly cycles through the zoom levels.
A-B	Repeats an arbitrary section of audio/video. Press once to mark the beginning of the section, a second time to mark the end of the section and begin repeating, and a third time to return to normal play mode.
MODE	Cycles through the recording modes: HQ, SP, LP, EP, and SLP (see "Recording DVDs" on page 16).
P-SCAN	Toggles the video output between progressive scan and interlaced
REPEAT	Cycles through the available repeat modes
TIMER	Brings up the Record Scheduler, which allows you to schedule future recordings
SETUP	Brings up the Setup menu, which allows you to configure the recorder
DISC EDIT	Brings up the Disc Edit menu, where you can edit the disc and its titles
EDIT	Puts the recorder in Edit Mode, in which you can edit the contents of titles on the disc

Replacing the Remote Batteries

The remote requires two AAA batteries, which are held in an enclosure on the back of the remote.

To replace the battery:

1. Turn the remote over.

2. Slide the battery enclosure cover down off the remote.

3. Remove the old batteries and replace them with the new batteries. Be sure to match the orientation indicated in the enclosure.

4. Slide the enclosure cover back onto the remote.

Recording DVDs

Your DVD recorder can record up to six hours of video on a 4.7GB disc from any of the three analog audio/video sources, the IEEE 1394 input, or the television tuner.

Upon inserting a blank disc, the recorder will immediately begin to format the disc to prepare it for recording. This takes a few minutes, and a message will display on the screen informing you that the formatting is in progress.

Supported Media Types

The recorder will record to DVD+R and DVD+RW discs. It will not record to DVD-R/RW or DVD-RAM discs, so be sure you obtain DVD+R or DVD+RW discs for use with your recorder.

DVD+R discs may be written to only once—that is, any recording on a DVD+R is permanent. However, you can add video to a DVD+R disc that still has empty space.

DVD+RW discs may be written to over and over again, as many as 1000 times, allowing you to overwrite old video or edit any video currently on the disc.

About DVD Layout

DVDs are divided into titles and chapters.

Titles are generally used for full movies, shows, clips, etc. There are usually only a few titles on a DVD.

Titles are further divided into chapters. Chapters are generally used for individual scenes or coherent sections of video. This allows you to navigate directly to a specific scene or section of video. There are often many chapters in a given title.
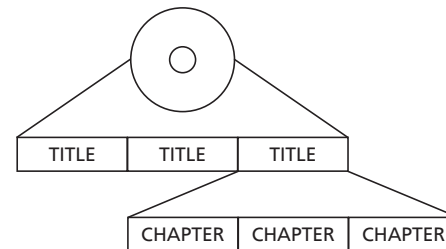
For example, if you had two movies on a DVD, each movie would inhabit its own title. The titles would then be divided into chapters, one for each movie scene.

In recording DVDs, the recorder saves each recording session in a separate title. You can then edit the DVD and create chapters within each title.

The LCD Readout

When in DVD record mode, though not actually recording, the first three digits of the readout indicate the current signal source—if the source is television, "CHANNEL" will illuminate and the first two digits will indicate the current channel. The last two digits on the readout indicate the current quality setting.

When recording a DVD, the first two digits of the readout indicate the current signal. The rest of the digits indicate the current recording time count.

When in Edit Mode (see "Using Edit Mode" on page 22), the first two digits of the readout indicate the current title. The rest of the digits indicate the current playback time.

The rest of the readout behaves as described in "Understanding the LCD Readout" on page 11.

The On-Screen Display

The DVD recording OSD has two modes:

The first mode (press **DISPLAY** once) shows the current signal source and recording quality.

> ⊡Monitor Ch001 (No signal) SP
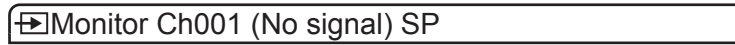
The second mode (press **DISPLAY** twice) displays and allows you to change the current recording mode, signal source, recording quality, recording state, title, chapter, and playback time.

⊡RECORD (DVD+RW)	
MODE	New Title
SOURCE	Ch001
QUALITY	SP
REC TO	DVD-VIDEO
TRICK	Stop
TITLE	01/03
CHAPTER	01
TIME	00:00:01 / 01:59:59

Recording Video Manually

If you have a DVD+R or DVD+RW disc in the recorder, you can begin recording manually by pressing the **REC** button. The recorder will begin recording video from the current source to the disc.

Pressing **REC** again when the recorder is recording turns on timed recording, which will automatically stop the recording after a set period of time. Pressing **REC** repeatedly cycles through the options: 30 minutes, 60 minutes, 90 minutes, and Off. If there is insufficient space on the disc for a particular timed recording mode, that mode will be unavailable.

Press ■ to stop recording.

Scheduling Recordings

You can schedule future recordings using the **TIMER** button on the remote. The **TIMER** button brings up the Record Scheduler, which allows you to schedule up to 20 recordings by source and time.

⏱ Record scheduler				
Source	Quality	Date	Start	End
1				
2				
3				
4				
5				
6				

To schedule a recording:

1. Press **TIMER** to bring up the Record Scheduler.

2. Use ▲ and ▼ to select the first empty slot.

3. Press **ENTER** to bring up the Item Editor.

4. Use ▲ and ▼ to select Source and press **ENTER**.

5. Use ▲ and ▼ to select the desired source and press **ENTER**.

⏱ Item Editor	
Source	Ch001 ▾
Quality	SP ▾
Mode	Once ▾
Date	1 2 / 0 1 / 0 3
Start	1 2 : 0 0
End	1 2 : 3 0
OK	Cancel

6. Set the desired Quality in the same fashion. The following qualities are available:

Name	Format	Bit Rate	Capacity	Quality
HQ (High Quality)	720 × 480 (NTSC) 720 × 576 (PAL)	9.5Mbps	~60 minutes	Full DVD quality
SP (Standard Play)	720 × 480 (NTSC) 720 × 576 (PAL)	5.1Mbps	>120 minutes	Standard DVD quality
LP (Long Play)	352 × 480 (NTSC) 352 × 576 (PAL)	3.4Mbps	>180 minutes	Similar to S-VHS
EP (Extended Play)	352 × 480 (NTSC) 352 × 576 (PAL)	2.5Mbps	>240 minutes	Similar to VHS in SP mode
SLP (Super Long Play)	352 × 240 (NTSC) 352 × 288 (PAL)	1.7Mbps	>360 minutes	Similar to VHS in EP mode

7. Set the desired Mode in the same fashion. By setting the Mode properly, you can schedule the player to record a particular program every time it plays. The options are

    • Once—The recorder will record the program only once.

    • Daily—The recorder will repeat this recording every day at the same time.

    • Weekly—The recorder will repeat this recording every week on the same day at the same time.

    • Mon–Fri—The recorder will repeat this recording every week day at the same time.

    • Mon–Sat—The recorder will repeat this recording every day except Sunday, at the same time.

    • Weekend—The recorder will repeat this recording every weekend day at the same time.

8. Use ▲ and ▼ to select Date and press **ENTER**.

9. Enter the date of the program (or the next date of the program if you've set Mode to repeat the recording) using the keypad.

    Alternatively, you can select each digit individually by pressing ◄ and ►, then adjust it by pressing ▲ and ▼.

10. Press **ENTER** to set the date.

11. Set Start and End to the program's start and end times in the same fashion.

12. Use ▲ and ▼ to select OK and press **ENTER**.

To change a scheduled recording, select it in the Record Scheduler and press **ENTER**.

To clear a scheduled recording, select it in the Record Scheduler and press **ADD/CLEAR**.

Finalizing the Disc

If you are recording to a DVD+R disc, you must finalize the disc before it can be read by other DVD players. For information on how to do this, see "Using the Disc Edit Menu" on page 19 and "Finalizing the Disc (DVD+R Only)" on page 20.

Note: Once you have finalized a disc, no further recordings or changes can be made to it. Be sure any recordings or changes are complete before you finalize.

Editing Recorded DVDs

Once a DVD has been recorded, you can edit the video on the DVD using the Disc Edit menu and Edit Mode.

Using the Disc Edit Menu

Press **DISC EDIT** to enter the Disc Edit menu. This menu allows you to change settings for the entire disc. You can do the following with the Disc Edit menu:

NTSC

DVD

EDIT

◄
Play
Rename disc
Erase disc
Record a new title
Overwrite disc
Lock disc

- • Play the disc
- • Rename, erase, or overwrite the disc
- • Lock or finalize the disc
- • Make the disc compatible
- • Create a new title
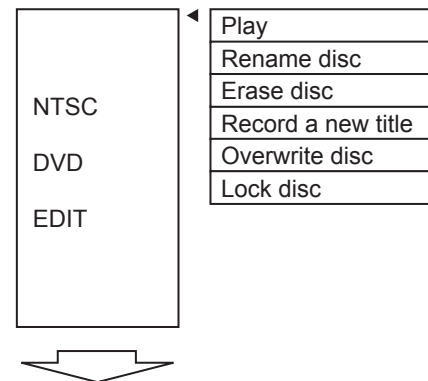
Renaming the Disc

The Rename Disc option in the Disc Edit menu allows you to change the disc title.

To rename the disc:

1. In the Disc Edit menu, use ▲ and ▼ to select Rename Disc, and press **ENTER**.

2. In the Disc Name pop-up box that appears, use the arrow controls and **ENTER** to select and press the on-screen buttons to change the title.

3. Select **OK** to save the new name.

4. Select **Exit** to cancel the change.

↳ Disc Name:

MY DVD_

A	B	C	D	E	F	G	H	I	J	K	0	1	2
L	M	N	O	P	Q	R	S	T	U	V	3	4	5
W	X	Y	Z	(	)	_	:	?	.	6	7	8	9

Space	Caps	BkSp	Delete	Clear	Exit	OK
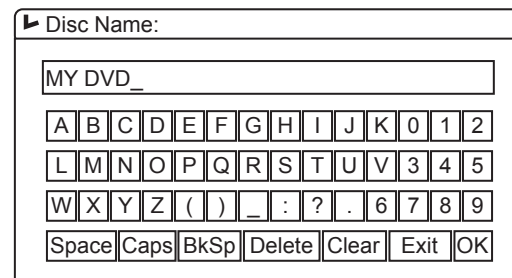
Erasing the Disc (DVD+RW Only)

If you are using a DVD+RW disc, you can erase the entire disc from the Disc Edit menu using the Erase Disc menu option.

To erase the disc:

1. In the Disc Edit menu, use ▲ and ▼ to select Erase Disc, and press **ENTER**.

2. In the confirmation dialog that appears, select **Yes** and press **ENTER** to erase the disc.

Creating a New Title

The Record a New Title option in the Disc Edit menu allows you to create a new title on the disc. When you select this option, the recorder will automatically set the recording mode to New Title, at which point any new recording will be stored in a new title on the disc.

To create a new title:

1. In the Disc Edit menu, use ▲ and ▼ to select Record a New Title, and press **ENTER**.

2. Begin a new recording. It will be stored in a new title on the disc.

Editing Recorded DVDs

Overwriting the Disc (DVD+RW Only)

If you are using a DVD+RW, you can overwrite the entire disc using the Overwrite Disc option in the Disc Edit menu. When you select this option, the recorder will automatically set the recording mode to Overwrite Disc, at which point any new recording will overwrite the video on the disc.

To overwrite the disc:

1. In the Disc Edit menu, use ▲ and ▼ to select Overwrite Disc, and press **ENTER**.

2. Begin a new recording. It will overwrite the video stored on the disc.

Making the Disc Compatible with Other DVD Players (DVD+RW Only)

The Make Compatible option in the Disc Edit menu will make a DVD+RW disc created with the recorder compatible with other DVD players. (If the option is not available, the disc is already compatible with other DVD players.)

Note: This feature will not necessarily make the disc compatible with your DVD player. It works with many, but not all, DVD players.

To make the disc compatible with other DVD players, select the Make Compatible option in the Disc Edit menu. The recorder will then begin the process, which may take a minute.

Locking and Unlocking the Disc (DVD+RW Only)

Locking a disc prevents it from being written to, protecting the data currently on the disc. If you are using a DVD+RW disc, you can lock the disc using the Lock Disc option in the Disc Edit menu.

To lock the disc, select Lock Disc in the Disc Edit menu. The recorder will take a few seconds to perform the lock procedure.

If a disc is already locked, the Unlock Disc option will show in the Disc Edit menu. Select this option to unlock the disc. The recorder will take a few seconds to perform the unlock procedure.

Finalizing the Disc (DVD+R Only)

A DVD+R disc must be finalized before it can be read by other DVD players. You can finalize a disc with the Finalize Disc option in the Disc Edit menu.

Note: Once you have finalized a disc, no further recordings or changes can be made to it. Be sure any recordings or changes are complete before you finalize.

To finalize the disc:

1. In the Disc Edit menu, use ▲ and ▼ to select Finalize Disc, and press **ENTER**.

2. In the confirmation dialog that appears, select **Yes** and press **ENTER** to finalize the disc. The recorder will begin the process of finalizing the disc, which can take up to an hour, depending on the amount of video on the disc.

Using the Title Menu

Press **TITLE** to enter the Title menu. This menu allows you to change individual titles on the disc. You can do the following with the Title menu:

- Play a title
- Edit, rename, erase, or overwrite an existing title
- Overwrite from the beginning of a title to the end of the disc

| Play title |
| Edit title |
| Rename title |
| Erase title |
| Overwrite title |
| Overwrite disc |

3. TITLE
12/01/2003
12:00:00
SP 00:45:00

Editing a Title

Using the Edit Title option in the Title menu, you can enter Edit Mode for a title (see "Using Edit Mode" on page 22).
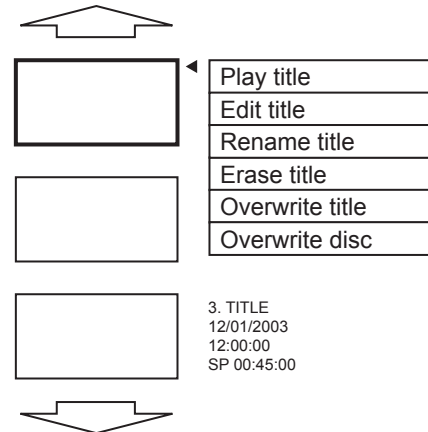
To edit a title:

1. In the Title menu, use ▲ and ▼ to select the title.

2. Press ▶ to bring up the menu for the title.

3. Use ▲ and ▼ to select Edit Title, and press **ENTER**.

Renaming a Title

The Rename Title option in the Title menu allows you to change the name of a title.

To rename a title:

1. In the Title menu, use ▲ and ▼ to select the title.

2. Press ▶ to bring up the menu for the title.

3. Use ▲ and ▼ to select Rename Title, and press **ENTER**.

4. In the Title Name pop-up box that appears, use the arrow controls and **ENTER** to select and press the on-screen buttons to change the title.

5. Select **OK** to save the new name.

6. Select **Exit** to cancel the change.

➤ Title Name:

TITLE_

A	B	C	D	E	F	G	H	I	J	K	0	1	2
L	M	N	O	P	Q	R	S	T	U	V	3	4	5
W	X	Y	Z	(	)	_	:	?	.	6	7	8	9

| Space | Caps | BkSp | Delete | Clear | Exit | OK |
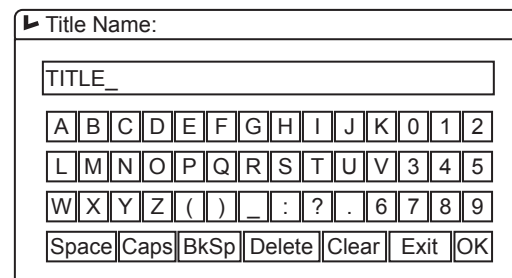
Erasing a Title

You can erase a title from the Title menu using the Erase Title menu option.

Note: If you are using a DVD+R disc, you cannot reuse the space used by a title when it is erased.

To erase a title:

1. In the Title menu, use ▲ and ▼ to select the title.

2. Press ▶ to bring up the menu for the title.

3. Use ▲ and ▼ to select Erase Title, and press **ENTER**.

4. In the confirmation dialog that appears, select **Yes** and press **ENTER** to erase the title.

Overwriting a Title (DVD+RW Only)

If you are using a DVD+RW, you can overwrite a title using the Overwrite Title option in the Title menu. When you select this option, the recorder will automatically set the recording mode to Overwrite Title, at which point any new recording will overwrite the selected title.

To overwrite a title:

1. In the Title menu, use ▲ and ▼ to select the title.

2. Press ▶ to bring up the menu for the title.

3. Use ▲ and ▼ to select Overwrite Title, and press **ENTER**.

4. Begin a new recording. It will overwrite the title you selected.

Overwriting from a Title (DVD+RW Only)

If you are using a DVD+RW, you can overwrite from the beginning of a title to the end of the disc using the Overwrite Disc option in the Title menu. When you select this option, the recorder will automatically set the recording mode to Overwrite Disc, at which point any new recording will overwrite the disc beginning with the selected title.

To overwrite from a title to the end of the disc:

1. In the Title menu, use ▲ and ▼ to select the title.

2. Press ▶ to bring up the menu for the title.

3. Use ▲ and ▼ to select Overwrite Disc, and press **ENTER**.

4. Begin a new recording. It will overwrite from the title you selected to the end of the disc.

Using Edit Mode

Edit Mode allows you to change the contents of individual titles on the disc. You can enter Edit Mode for the currently playing title by pressing **EDIT**, or you can enter from the Title menu as described in "Editing a Title" on page 21. You can do the following in Edit Mode:

► EDIT MODE
🗀 Title: 01/03
🗐 Chapter: 01/01
⏸ Pause
Chapter marker
Hide chapter
Index picture
Split title

*   Create or delete a chapter marker
*   Hide a chapter
*   Set an index picture for the title
*   Split the title into two

Creating/Deleting a Chapter Marker

Chapter markers indicate where chapters begin within a title. You can create and delete chapter markers in Edit Mode.

To create a new chapter marker:

1. Pause title playback at the location where you would like the new chapter to start.

2. Select Chapter Marker in the Edit Mode menu and press ▶.

3. Select Insert Marker and press **ENTER**. A new chapter will be created, beginning at the current location.

To delete a chapter marker:

1. Pause title playback in the chapter whose marker you would like to delete.

2. Select Chapter Marker in the Edit Mode menu and press ▶.

3. Select Delete Marker and press **ENTER**. The recorder will delete the marker for the current chapter and merge it with the previous chapter.

    To delete all chapter markers, instead select Delete All Markers. The recorder will delete all chapter markers, and the title will then contain only one chapter.

Hiding a Chapter

Using the Hide Chapter option in the Edit Mode menu, you can make the current chapter invisible during playback. That is, when playing the DVD in playback mode or on other DVD players, a hidden chapter will be skipped, though it is still on the disc.

Note: When in Edit Mode, the hidden chapter will still play back.

To hide a chapter:

1. Pause title playback in the chapter you would like to hide.

2. Select Hide Chapter in the Edit Mode menu and press **ENTER**. The recorder will mark the current chapter hidden so it will not be played back.

Setting an Index Picture

Each title has an index picture that shows in the Title menu. You can set a title's index picture using the Index Picture option in the Edit Mode menu.

To set the index picture:

1. Pause title playback on the frame you would like to use as the index picture.

2. Select Index Picture in the Edit Mode menu and press **ENTER**.

Splitting a Title (DVD+RW Only)

If you are using a DVD+RW disc, you can split a title into two using the Split Title option in the Edit Mode menu.

Note: Splitting a title cannot be reversed.

To split a title:

1. Pause title playback where you would like to split the title.

2. Select Split Title in the Edit Mode menu and press **ENTER**. The recorder will split the title, beginning the new title at the current location. This may take a few minutes, depending on the length of the title.

Playing DVDs

DVDs will play upon insertion. The player can perform all standard DVD playback and search functions.

The LCD Readout

When playing a DVD, the first two digits of the readout indicate the current chapter. The rest of the digits indicate the current playback time.

The rest of the readout behaves as described in "Understanding the LCD Readout" on page 11.

The On-Screen Display

The DVD OSD has two modes:

The first mode (press **DISPLAY** once) shows the current repeat mode, playback mode, title, chapter, audio channel, and playback time.

> ▶ NORMAL PLAY T01/03 C01/10 AU01/01 00:00:01

The second mode (press **DISPLAY** twice) displays and allows you to change the current repeat mode, playback mode, title, chapter, audio channel, subtitle channel, camera angle, and playback time.

▶ DVD	
MODE	NORMAL
Trick mod	PLAY
TITLE	01/03
CHAPTER	01/10
AUDIO	01/01-English
SUBTITLE	Off
ANGLE	01/01
T-TIME	00:00:01/01:59:59

To change a setting:

1. Select the setting using ▲ and ▼.

2. Press ▶ to bring up a list of options for the setting.

   (If the setting to be changed is Title, Chapter, Angle, or Time, enter the desired value using the remote keypad and skip step 3.)

3. Use ▲ and ▼ to select the desired option.

4. Press **ENTER**.

Press **DISPLAY** a third time to exit the OSD.

Navigating Menus

When in a DVD menu, use the arrow controls to navigate.

Press **ENTER** to select an item.

Press **MENU** to return to the previous menu.

Controlling Playback

Press ■ once to stop the DVD at the current location, and twice to stop the DVD completely.

When the DVD is playing, press ❙❙▶ to pause it.

When the DVD is paused, press ❙❙▶ to step forward one frame at a time.

Press ❙◀◀ to return to the previous chapter.

Press ▶▶❙ to skip to the next chapter.

Press ◀◀ to fast reverse the DVD. Press ▶▶ to fast forward the DVD. Repeated presses cycle through the speed options: ×2, ×4, ×16, ×32, and normal speed.

Press I▶ to play the video at a slower speed. Repeated presses cycle through the speed options: ×1/2, ×1/4, ×1/8, ×1/16, and normal speed.

Press ▶ to return to normal play mode or to start playing the DVD again when it is stopped or paused.

Press **MENU** to return to the last DVD menu.

Searching to a Location

You can search to a chapter or time on the current disc using the **SEARCH** button.

To search to a location:

1. Press **SEARCH** once to bring up the Chapter Search menu and twice to bring up the Time Search menu.

2. Enter the desired chapter/time using the remote keypad.

3. Press **ENTER**.

Programming Playback Sequence

The **PROGRAM** button brings up the Program menu, which allows you to program playback sequence.

To program playback sequence:

1. Press **PROGRAM** to bring up the Program menu.

2. Use ▲ and ▼ to select a title, then press **ENTER** (press **ADD/CLEAR** to add the whole title to the playlist).

▶ Edit program play list	
TITLE	**Favorite/Program**
TITLE 01	
TITLE 02	
TITLE 03	
TITLE 04	
TITLE 05	
TITLE 06	
TITLE 07	
TITLE 08	

3. Use ▲ and ▼ to select a chapter, then press **ADD/CLEAR** to add it to the playlist.

4. Repeat 2–3 until all desired chapters have been added to the playlist.

5. Press ▶ to move to the Program column.

6. Select a playlist item and press **ENTER** to begin playing back the playlist from that point.
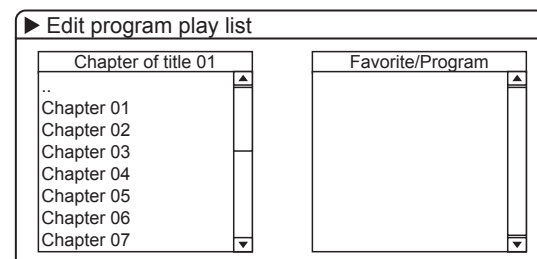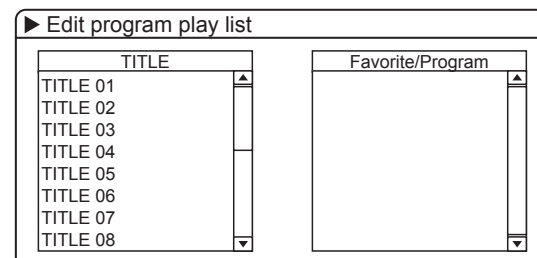
▶ Edit program play list	
Chapter of title 01	**Favorite/Program**
..	
Chapter 01	
Chapter 02	
Chapter 03	
Chapter 04	
Chapter 05	
Chapter 06	
Chapter 07	

To remove an item from the playlist, select it and press **ADD/CLEAR**.

To exit the Program menu, press **RETURN**.

Playing Video CDs

Video CDs can contain video or still images such as photos. Your DVD recorder will play all standard Video CD formats.

Upon insertion, the player will read and begin to play the CD.

If there is a menu on the CD, it will appear, allowing you to navigate through the tracks stored on the CD. Otherwise, the player will begin playing the video back beginning with the first track.

If the CD contains still pictures, the player will display them as a slideshow.

The LCD Readout

When playing a Video CD, the first two digits of the readout indicate the current track. The rest of the digits indicate the current playback time.

The rest of the readout behaves as described in "Understanding the LCD Readout" on page 11.

The On-Screen Display

The Video CD OSD has two modes:

The first mode (press **DISPLAY** once) displays the current repeat mode, playback mode, track, playback control status (PBC—the playback control status determines whether the disc menu is available), and playback time.

▶ NORMAL PLAY TR01/10 PBC ON 00:00:01

The second mode (press **DISPLAY** twice) displays and allows you to change the current repeat mode, playback mode, track, audio channel, playback control status, and playback time.

▶ VCD	
MODE	NORMAL
Trick mod	PLAY
TRACK	01/10
AUDIO	STEREO
PBC	PBC ON
TR-TIME	00:00:01-01:59:59

To change a setting:

1. Select the setting using ▲ and ▼.

2. Press ▶ to bring up a list of options for the setting.

   (If the setting to be changed is Track or Time, enter the desired value using the remote keypad and skip step 3.)

3. Use ▲ and ▼ to select the desired option.

4. Press **ENTER**.

Press **DISPLAY** a third time to exit the OSD.

Navigating Menus

Press ◀◀ and ▶▶ to scroll through menu pages.

To view an item, enter its number on the keypad and press **ENTER**.

Note: To view an item, the menu page containing the item must be visible before you enter the item's number.

Controlling Playback

Press ■ once to stop the disc at the current location, and twice to stop the disc completely.

When the disc is playing, press ⏸▶ to pause it.

When the disc is paused, press ⏸▶ to step forward one frame at a time.

Press ⏮ to return to the previous track.

Press ⏭ to skip to the next track.

Press ◀◀ to fast reverse the video. Press ▶▶ to fast forward the video. Repeated presses cycle through the speed options: ×2, ×4, ×16, ×32, and normal speed.

Press ▮▶ to play the video at a slower speed. Repeated presses cycle through the speed options: ×1/2, ×1/4, ×1/8, ×1/16, and normal speed.

Press ▶ to return to normal play mode or to start playing the disc again when it is stopped or paused.

Press **RETURN** to return to the menu.

Searching to a Location

Using the **SEARCH** button, you can search to a track, a time measured from the beginning of the disc, or a time measured from the beginning of the track.

To search to a location:

1. Press **SEARCH** once to bring up the Track Search menu, twice to bring up the Disc Time Search menu, and a third time to bring up the Track Time Search menu.

2. Enter the desired track/time using the remote keypad.

3. Press **ENTER**.

Programming Playback Sequence

The **PROGRAM** button brings up the Program menu, which allows you to program playback sequence.

To program playback sequence:

1. Press **PROGRAM** to bring up the Program menu.

2. Use ▲ and ▼ to select a track, then press **ADD/CLEAR** to add it to the playlist.

3. Repeat step 3 until all desired tracks have been added to the playlist.

4. Press ▶ to move to the Program column.

5. Select a playlist item and press **ENTER** to begin playing back the playlist from that point.

To remove an item from the playlist, select it and press **ADD/CLEAR**.

To exit the Program menu, press **RETURN**.


```
▶ Edit program play list

         TRACK                    Favorite/Program
TRACK 01          ▲                              ▲
TRACK 02
TRACK 03
TRACK 04
TRACK 05
TRACK 06
TRACK 07
TRACK 08          ▼                              ▼
```
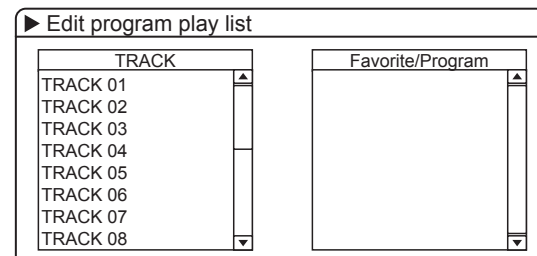
Playing Audio CDs

Audio CDs will play upon insertion. All standard Audio CD navigation features are available.

When an Audio CD begins playing, a display will appear showing all tracks on the CD and allowing you to navigate the tracks. In addition, you can program playback sequence.

```
▶ CDDA  -  PLAY    00:00:01-00:04:59
    FILES&DIRECTORY          FAVORITE/PROGRAM
  ■TRACK 1           ▲                      ▲
  ■TRACK 2
  ■TRACK 3
  ■TRACK 4
  ■TRACK 5
  ■TRACK 6
  ■TRACK 7
  ■TRACK 8           ▼                      ▼
```
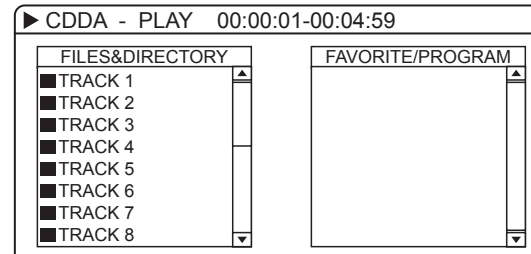
The LCD Readout

When playing an Audio CD, the first two digits of the readout indicate the current track. The rest of the digits indicate the current playback time.

The rest of the readout behaves as described in "Understanding the LCD Readout" on page 11.

The On-Screen Display

The Audio CD OSD (press **DISPLAY**) displays and allows you to change the current repeat mode, playback mode, audio channel, track, and playback time.

Press **DISPLAY** a second time to exit the OSD.

```
▶ CDDA
  MODE    NORMAL
  TRICK   PLAY
  AUDIO   STEREO
  TRACK   01 / 10
   TIME     00:00:01-00:04:59
```

To change a setting:

1. Select the setting using ▲ and ▼.

2. Press ▶ to bring up a list of options for the setting.

   (If the setting to be changed is Track or Time, enter the desired value using the remote keypad and skip step 3.)

3. Use ▲ and ▼ to select the desired option.

4. Press **ENTER**.

Controlling Playback

Press ■ to stop playback.

When the disc is playing, press ❙❙▶ to pause it.

Press ❙◀◀ to return to the previous track.

Press ▶▶❙ to skip to the next track.

Press ◀◀ to fast reverse the audio. Press ▶▶ to fast forward the audio. Repeated presses cycle through the speed options: ×2, ×4, and normal speed.

Press ▶ to return to normal play mode or to start playing the disc again when it is stopped or paused.

To skip directly to a track, enter the track number on the keypad and press **ENTER**.

Programming Playback Sequence

The navigation menu that appears when you first insert an Audio CD allows you to program playback sequence.

To program playback sequence:

1. Use ▲ and ▼ to select a track, then press **ADD/CLEAR** to add it to the playlist.

2. Repeat until all desired tracks have been added to the playlist.

3. Press ▶ to move to the Program column.

4. Select a playlist item and press **ENTER** to begin playing back the playlist from that point.

```
┌─────────────────────────────────────────────┐
│ ▶ CDDA - PLAY    00:00:01-00:04:59           │
│  ┌─ FILES&DIRECTORY ──┐ ┌ FAVORITE/PROGRAM ┐ │
│  │ ■TRACK 1        ▲  │ │              ▲   │ │
│  │ ■TRACK 2           │ │                  │ │
│  │ ■TRACK 3           │ │                  │ │
│  │ ■TRACK 4           │ │                  │ │
│  │ ■TRACK 5           │ │                  │ │
│  │ ■TRACK 6           │ │                  │ │
│  │ ■TRACK 7           │ │                  │ │
│  │ ■TRACK 8        ▼  │ │              ▼   │ │
│  └────────────────────┘ └──────────────────┘ │
└─────────────────────────────────────────────┘
```
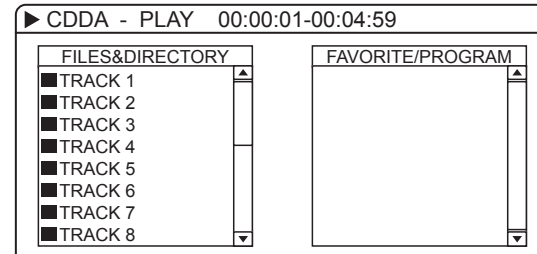
To remove an item from the playlist, select it and press **ADD/CLEAR**.

Playing Kodak Picture CDs

Upon insertion, the player will read and begin to play your Kodak Picture CD, displaying a slideshow of the images on the disc.

The LCD Readout

When playing a Kodak Picture CD, the first two digits of the readout indicate the current image number.

The rest of the readout behaves as described in "Understanding the LCD Readout" on page 11.

Controlling Playback

Press ■ or **RETURN** to stop slideshow playback and return to the menu.

When the disc is playing, press ❙❙▶ to pause it.

Press ▶ to start playing the slideshow again when it is stopped or paused.

Press ❙◀◀ to return to the previous image.

Press ▶▶❙ to skip to the next image.

To skip directly to an image, enter the image number on the remote keypad and press **ENTER**.

Navigating Menus

Press ■ or **RETURN** while the slideshow is playing to bring up the thumbnail menu, which displays thumbnails of the images on the disc.

Press ❙◀◀ and ▶▶❙ to scroll through menu pages.

Use the arrow controls to select the desired image and press **ENTER**. Alternatively, enter the number of the desired image on the remote keypad and press **ENTER**. The selected image will display on the screen.

Transforming Images

Press ▶ to rotate the image 90° clockwise.

Press ◀ to rotate the image 90° counterclockwise.

Press ▲ to flip the image vertically.

Press ▼ to flip the image horizontally.

Enabling Slideshow Transition Effects

Press **ANGLE** to cycle through the slideshow transition effects:

- Random Wipe Mode
- Top to Bottom
- Bottom to Top
- Left to Right
- Righ to Left
- Extend Center Vertically
- Extend Center Horizontally
- Compress Center Vertically
- Compress Center Horizontally
- Diagonal Left Top
- Diagonal Right Top
- Diagonal Left Bottom
- Diagonal Right Bottom
- Window Horizontally
- Window Vertically
- Edge to Center
- Center to Edge

Repeating Images

Press **REPEAT** to cycle through the repeat modes: Off, Image, Directory, and All.
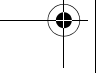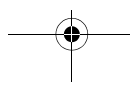
Playing Media on Data CDs

Upon inserting a data CD, the player will display a menu showing all media files on the disc and allowing you to select files for playback.

The LCD Readout

When playing media on a data CD, the first two digits of the readout indicate the current file number. The rest of the digits indicate the current playback time (audio/video files only).

The rest of the readout behaves as described in "Understanding the LCD Readout" on page 11.

The On-Screen Display

There are three different OSD modes, one for each type of media file (audio, image, and video). Each mode displays and allows you to change settings for the associated type of media file. Setting the Type in the OSD selects the mode.

The audio and video modes display and allow you to change the current repeat mode, playback mode, audio channel, and playback time.

▶ File Play	
TYPE	AUDIO
MODE	NORMAL
TRICK	PLAY
AUDIO	STEREO
TIME	00:00:01 / 00:04:59

The image mode displays and allows you to change the current repeat mode, playback mode, image transition effect (wipe) mode, zoom level, and image rotation.

▶ File Play	
TYPE	PIC
MODE	NORMAL
TRICK	PLAY
WIPE	RANDOM
ZOOM	FITSCREEN
ROTATE	CLOCKWISE 0

To change a setting:

1. Select the setting using ▲ and ▼.

2. Press ▶ to bring up a list of options for the setting.

   (If the setting to be changed is Time, enter the desired value using the remote keypad and skip step 3.)

3. Use ▲ and ▼ to select the desired option.

4. Press **ENTER**.

Using the Menu

The menu allows you to navigate files and program playback sequence.

The left column of the menu allows you to navigate the directory structure of the disc and displays any image (JPEG), video (MPEG), or audio (MP3) files on the disc.

▶ File Play - STOP	
FILES&DIRECTORY	**FAVORITE/PROGRAM**
1 ■ FOLDER 1	
2 ■ FOLDER 2	
3 ■ AUDIO 1.MP3	
4 ■ AUDIO 2.MP3	
5 ■ IMAGE 1.JPG	
6 ■ IMAGE 2.JPG	
7 ■ VIDEO 1.MPG	
8 ■ VIDEO 2.MPG	

To play back a file, use ▲ and ▼ to select it, then press **ENTER**. The recorder will then sequentially progress through any other files of the same type in the same directory.

You can also play back audio files while displaying image files. To do so, begin playback of an audio file, then select an image file for playback. The audio will play while the image slideshow displays.

The right column of the menu allows you to program playback sequence by creating a playlist. See "Programming Playback Sequence" on page 34.

Controlling Audio File Playback

Press ❚❚▶ to pause playback. Press ▶ to resume playback.

Press ■ once to stop CD playback.

Press ◀◀ to return to the previous file. Press ▶▶ to skip to the next file.

Press ◀◀ to fast reverse playback. Press ▶▶ to fast forward playback. Repeated presses cycle through the speed options: ×2, ×4, ×8, ×16, ×32, and normal speed.

Press ▶ to return to normal play mode or to start playing the disc again when it is stopped.

Controlling Image File Playback

Press ❚❚▶ to pause playback. Press ▶ to resume playback.

Press ■ to stop the slideshow and return to the menu.

Press ◀◀ to return to the previous image. Press ▶▶ to skip to the next image.

Press ▶ to rotate the image 90° clockwise.

Press ◀ to rotate the image 90° counterclockwise.

Press ▲ to flip the image vertically.

Press ▼ to flip the image horizontally.

Press **ANGLE** to cycle through the slideshow transition effects:

- Random Wipe Mode
- Top to Bottom
- Bottom to Top
- Left to Right
- Righ to Left
- Extend Center Vertically
- Extend Center Horizontally
- Compress Center Vertically
- Compress Center Horizontally
- Diagonal Left Top
- Diagonal Right Top
- Diagonal Left Bottom
- Diagonal Right Bottom
- Window Horizontally
- Window Vertically
- Edge to Center
- Center to Edge

Controlling Video File Playback

When video is playing, press ▐▌▶ to pause it. Press ▶ to resume playback.

Press ■ to stop playback and return to the menu.

Press ◄◄ to return to the previous file. Press ►► to skip to the next file.

Press ◄◄ to fast reverse playback. Press ►► to fast forward playback. Repeated presses cycle through the speed options: ×2, ×4, ×8, ×16, ×32, and normal speed.

Press I▶ to play the video at a slower speed. Repeated presses cycle through the speed options: ×1/2, ×1/4, ×1/8, and normal speed.

Press ▶ to return to normal play mode or to start playing the disc again when it is stopped.

Searching to a Location

Using the **SEARCH** button, you can search to a file in the current directory or a time in the current file (audio/video files).

To search to a location:

1. Press **SEARCH** once to search to a file, twice to search to a time in the current file (audio/video files).

2. Enter the desired file number or time using the remote keypad. The location you enter will display on the menu as you enter it.

3. Press **ENTER**.

Programming Playback Sequence

The navigation menu that appears when you first insert a data CD allows you to program playback sequence.

To program playback sequence:

1. Use ▲ and ▼ to select a file, then press **ADD/CLEAR** to add it to the playlist.

2. Repeat until all desired files have been added to the playlist.

3. Press ▶ to move to the Program column.

4. Select a playlist item and press **ENTER** to begin playing back the playlist from that point.

To remove an item from the playlist, select it and press **ADD/CLEAR**.

```
▶ File Play - STOP

  FILES&DIRECTORY          FAVORITE/PROGRAM
1 ■FOLDER 1
2 ■FOLDER 2
3 ■AUDIO 1.MP3
4 ■AUDIO 2.MP3
5 ■IMAGE 1.JPG
6 ■IMAGE 2.JPG
7 ■VIDEO 1.MPG
8 ■VIDEO 2.MPG
```
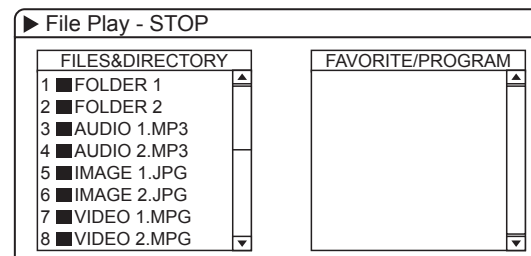
Configuring the Recorder

The Setup menu allows you to configure the operation of the recorder. You can change video, audio, and language settings, control access to mature programming, and configure other general behavior.

To use the Setup menu:

1. Press the **SETUP** button to bring up the menu.

2. Once the menu appears, use the ▲ and ▼ buttons to navigate the sub-menus listed at the side of the menu.

3. Press ▶ to enter a sub-menu. (Press ◀ repeatedly to leave a sub-menu.)

4. Use ▲ and ▼ to select an item.

5. Press **ENTER** to bring up a list of the available options for the selected item.

6. Use ▲ and ▼ to select the desired option and then press **ENTER** to select it.

7. Press the **SETUP** button to exit the menu.

The following is a description of the contents of the Setup menu and their use.

General

The General sub-menu allows you to change video output settings, enable/disable a screen saver, and restore all recorder settings to factory defaults. The menu items are as follows:


```
SYSTEM SETUP - GENERAL

  Screen saver              OFF
  Progressive/Interlace     Interlace
  Video output format       NTSC
  Restore factory settings       OK
```
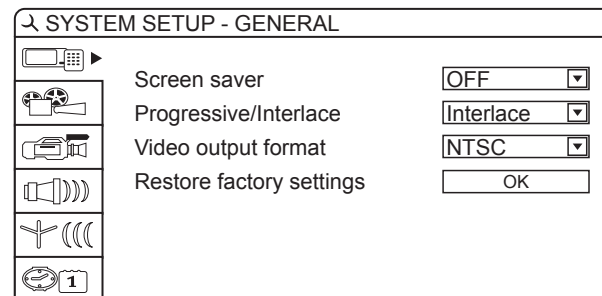
Screen Saver

Turns the screen saver on and off. When on, a screen saver will appear after a pre-defined period of inactivity.

Progressive/Interlace

Selects progressive scan or interlaced video output. Progressive scan offers crisp, flicker-free video and higher quality than interlaced.

Note: Progressive scan *only* works with component video connections to displays that support it. Check to ensure your display supports progressive scan before configuring the recorder to use it.

Video Output Format

Selects the video format used to transmit video to an external display:

*   **NTSC**—A format used primarily in North and Central America

*   **PAL**—A format used in various parts of the world, including Europe, Asia, South America, and the Middle East

Restore Factory Settings

Resets all recorder settings to factory defaults

Configuring the Recorder

Playback

The Playback sub-menu allows you to change audio and video playback settings and set up parental controls. The menu items are as follows:

```
⌕ SYSTEM SETUP - PLAYBACK

        TV aspect ratio            16:9       ▼
        Rating level               OFF
        Digital audio output       RAW        ▼
        Analog audio output        2 CH       ▼
        Speaker setting                   OK
```
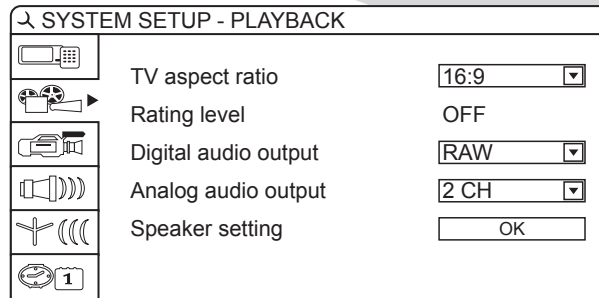
TV Aspect Ratio

Selects the aspect ratio used by the external display and the method used to display widescreen video on non-widescreen displays:

- **16:9**—Native widescreen

- **Pan Scan**—Crops the video image to fill the entire screen of a 4:3 format display

- **Letter Box**—Displays the full image on the screen of a 4:3 format display, but does not fill the entire screen
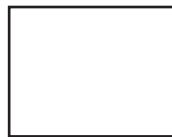
```
    4:3PS              4:3LB              16:9
```

Rating Level

When you select this item, the recorder will ask for the current parental control password. Enter the password using the remote keypad, then press **ENTER**. The factory default password is '1234'.
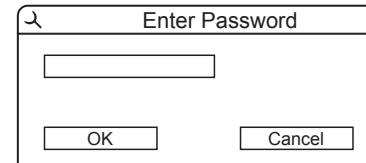
Once you enter the correct password, the recorder will display a pop-up box where you can select the content rating above which a password will be required, or set a new password.

```
⌕         Enter Password



     OK                  Cancel
```

To change the protection level:

1. Use the arrow controls to select the drop-down box and press **ENTER**.

2. Then use ▲ and ▼ to select the desired rating level and press **ENTER**. The available ratings are
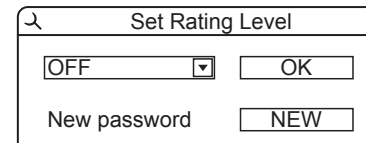
    - Off
    - 8: Adult
    - 7: NC-17
    - 6: R
    - 5: PG-R
    - 4: PG-13
    - 3: PG
    - 2: G
    - 1: Kid Safe

```
⌕         Set Rating Level
   OFF          ▼        OK

   New password          NEW
```

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To set a new password:

1. Use the arrow controls to select the **NEW** button and press **ENTER**. Another pop-up box will display asking for the new password.

2. Enter a new four-digit password in the New Password box.

3. Press ▼ to select the Confirm Password box and enter the same password again.

4. Press **ENTER** to change the password.

To cancel the password change, use the arrow controls to select **CANCEL** and press **ENTER**.

Digital Audio Output

Configures the digital audio output format: Raw or LPCM

Analog Audio Output

Configures the analog audio output format: 2 CH (stereo) or 5.1 CH (surround)
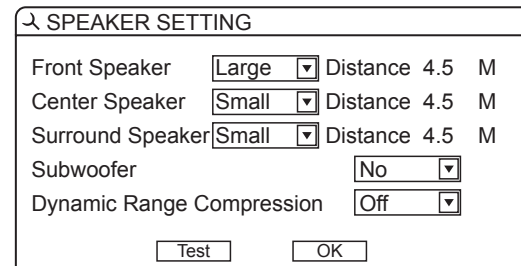
When 2 CH is selected, only the FR and FL outputs in the AUDIO OUT block on the rear of the recorder will be active.

When 5.1 CH is selected, all outputs in the AUDIO OUT block will be active.

Speaker Setting

Brings up a pop-up box that allows you to change settings for the 5.1 channel audio outputs. The parameters are

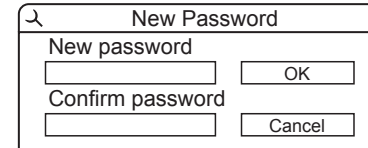- **Front Speaker**—Sets the size of the front channel speakers and their distance from the listening position in meters

- **Center Speaker**—Sets the size of the center channel speaker and their distance from the listening position in meters

- **Surround Speaker**—Sets the size of the side channel speakers and their distance from the listening position in meters

- **Subwoofer**—Turns subwoofer output on and off

- **Dynamic Range Compression**—Turns dynamic range compression on and off

Select **Test** to test the configuration by playing noise on each of the channels sequentially. Select **OK** to confirm the settings and return to the Playback menu.

Note: Analog Audio Output above must be set to 5.1 CH to access this menu option.

Configuring the Recorder

Record

The Record sub-menu configures DVD recording. The menu items are as follows:

Auto Chapter Marker

Sets up automatic chapter marking, which creates a new DVD chapter at regular intervals. You can set the recorder to create a new chapter every 5, 10, 15, or 20 minutes, or you can turn off automatic chapter marking.

```
⅄ SYSTEM SETUP - RECORD
          Auto chapter marker          5 minutes  ▼
          Default source               Tuner      ▼
          Default quality              SP         ▼
```

Default Source

Sets the audio/video source selected when the recorder is turned on: AV1, AV2, AV3, DV (IEEE 1394), or Tuner

Default Quality

Sets the default quality used for recording:

Name	Format	Bit Rate	Capacity	Quality
HQ (High Quality)	720 × 480 (NTSC) 720 × 576 (PAL)	9.5Mbps	~60 minutes	Full DVD quality
SP (Standard Play)	720 × 480 (NTSC) 720 × 576 (PAL)	5.1Mbps	>120 minutes	Standard DVD quality
LP (Long Play)	352 × 480 (NTSC) 352 × 576 (PAL)	3.4Mbps	>180 minutes	Similar to S-VHS
EP (Extended Play)	352 × 480 (NTSC) 352 × 576 (PAL)	2.5Mbps	>240 minutes	Similar to VHS in SP mode
SLP (Super Long Play)	352 × 240 (NTSC) 352 × 288 (PAL)	1.7Mbps	>360 minutes	Similar to VHS in EP mode

Language

The Language sub-menu allows you to change the language used by the player for the On-Screen Display (OSD), menus, audio, and subtitles. The menu items are as follows:

```
⅄ SYSTEM SETUP - LANGUAGE
          OSD language                 English    ▼
          Menu language                English    ▼
          Subtitle language            OFF        ▼
          Audio language               English    ▼
```

OSD Language

Changes the language of the Setup menu and the OSD

Menu Language

Changes the language used for disc menus

Subtitle Language

Changes the language used for subtitles

Audio Language

Changes the language used for audio

Channel Scan

The Channel Scan sub-menu configures the television tuner. The menu items are as follows:

```
⌕ SYSTEM SETUP - CHANNEL SCAN

        Tuner input source          Air      ▼
        Scan channels                   SCAN
        Modify channel information      EDIT
```

Tuner Input Source

Sets the type of television signal the tuner uses:
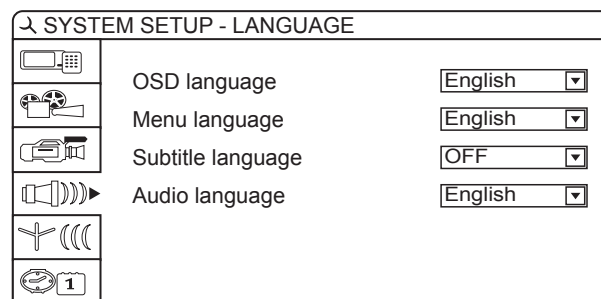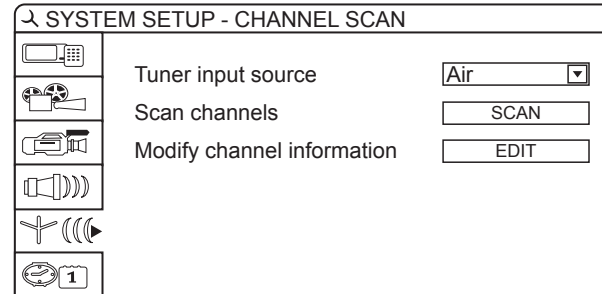
- **Air**—Used when an antenna is connected to the recorder's television input

- **Standard**—Used for a standard cable television connection

- **IRC**—A type of cable television signal used primarily on the east coast of the US

- **HRC**—A type of cable television signal used primarily on the west coast of the US

Note: If you are connecting directly to a cable television wall outlet, contact your cable company to find out which system is in use in your area. IRC will work with most systems.

Scan Channels

Scans the signal spectrum and weeds out the channels with insufficient signal strength

Modify Channel Information

Brings up a pop-up box that allows you to change settings for individual television channels. The parameters are

- **Name**—Selects the channel number to be modified. Enter the channel number on the remote keypad and press **ENTER**, or use the **CHANNEL** buttons on the remote to adjust the channel.

- **Frequency**—Shows the frequency used for the channel selected in **Name**. Press ◄ or ► to scan for a strong signal.

- **Skip**—Determines whether the channel is available when using the **CHANNEL** buttons on the remote. When set to Yes, the recorder will skip the channel when you scroll through channels using the **CHANNEL** buttons.

- **Fine Tune**—Adjusts the frequency used for the channel in small increments for better reception. Use ◄ and ► to adjust this parameter.

```
⌕ CHANNEL

Name         Ch002
Frequency    55.25MHz
Skip         No        ▼
Fine tune    ——————■——————


    OK              Cancel
```

Configuring the Recorder

Clock

The Clock sub-menu allows you to set the current date and time.

To set the date/time:

1. Use ▲ and ▼ to select Date or Time and press **ENTER**.

2. Enter the desired value using the keypad.

   Alternatively, you can select each digit individually by pressing ◄ and ►, then adjust it by pressing ▲ and ▼.

3. Press **ENTER** to set the time/date.

⌕ SYSTEM SETUP - CLOCK	
Date (mm/dd/yy)	1 2 / 0 1 / 0 3
Time (hh:mm:ss)	1 2 : 0 0 : 0 0

Troubleshooting

Symptom	Possible Cause	Resolution
Power does not come on	Power cord(s) not securely connected	Make sure the power cable is securely connected to a wall outlet.
	Power outlet is off or not working	Try plugging a different device into the outlet and see if it turns on. If not, check that the outlet is on or use a different outlet.
Remote control not functioning	Batteries inserted improperly	Make sure the batteries are inserted and oriented properly.
	Batteries low on energy	Replace the batteries.
	A button is stuck	Jog any stuck buttons on the remote to unstick them.
	Obstacle between remote and recorder	Remove the obstacle.
	The remote is too far from the recorder	Move closer to the recorder.
No picture	Incorrect video format selected	Set Progressive/Interlace and Video Output Format as appropriate in the Setup menu under the General sub-menu. See "General" on page 35.
	No signal	Make sure the proper source is selected on the external display. If there is still no picture, check the signal cable(s) and ensure the recorder is on and working.
Unclear or noisy picture	Signal cable(s) not securely connected	Make sure the signal cable(s) are firmly connected.
	Radio interference	Check for any electronic devices nearby that might be interfering with the video signal or the recorder's operation.
	Incorrect video format selected	Set Progressive/Interlace and Video Output Format as appropriate in the Setup menu under the General sub-menu. See "General" on page 35.
	Poor television signal	If you are using an antenna, move the antenna to a position with better reception, or obtain and use a more powerful antenna.
		If the recorder is connected to a cable TV signal, ensure the cable is connected securely. Otherwise, contact your cable service provider.

Troubleshooting

Symptom	Possible Cause	Resolution
Distorted image	Display format set incorrectly	Check that the correct TV Aspect Ratio is selected under the Playback sub-menu in the Setup menu. See "Playback" on page 36. Check that Progressive/Interlace and Video Output Format are set correctly in the Setup menu under the General sub-menu. See "General" on page 35.
No sound	Audio cable(s) not securely connected	Make sure the audio signal cables are firmly connected.
	Audio cable(s) connected to incorrect input	Make sure the audio cables are connected to the same input as the video.
	Incorrect audio format selected	Select the correct audio output format in the Setup menu.
	Audio muted	Unmute the audio by pressing the **MUTE** button on the remote.
Disc fails to load	Unreadable disc	Ensure disc is not scratched or dirty. Clean and re-insert as necessary.
	Disc format not supported	Ensure the disc has a format compatible with the recorder (see "Specifications" on page 43).
Recorded disc fails to play on other player(s)	Disc not finalized	If you are using a DVD+R disc, ensure it is finalized before using it with other players (see "Finalizing the Disc (DVD+R Only)" on page 20).
	Disc not made compatible	If you are using a DVD+RW disc, ensure you have made it compatible (see "Making the Disc Compatible with Other DVD Players (DVD+RW Only)" on page 20).
	Disc format not supported	Not all players support DVD+R/RW discs. Ensure your player supports these formats.

Note: Further troubleshooting information may be found on the Protron website at www.protronusa.com.

Support Information

Do not return this product to your retailer until you have performed the steps laid out in "Unpacking Your New DVD Recorder" on page 2 and contacted the customer service center. Merchandise may not be returned to Protron without a return form authorization.

Before contacting Protron customer service, please record the following information, which may be found on the bottom of your DVD recorder:

- Model Number
- Serial Number

The Protron customer service center may be contacted 24 hours a day, 7 days a week at the following number:

1-888-257-8899

Specifications

General

Dimensions	17"W × 3"H × 13"D
Weight	8.8lbs
Playback Formats	DVD, DVD-R/RW, DVD+R/RW, CD-ROM, CD-R/RW, CD-DA, VCD, SVCD, MP3 CD
Record Formats	DVD+R/RW
Inputs	1 × television (F) 1 × 4-pin IEEE 1394 3 × composite video (RCA) 3 × S-Video 3 × stereo audio (RCA)
Outputs	1 × television pass thru (F) 1 × component video (RCA) 1 × S-Video 1 × composite video (RCA) 1 × 5.1 channel audio (RCA) 1 × coaxial digital (RCA) 1 × optical digital (TOSLINK™)
Power Input	100–120VAC, 50–60Hz
Power Consumption	Playback: 29W Standby: <3W (Green)
Storage Temperature	–15 to 55°C
Operating Temperature	5 to 40°C

Television Tuner

Tuner Type	NTSC-M, CATV, 125 channels
Frequency Range	54.25–802.25MHz
Input Sensitivity	48dBuV

Video

D/A Sample Rate	54MHz
D/A Resolution	10 bits
A/D Sample Rate	5MHz
A/D Resolution	10 bits
Dynamic Range	>100dB @ 1kHz
THD+N	<–90dB @ 1kHz
Crosstalk	<–110dB @ 1kHz

Audio

D/A Max. Sample Rate	Channels 1–2 (FL/FR): 200kHz Channels 3–6: 100kHz
D/A Resolution	24 bits
A/D Max. Sample Rate	96kHz
A/D Resolution	24 bits
Frequency Response	+0.5/–1.0dB, 4Hz–44kHz
Dynamic Range	>80dB @ 1kHz
THD	<–65dB @ 1kHz
Channel Separation	>80dB @ 1kHz

PROTRON
More for your money

Limited Warranty

Protron warrants this product to be free from manufacturing defects in material and workmanship under normal use for the period listed at the bottom of this document.

How to obtain service:

- Call the Protron Customer Support line at 1-888-257-8899. If the issue cannot be resolved over the phone, a service tag number will be issued and the product must be returned to Protron, at your expense, for assessment and repair/replacement. To request warranty repair, you may also contact us by email at service@protronusa.com. For all other customer service related inquiries, please email us at customerservice@protronusa.com.
- Proof of purchase in the form of a bill of sale or receipted invoice with product name, model and serial #, which provides evidence that the product is within the warranty period, must accompany the product to obtain warranty service.

This warranty does not cover:

- Physical or cosmetic damages.
- Damage caused by abuse and/ or neglect.
- Ordinary adjustments as outlined in the owners manual that can be performed by the customer.
- Damage to equipment not properly connected to the product.
- Any cost incurred in shipping the product for repair.
- Signal reception problems caused by external antenna, cable systems or interference.
- Incompatibility due to a change in TV/CATV broadcast systems after the product was sold.
- Batteries.
- Images burnt onto the screen.
- Initial installation and related adjustments.
- Power surge and/or damage by lightning.
- Force majeure or uncontrollable external force damage.
- Product shipped for service with inadequate packaging or packaging materials

What we will do:

- Protron will assess the product and cover all labor charges to repair your product.
- Protron will provide new, or at our discretion, refurbished replacement parts required to repair your product.

This warranty is void if:

- Product is used in a commercial application or rental.
- Damaged through misuse, negligence or abuse.
- Modified or repaired by anyone other than an authorized PROTRON service center.
- Damaged because it is improperly connected to any other equipment.
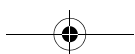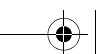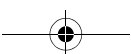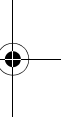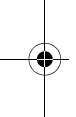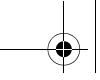- The original proof of purchase cannot be supplied.

- The identifiable markings on the product such as Serial # are defaced, unrecognizable, or missing.
- The product is used outside the country in which it was originally sold.

This warranty is non-transferable and only applies to the original purchase. Any implied warranties, including the warranty of merchantability, are limited in duration to the period of this expressed warranty and no warranty whether expressed or implied shall apply to the product thereafter. Under no circumstance shall PROTRON be liable for any loss or consequential damage arising out of the use of this product. This warranty gives specific legal rights. However, you may have other rights that may vary from state/province to state/province. Some states/provinces do not allow limitations on implied warranties or exclusions of consequential damage. Therefore these restrictions may not apply to you.

90 days Labor and Parts

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