

ROTEL

Owner's Manual

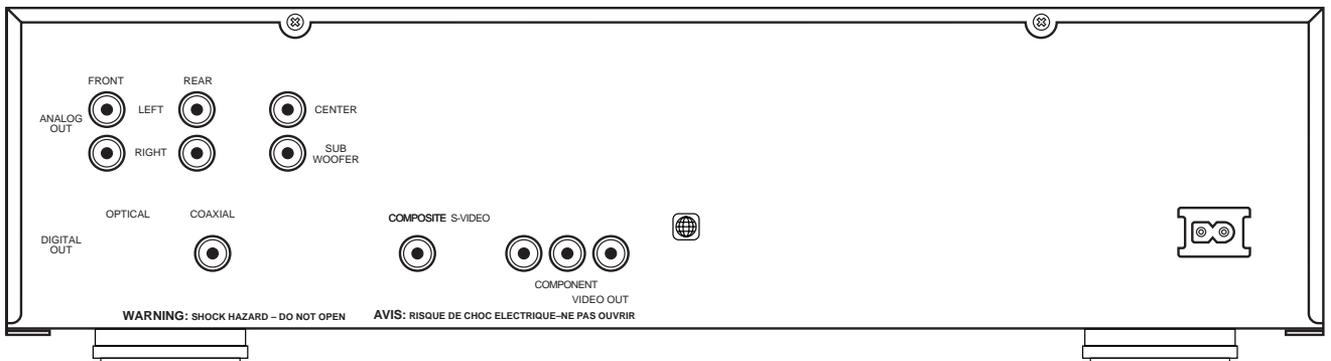
RDV-1080 DVD Audio/Video Player

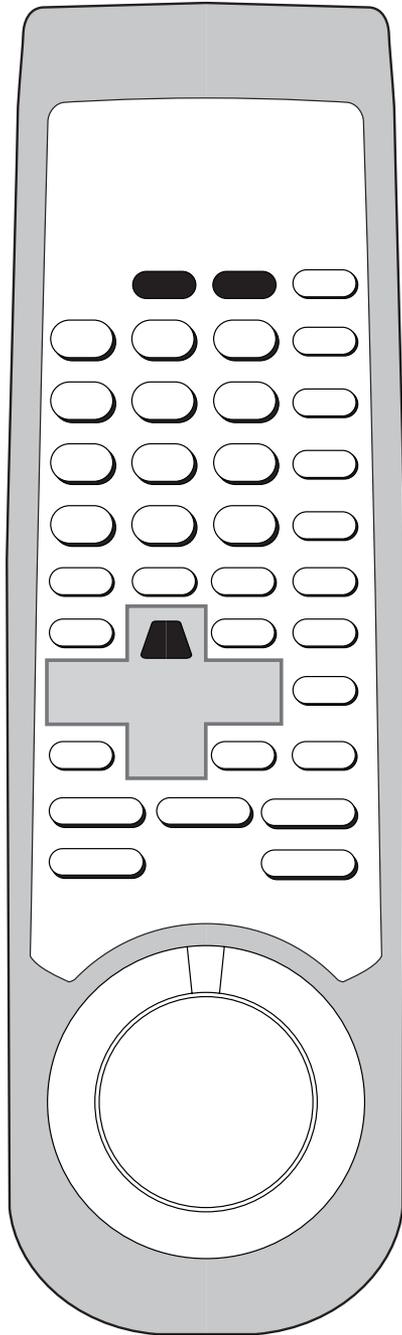


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1: Controls and Connections





6: Parental Lock Country Codes

AD	Andorra
AE	United Arab Emirates
AF	Afghanistan
AG	Antigua and Barbuda
AI	Anguilla
AL	Albania
AM	Armenia
AN	Netherlands Antilles
AO	Angola
AQ	Antarctica
AR	Argentina
AS	American Samoa
AT	Austria
AU	Australia
AW	Aruba
AZ	Azerbaijan
BA	Bosnia and Herzegovina
BB	Barbados
BD	Bangladesh
BE	Belgium
BF	Burkina Faso
BG	Bulgaria
BH	Bahrain
BI	Burundi
BJ	Benin
BM	Bermuda
BN	Brunei Darussalam
BO	Bolivia
BR	Brazil
BS	Bahamas
BT	Bhutan
BV	Bouvet Island
BW	Botswana
BY	Belarus
BZ	Belize
CA	Canada
CC	Cocos (Keeling) Islands
CF	Central African Republic
CG	Congo
CH	Switzerland
CI	Côte d'Ivoire
CK	Cook Islands
CL	Chile

CM	Cameroon
CN	China
CO	Colombia
CR	Costa Rica
CU	Cuba
CV	Cape Verde
CX	Christmas Island
CY	Cyprus
CZ	Czech Republic
DE	Germany
DJ	Djibouti
DK	Denmark
DM	Dominica
DO	Dominican Republic
DZ	Algeria
EC	Ecuador
EE	Estonia
EG	Egypt
EH	Western Sahara
ER	Eritrea
ES	Spain
ET	Ethiopia
FI	Finland
FJ	Fiji
FK	Falkland Islands (Malvinas)
FM	Micronesia (Federated States of)
FO	Faroe Islands
FR	France
FX	France, Metropolitan
GA	Gabon
GB	United Kingdom
GD	Grenada
GE	Georgia
GF	French Guiana
GH	Ghana
GI	Gibraltar
GL	Greenland
GM	Gambia
GN	Guinea
GP	Guadeloupe
GQ	Equatorial Guinea

GR	Greece
GS	South Georgia and the South Sandwich Islands
GT	Guatemala
GU	Guam
GW	Guinea-Bissau
GY	Guyana
HK	Hong Kong
HM	Heard Island and McDonald Islands
HN	Honduras
HR	Croatia
HT	Haiti
HU	Hungary
ID	Indonesia
IE	Ireland
IL	Israel
IN	India
IO	British Indian Ocean Territory
IQ	Iraq
IR	Iran (Islamic Republic of)
IS	Iceland
IT	Italy
JM	Jamaica
JO	Jordan
JP	Japan
KE	Kenya
KG	Kyrgyzstan
KH	Cambodia
KI	Kiribati
KM	Comoros
KN	Saint Kitts and Nevis
KP	Korea, Democratic People's Republic of
KR	Korea, Republic of
KW	Kuwait
KY	Cayman Islands
KZ	Kazakhstan
LA	Lao People's Democratic Republic
LB	Lebanon
LC	Saint Lucia

LI	Liechtenstein
LK	Sri Lanka
LR	Liberia
LS	Lesotho
LT	Lithuania
LU	Luxembourg
LV	Latvia
LY	Libyan Arab Jamahiriya
MA	Morocco
MC	Monaco
MD	Moldova, Republic of
MG	Madagascar
MH	Marshall Islands
ML	Mali
MM	Myanmar
MN	Mongolia
MO	Macau
MP	Northern Mariana Islands
MQ	Martinique
MR	Mauritania
MS	Montserrat
MT	Malta
MU	Mauritius
MV	Maldives
MW	Malawi
MX	Mexico
MY	Malaysia
MZ	Mozambique
NA	Namibia
NC	New Caledonia
NE	Niger
NF	Norfolk Island
NG	Nigeria
NI	Nicaragua
NL	Netherlands
NO	Norway
NP	Nepal
NR	Nauru
NU	Niue
NZ	New Zealand
OM	Oman
PA	Panama

PE	Peru
PF	French Polynesia
PG	Papua New Guinea
PH	Philippines
PK	Pakistan
PL	Poland
PM	Saint Pierre and Miquelon
PN	Pitcairn
PR	Puerto Rico
PT	Portugal
PW	Palau
PY	Paraguay
QA	Qatar
RE	Runion
RO	Romania
RU	Russian Federation
RW	Rwanda
SA	Saudi Arabia
SB	Solomon Islands
SC	Seychelles
SD	Sudan
SE	Sweden
SG	Singapore
SH	Saint Helena
SI	Slovenia
SJ	Svalbard and Jan Mayen
SK	Slovakia
SL	Sierra Leone
SM	San Marino
SN	Senegal
SO	Somalia
SR	Suriname
ST	Sao Tome and Principe
SV	El Salvador
SY	Syrian Arab Republic
SZ	Swaziland
TC	Turks and Caicos Islands
TD	Chad
TF	French Southern Territories
TG	Togo
TH	Thailand

TJ	Tajikistan
TK	Tokelau
TM	Turkmenistan
TN	Tunisia
TO	Tonga
TP	East Timor
TR	Turkey
TT	Trinidad and Tobago
TV	Tuvalu
TW	Taiwan, Province of China
TZ	Tanzania, United Republic of
UA	Ukraine
UG	Uganda
UM	United States Minor Outlying Islands
US	United States
UY	Uruguay
UZ	Uzbekistan
VA	Vatican City State (Holy See)
VC	Saint Vincent and the Grenadines
VE	Venezuela
VG	Virgin Islands (British)
VI	Virgin Islands (U.S.)
VN	Vietnam
VU	Vanuatu
WF	Wallis and Futuna Islands
WS	Samoa
YE	Yemen
YT	Mayotte
YU	Yugoslavia
ZA	South Africa
ZM	Zambia
ZR	Zaire
ZW	Zimbabwe

7: Language Codes

AA	Afar
AB	Abkhazian
AF	Afrikaans
AM	Ameharic
AR	Arabic
AS	Assamese
AY	Aymara
AZ	Azerbaijani
BA	Bashkir
BE	Byelorussian
BG	Bulgarian
BH	Bihari
BI	Bislama
BN	Bengali, Bangla
BO	Tibetan
BR	Breton
CA	Catalan
CO	Corsican
CS	Czech
CY	Welsh
DA	Danish
DZ	Bhutani
EL	Greek
EO	Esperanto
ET	Estonian
EU	Basque
FA	Persian
FI	Finnish
FJ	Fiji
FO	Faroese
FY	Frisian
GA	Irish
GD	Scots Gaelic
GL	Galician
GN	Guarani
GU	Gujarati
HA	Hausa
HI	Hindi
HR	Croatian
HU	Hungarian
HY	Armenian
IA	Interlingua
IE	Interlingue

IK	Inupiak
IN	Indonesian
IS	Icelandic
IW	Hebrew
JI	Yiddish
JW	Javanese
KA	Georgian
KK	Kazakh
KL	Greenlandic
KM	Cambodian
KN	Kannada
KO	Korean (KOR)
KS	Kashmiri
KU	Kurdish
KY	Kirghiz
LA	Latin
LN	Lingala
LO	Laothian
LT	Lithuanian
LV	Latvian, Lettish
MG	Malagasy
MI	Maori
MK	Macedonian
ML	Malayalam
MN	Mongolian
MO	Moldavian
MR	Marathi
MS	Malay (MAY)
MT	Maltese
MY	Burmese
NA	Nauru
NE	Nepali
NL	Dutch
NO	Norwegian
OC	Occitan
OM	(Afan) Oromo
OR	Oriya
PA	Panjabi
PL	Polish
PS	Pashto, Pushto
PT	Portuguese
QU	Quechua
RM	Rhaeto-Romance

RN	Kirundi
RO	Rumanian
RU	Russian
RW	Kinyarwanda
SA	Sanskrit
SD	Sindhi
SG	Sangho
SH	Serbo-Croatian
SI	Singhalese
SK	Slovak
SL	Slovenian
SM	Samoaan
SN	Shona
SO	Somali
SQ	Albanian
SR	Serbian
SS	Siswati
ST	Sesotho
SU	Sundanese
SV	Swedish
SW	Swahili
TA	Tamil
TE	Telugu
TG	Tajik
TH	Thai
TI	Tigrinya
TK	Turkmen
TL	Tagalog
TN	Setswana
TO	Tonga
TR	Turkish
TS	Tsonga
TT	Tatar
TW	Twi
UK	Ukrainian
UR	Urdu
UZ	Uzbek
VI	Vietnamese
VO	Volapuk
WO	Wolof
XH	Xhosa
YO	Yoruba
ZU	Zulu

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Other Features

- User-friendly language
- Full-featured your TV
- Parental

Supplies

- Audio
- Audio
- S-v
-



The RDV-1080 cannot play these disc formats: DVD-ROM, DVD-RAM, DVD-R, DVD-RW, CD-ROM, PHOTO CD, CD-R, or CD-RW. The unit can only play the audio content on CD-EXTRA, CD-G, and CD-TEXT discs.

When a disc is inserted in the RDV-1080, an Opening Screen appears on the TV indicating the type of disc. The disc type also appears in the front-panel display.

DVD Region Codes **18**

DVD Video discs are encoded with region codes which also appear on the packaging:



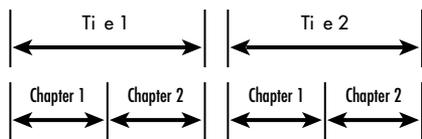
A disc can only be played if its region code matches the code printed on the back-panel of the RDV-1080.

The RDV-1080 can play discs encoded in either the NTSC or PAL video formats, outputting the correct video signal as set by the back-panel NTSC/PAL switch.

Disc Structure

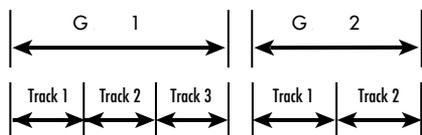
Each type of disc has its own organization, allowing you to locate various portions of the program recorded on the disc. Depending on the type of disc, these may be called *Titles*, *Groups*, *Chapters*, or *Tracks*:

DVD Video:



A DVD Video disc is comprised of *Titles* and each title may be divided into *Chapters*. For example, a DVD Video disc may contain several movies, each with its own *Title* number, and each movie may be divided into several *Chapters*. In a DVD Video karaoke disc, each song usually has its own title number and does not have *Chapters*.

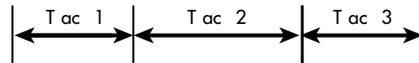
DVD Audio:



A DVD Audio disc contains *Groups*, and each group divided into *Tracks*. Some DVD Audio discs also contain a *Bonus Group* that can only be played back by entering a *Key Number* password.

Most DVD Audio discs include other information in addition to audio, such as still pictures, movies and text.

Audio CD:



An Audio CD, Video CD or SVCD simply contains *Tracks*.

Digital Audio Formats

DVD and CD discs can be encoded with several different digital audio formats. Generally, the type of digital audio encoding is indicated on the disc packaging.

- **Dolby Digital.** A 6-channel digital surround sound format (called 5.1 channel) for playing Dolby Digital encoded disks.
- **DTS (Digital Theater Systems).** Another 5.1 channel digital surround format similar to Dolby Digital, but with wider dynamic range and separation resulting from a lower compression ratio.
- **MPEG multichannel.** Another digital surround format for playing 5.1 channel audio plus a 7.1 channel format rarely used in home systems.
- **MLP (Meridian Lossless Packing).** A high quality digital format for DVD Audio with the compression ratio of about 2:1 supporting a 192kHz sampling rate and 24-bit resolution, allowing the PCM signal to be recreated without loss.
- **LPCM (Linear PCM).** Uncompressed digital audio, the format used on CDs and most studio masters.

The RDV-1080 automatically detects the type of digital audio signal encoded on the disc and activates the proper processing circuitry. An indicator in the front-panel display illuminates to show the type of digital audio.

Remote Control

The RDV-1080 includes an RR-DV93 remote control that operates many of the controls of the RDV-1080. In addition, the remote operates basic features of many TV sets.

Remote Sensor **8**

The remote sensor receives infrared signals from the remote control. Do not cover or block the sensor. It must be unobstructed or the remote control will not work properly.

The operation of the remote sensor can also be affected if it is exposed to bright sunlight or certain types of lighting (such as halogen lights) that emit infrared light. In addition, remote control functions may not work reliably if the batteries in the RR-DV93 are weak.

NOTE: To use the remote, aim it at the remote sensor on the front-panel of the RDV-1080.

Remote Control Batteries

Two R03(LR03)/AAA size batteries (supplied) must be installed before the remote control can be used. Remove the cover on the back of the RR-DV93. Install the batteries as shown in the illustration in the battery well, then replace the cover. When the batteries become weak, the remote control won't operate the RDV-1080 consistently. Installing fresh batteries should eliminate the problem.

NOTE: Remove the batteries from the remote if it will not be used for a long period of time. Do not leave run down batteries in the remote control; they can leak corrosive chemicals which will damage the unit.

TV/DVD Switch **L**

The RR-DV93 remote can operate both the RDV-1080 and your TV set. Slide the TV/DVD switch to the left to activate the TV functions and to the right to activate the DVD functions.

DVD Functions

When the TV/DVD switch is in the DVD position, the RR-DV93 duplicates the functions of the RDV-1080 front-panel plus additional functions not available on the front-panel. When a function is available on both the front-panel and the remote, a number (referring to the front-panel illustration) and a letter (referring to the remote illustration) are shown in the instruc-

tions. When only one identifier appears, that control is available only on the front-panel or the remote, but not both.

The DVD functions available on the remote are detailed in the sections of this manual describing operation of the RDV-1080.

Setting the TV code **O C I N**

To use the RR-DV93 with your TV, you need to program the command set for your TV by entering a 2-digit code from the list in Figure 3. This need only be done once.

Find your TV brand in the code list and note the 2-digit code(s):

1. Press and hold the TV/VIDEO button **O**, keeping it pressed during Steps 2 and 3 below.
2. Enter the 2-digit code using the NUMERIC keypad **C**. For example, to enter code 01, press 0, then 1.
3. Press the STOP **I** button **I** to store the selected code.
4. Release the TV/VIDEO button and test the new code by pressing the TV POWER button **N**. If the TV turns on and off, you have programmed the correct code.
5. If the programmed code does not turn the TV on or off, try a different code for the brand of TV.

TV Functions **N O G S**

The following TV control functions are available on the RR-DV93 remote whenever the TV/DVD switch is in the TV position:

TV POWER **N** : Turns the TV on or off.

TV/VIDEO **O** : Switches between the TV antenna input and the video input on the TV set.

CH **</> **G**** : Changes the TV channel.

VOL

On-Screen Icons

During operation of the RDV-1080, you may see icons displayed over the picture:

 **Invalid operation:** Displayed when a button press is not a valid operation accepted by the unit for the disc you are playing.

 **DVD Video multi-angle:** Displayed at the beginning of a scene recorded from multiple angles.

 **DVD Video multi-language:** Displayed at the beginning of a scene recorded with multiple audio languages.

 **DVD Video multi-subtitles:** Displayed at the beginning of a scene recorded with multiple subtitle languages.

NOTE: You can set the unit not to display on-screen icons above via the preference settings described later in this manual.

Back-Panel Connections

This section describes the back-panel connections and settings that must be made during installation of the RDV-1080. These include the power connection, output connections to the preamp or surround processor, selecting of the video standard (PAL or NTSC) for your location, and optional external IR remote connections.

There are three types of output connections:

Analog audio: supplies 5.1 channels of decoded analog audio to the surround processor, using the RDV-1080's built-in D/A converters and digital decoding. These outputs take maximum advantage of the RDV-1080's ability to process a large number of audio formats. *RCA connections.*

Digital audio: unprocessed digital audio signal for use with the surround processor's D/A converters and surround sound decoding. *Optical or Coaxial connections.*

Video: sends the video signal from the DVD player to the surround processor or TV set. *Composite, S-Video, or Component Video connections.*

NOTE: To prevent loud noises, make sure the DVD player and the rest of system is turned off when you make any of these connections.

Analog Audio Outputs

See Figure 4

A set of six RCA jacks, labeled ANALOG OUT sends six channels of decoded analog audio signals (front left, front right, rear left, rear right, center, and subwoofer) from the RDV-1080 to the analog audio inputs of an audio surround processor preamplifier, integrated amplifier, receiver or TV set.

To a surround processor with 5.1 channel inputs, use RCA audio cables to connect each of these six outputs to the matching input on the surround processor (front left to front left, subwoofer to subwoofer, etc.)

To a stereo preamp, processor, or TV set with 2-channel inputs, connect the RDV-1080's front left output to the left channel source input and the front right output to the right channel input.

NOTE: See the *DOWN MIX Settings* topic in the *Setting Preferences* section of this manual for information on matching the analog output signal to your preamp or processor.

Digital Outputs

See Figure 4

The RDV-1080 provides digital outputs (with both optical and coaxial connectors) which may be used in place of, or in addition to, the analog audio output connections described in the previous section. These digital outputs provide a digital audio data stream, which must be used with a processor that accepts a digital signal and has its own D/A conversion and digital surround decoding.

The RDV-1080 provides an optical output and a coaxial output for the video signal. Use whichever you prefer. If you chose the optical connection, remove the plastic cap protecting the connector and save it for future use.

Connect the appropriate cable (optical or 75 ohm coaxial) from the DIGITAL OUT connectors of RDV-1080 to a digital *input* on the surround processor.

NOTE: See the *DIGITAL AUDIO OUTPUT Settings* topic in *Setting Preferences* for important information on matching the digital output signal to your preamp or processor.

Video Outputs

See Figure 4

The VIDEO OUT connectors send the video signal from the RDV-1080 to your surround processor or TV monitor. Three types of video output connections are provided – RCA composite video, S-Video, and Component Video. Choose the type of video output connection that best matches the inputs on your TV or surround processor. Connect the TV MONITOR *output* (from the RCA composite, S-Video, or Component Video connectors) to the corresponding *input* on your TV or surround processor, using appropriate video cables.

NTSC/PAL Switch

Various regions of the world use two different video standards. For example, the US uses the NTSC standard while most countries in Europe use the PAL standard. The output of the RDV-1080 must be set to match the standard your TV accepts. Put the switch in the *left* position for use with NTSC video equipment. Put it in the *right* position for the use with PAL equipment.

NOTE: This switch only relates to the hardware configuration of your TV set and other components. Regardless of the setting, the RDV-1080 can play DVD discs encoded in either format, converting the signal to the format selected with the NTSC/PAL switch.

EXT REM IN/OUT Connectors

The EXT REM IN receives IR command codes relayed from an infrared receiver (Xantech, etc.). This feature is useful when the unit is installed in a cabinet and the front-panel IR sensor is blocked. Consult your authorized Rotel dealer for information on IR receivers and the proper wiring of a plug to fit the connector.

The IR signals received by the RDV-1080 can be relayed to other components using external IR emitters or hardwired connections from the EXT REM OUT jack. For example, you might place such a remote IR emitter in front of your TV's IR sensor to receive the TV commands from the RR-DV93 remote.

See your authorized Rotel dealer for information on IR repeater systems and connecting them to the EXT REM OUT jack on the RDV-1080.

AC Power Input 21

It is best to plug the RDV-1080 directly into a 2-pin polarized wall outlet. Avoid the use of extension cords.

Your RDV-1080 will automatically configure itself for the proper AC line voltage ranging from 110 volts to 240 volts at 50/60Hz. No setting is required to match the unit to your local voltage.

Plug the supplied cord into the AC INPUT receptacle on the back of the unit. After all connections have been made, plug the cord into an appropriate AC wall outlet.

NOTE: *If you are away from home for an extended period of time, it is a sensible precaution to unplug your audio/video components.*

Basic Operation

The RDV-1080 can be operated using its front-panel buttons or from corresponding buttons on the supplied infrared remote control. Specific instructions for each of the basic operating controls are detailed here. Additional features, as well as settings available from the On-Screen Displays are described in later sections of the manual.

STANDBY Switch 1

DVD POWER Switch M

Standby LED 2

The LED above the front-panel STANDBY button illuminates when the RDV-1080 is connected to a live AC outlet, but is in standby mode. Press the STANDBY button or remote control DVD POWER button to fully activate the RDV-1080, indicated by the front-panel display being illuminated. Press either button again to put the RDV-1080 in standby mode; the display turns off and the LED illuminates.

Pressing the OPN/CLOSE button or PLAY ► will also activate the unit from standby mode.

NOTE: *You can choose to use an Auto Standby function that puts the unit in standby mode after 30 or 60 minutes of inactivity. See the Setting Preferences section of this manual.*

Front-Panel Display 4

DISPLAY OFF Button 7

A lighted display on the front-panel of the RDV-1080 provides information about the status of the unit, activation of special features, and track/time information.

The display can be turned off by pressing the DISPLAY OFF button which will light the LED above the button. Press the button again to turn the display back on.

See the illustration at the front of this manual for the location of each section of the display:

Title/Group 4A displays the number of the current *Title* or *Group*.

Chapter/Track 4B displays the number of the current *Chapter* or *Track*.

Step 4C displays the current step number of the program.

Audio Format 4D displays the digital audio format of the inserted disc.

B.S.P./Bonus 4E indicates when a DVD Audio disc contains B.S.P. (Browsable Still Pictures) or a Bonus Group.

Disc Type 4F displays the type of disc inserted in the unit.

Function 4G indicates which special features are activated.

Time Mode 4H indicates which time mode is shown in the Multi-Information Window of the Display.

Audio Channel 4I shows which of the six possible audio channels are in use.

Multi-Information 4J shows time and status information in an alphanumeric display.

Audio LED Indicators 3 6

Five front-panel LEDs provide information about the format of the disc being played.

DVD Audio 3 lights when the disc contains DVD Audio programming.

Sampling Rate 6 indicates the sampling frequency of the digital bitstream

Disc Drawer 9

OPN/CLOSE Button 11 A

A motor-driven disc drawer, located in the center of the RDV-1080, slides out to accept a disc and retracts for playback. Place the disc in the drawer label-side up. Make sure the disc is properly centered in the tray. Do not use accessory stabilizer devices.

When the disc drawer is closed, pressing the OPN/CLOSE button opens the drawer. Press the button again to close the drawer. The drawer also closes when the PLAY ► button is pressed.

In addition, the drawer can also be closed from the opening On-Screen Display by moving the cursor over the CLOSE icon and pressing the ENTER button on the remote.

Playing a Disc PLAY/SELECT Buttons 14 Z

Press the PLAY ► button to start playing the disc from the beginning. If the disc drawer is open, it will close automatically.

The PLAY ► button always starts play from the beginning of the disc, except when it is after the PAUSE 11 button has been pressed. In this case, the disc will resume playing from the current location.

Playback can also be started from the Opening Screen Display by moving the cursor over the PLAY icon and pressing the ENTER button on the remote.

Stopping a Disc STOP/CLEAR Buttons 10 1

Press the STOP ■ button to stop a disc that is playing. Playback will also stop when the DVD POWER button on the remote is pressed.

The RDV-1080 memorizes the point at which the disc stopped playing, with an option of resuming play at that point (see RESUME button, following). This stored position remains in memory even if the unit is put in standby mode; however, it is erased from memory when the disc drawer is opened.

Resuming Play RESUME Button P

The RESUME button restarts playback after it has been stopped. Instead of playing from the start of the disc, the RESUME button restarts play at the last location on the disc when play was stopped.

NOTE: The stored location is erased when the disc drawer is opened.

Pausing Play/Still Frame PAUSE/STROBE Buttons **[2]** **[AA]**

Press the PAUSE **[2]** button to temporarily suspend play. To resume playing the disc from the current location, press the PLAY **[▶]** button.

Still-Frame: When playing a video disc, a still-frame picture remains on the TV screen with no sound when the PAUSE **[2]** button is pressed. Press the button again to advance to the next still-frame picture. Each button press advances one more frame.

Strobe Play: With playback paused, press and hold the PAUSE **[2]** button for more than one second. The unit displays the next nine still-frame images on the TV screen.

NOTE: Activating the Strobe feature during playback will also display nine images; however, these images will update in real-time.

Finding a selection Fast forward/reverse TRACK Buttons **[3]** **[J]**

The TRACK **[◀◀ ▶▶]** buttons serve two functions: to skip forward/back to the beginning of the next selection or to play forward/back at high speed.

Skip forward/back: During playback, pressing the right TRACK **[◀◀ ▶▶]** button advances to the beginning of the next *Title, Chapter, or Track*. Pressing the left button returns to the beginning of the current scene or song. Pressing twice quickly in succession returns to the beginning of the previous track.

Press the button as many times as necessary to find the desired scene or selection.

With a DVD Audio or Audio CD, this feature also works to find a selection when playback is stopped. This feature may not work with Video CD/SVCD discs with the PBC function enabled.

NOTE: There are other methods of locating specific selections on a disc, including direct access with the NUMERIC buttons and using the On-Screen Display features. See *Playing Specific Selections* for details.

High Speed Play: During playback, press and hold one of the TRACK **[◀◀ ▶▶]** buttons for high speed play, either forward or backward. You will continue to see and hear high speed audio/video. Release the button to resume normal playback.

NOTE: Variable high speed play is also available, using the SHUTTLE knob.

Variable Speed Play SHUTTLE Knob **[K]**

The large knob at the bottom of the remote provides two functions: variable high-speed play and variable slow-motion.

For high-speed play: During playback, rotate the SHUTTLE knob for video and audio playback at high speed. Rotate clockwise for forward and counterclockwise for reverse. The more you rotate the knob, the faster the speed. Release the knob to return to normal play.

For slow-motion: Press the PAUSE **[2]** button to pause playback of a video disc, then rotate the SHUTTLE knob for slow-motion playback. Rotate clockwise for forward and counterclockwise for reverse. Rotating the knob more increases the slow-motion speed. Release the knob to return to the still-frame image. Press PLAY **[▶]** to resume normal playback.

NOTE: The sound is muted during slow-motion play. Slow-motion is not available on Audio CDs. Reverse slow-motion is not available Video CD/SVCD discs.

Advanced Features

The RDV-1080 provides several advanced features for controlling the audio/video content displayed during playback. These include progressive scanning, zooming, changing the scene angle on DVD Video discs, selecting alternate languages for the audio portion of DVD programs, and selecting subtitle languages on DVD programs, picture adjustments, and VSS for simulated surround sound from a 2-channel stereo system or TV. This section of the manual describes these features.

Setting Scan Mode (NTSC only) PROG SCAN Button **[B]** PROGRESSIVE LED **[5]**

Images appear on a TV screen by rapidly displaying a series of horizontal scan lines. The conventional method for displaying these lines is interlaced scanning. Half of the horizontal lines are displayed at a time followed by the other half, the two groups visually merging to form a single video image. Interlaced scanning is always used in the PAL video standard and, until recently, has been used for all NTSC video as well.

A more advanced scanning system has been developed for some NTSC TV monitors. This system scans all horizontal lines at a time, doubling the number of lines that appear at one time, resulting flicker-free, high-density picture. The RDV-1080 provides this Progressive Scan option. To enjoy progressive scanned video, your TV monitor **must** have Progressive Video inputs.

NOTE: The Progressive Scan feature only works with NTSC TV monitors. The feature is only available when the NTSC/PAL switch on the rear-panel is set to the NTSC position. A disc encoded with PAL standard video will always be played with standard interlaced video, regardless of the Progressive Scan feature.

DVD video discs can be classified into two types; film source and video source (Some DVD Video discs contain both film source and video source material). Film sources are recorded as 24-frame-per-second information, while (NTSC) video sources are recorded as 30-frame-per-second (60-field-per-second interlaced) information.

When playing film source material, uninterlaced progressive output signals are created using the original information. When playing video source material, the unit interpolates extra lines to create an uninterlaced picture and outputs this as the progressive scan signal.

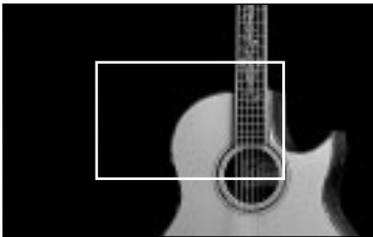
To activate progressive scan, press the PROG SCAN button on remote while playback is stopped. An indicator appears in the front-panel display. To return to normal scanning, press the button again.

The **Digital Direct Progressive LED** lights when the unit is configured for progressive non-interlaced scanning and the DVD Video programming has film source progressive content.

Zoom In/Out ZOOM Button

When playing a video disc, the RDV-1080 can zoom in to enlarge a section of the picture up to 1024 times its original size or zoom out to reduce a picture to 1/8 of its original size. The zoom feature is available for full-motion video during playback or for still-frame pictures while the unit is paused.

To zoom in or out, use the ZOOM buttons on the remote. Each press of the ZOOM + button doubles the size of the picture. Each press of the ZOOM - button halves the size of the picture.



An icon at the top left of the screen shows the current magnification. A rectangular box represents the portion of the original image currently being displayed.

To move the zoomed-in position, use the CURSOR </>/▲/▼ buttons. The zoomed image will move on the screen as indicated by the box in the graphic display.

To return to normal size, press ENTER.

Selecting a Scene Angle ANGLE Button

Some DVD Video discs have scenes that can be viewed from multiple user-selectable camera angles. Multi-angle parts of a scene are indicated by a screen icon at the beginning of the scene. There are three ways to select a scene angle:

From the normal screen

- Press the ANGLE button on the remote. The following icons appear in the top left corner of the screen. The first of three available angles is selected:



Selecting Subtitles SUBTITLE Button

Some DVD Video, DVD Audio, and Video CD/SVCD discs can display subtitles in various languages during playback. Subtitled recordings are indicated by a  icon at the beginning of the scene. There are two ways to select the subtitle display.

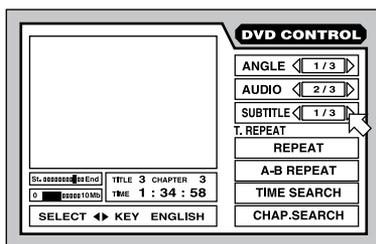
From the normal screen:

- Press the SUBTITLE button on the remote. The following icons appear indicating that the second of three available subtitle languages is selected:

 ON ◀ 2/3 ▶ ENGLISH

- Press the SUBTITLE button again or press the CURSOR ◀/▶ buttons to change to the next available subtitle language. Each press will skip to the next option, including turning the subtitles off.

From the On-Screen Display:



- Press the ON-SCREEN button to show the DVD CONTROL screen.
- Use the CURSOR ▲/▼ buttons to move the  over the subtitle field as shown above.
- Press the SUBTITLE button or the CURSOR ◀/▶ buttons to change to the next available subtitle option.
- Press the ON-SCREEN button to close the display window.

NOTE: The position of the subtitle field differs slightly on SVCD screens. SVCD discs always have four subtitle options (plus off) to cycle through, even if there are no subtitles available in some of the positions.

NOTE: See the list of abbreviations used for languages in Figure 7.

NOTE: If the  icon appears, subtitles are not available.

Adjusting the Picture TH POSITION Button

When playing video discs, the RDV-1080 provides picture adjustments, much like the video controls on a TV monitor. The unit stores four sets of adjustments, which can be selected according to personal preference.

To adjust these picture controls: When a video image is being displayed, press the TH POSITION button on the remote. The following adjustment screen appears:



There are four presets (groups of settings) indicated as tabs with the active preset highlighted. NORMAL and CINEMA are factory presets and cannot be adjusted. USER1 and USER2 presets can be used to store custom settings.

To change presets: Press the TH POSITION button again, cycling through until you reach the desired tab.

There are seven adjustable parameters in a preset, with the selected parameter on the left side of the display:

- Brightness** controls the overall brightness of the picture.
- Contrast** determines the difference between the lightest and darkest tones.
- Sharpness** controls picture detail.
- Gamma** changes the brightness of mid-tones without altering dark or light tones.
- Tint** controls overall color balance.
- Color** determines how saturated or vibrant the colors appear.
- Y Delay** determines color gap of the display.

To select a parameter: Press one of the CURSOR ▲/▼ buttons. Each press will cycle through to the next option, as shown on the screen display.

To adjust a parameter: Press one of the CURSOR ◀/▶ buttons to increase or decrease the setting, as shown on the bar graph on the screen display.

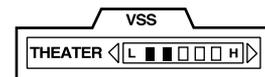
To close the adjustment window: Press the ENTER button. The window will automatically close following 10 seconds of inactivity.

Virtual Surround Sound VSS Button

When playing Dolby Digital sources on a 2-channel stereo or TV, the VSS (Virtual Surround Sound) feature can simulate the 3-dimensional effects of a surround sound system.

NOTE: VSS only works on Dolby Digital source material containing rear surround signals. The VSS feature does not change the signal available at the digital outputs. When used, VSS overrides the downmix and compression features that may be activated for Dolby Digital

To activate the VSS feature: During playback, press the VSS button on the remote. A display window appears on screen with the current VSS mode shown on the left side.



There are four settings for VSS:

- Action** is suitable for action films and sports where sounds move around the room
- Drama** provides warm, natural sound.
- Theater** simulates the sound of a good movie theater.
- Off** deactivates the VSS feature.

To change settings: Press the VSS button again, cycling through until the desired effect appears on the display window.

To adjust the intensity of the effect: The intensity of each VSS effect can be increased or decreased in five steps as shown on the bar graph in the display window. Press one of the CURSOR ◀/▶ buttons to change the intensity.

To close the adjustment window: Press the ENTER button. The window will automatically close following 10 seconds of inactivity.

Playing Specific Selections

The RDV-1080 provides a several methods for locating specific selections from a disc. The simplest method, using the TRACK  buttons, is covered in the *Basic Operations* topic. This section details additional methods, such as finding a selection with the disc menu, the On-Screen Display, or the Digest (thumbnail images of the disc's content). Also cov-

ered is the use of NUMERIC buttons to specify selections along with advanced features like random, program, and repeat play functions.

Please review the *About Discs* section of this manual to learn how various types of discs are divided into *Titles*, *Chapters*, and *Tracks*. Finding selections on various disc formats may require slightly different procedures as noted in the following instructions.

Find a Scene from a DVD Menu

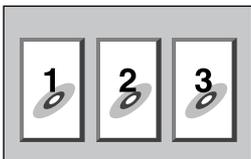
TOP MENU Button **F**

MENU Button **W**

DVD Video and DVD Audio discs usually have menus that display the selections on the disc on the TV screen. These menus may include information about each scene, such as movie names, song titles, artist information. A *top menu* typically shows the highest level of organization on a disc: *Titles* for a DVD Video disc or *Groups* for a DVD Audio Disc. Other *menus* may show additional selections, such as individual scenes. Each disc package should include information on the menu structure.

To make selections from a disc menu when a DVD disc is loaded:

- Press the TOP MENU or MENU button on the remote. The following display window appears on the TV screen, showing the available selections.



- Press the CURSOR **◀/▶/▲/▼** buttons to select the desired item.
- Press the ENTER button to play the scene.

Some discs let you enter one of the scene numbers from this display using the NUMERIC buttons on remote.

Examples:

To select 1, press: 1
 To select 14, press: +10 ⇨ 4
 To select 28, press: +10 ⇨ +10 ⇨ 8
 To select 30, press: +10 ⇨ +10 ⇨ 10

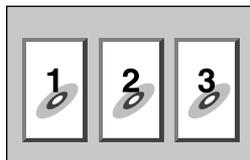
Find a Scene from a Video CD/SVCD Menu

RETURN Button **C**

Some Video CD/SVCD discs have a feature called PBC (PlayBack Control) which provides a menu system similar to the DVD menus. With a PBC-enabled disc in the player, the PBC menu appears on the TV screen automatically when the PLAY **▶** button is pressed.

To use the PBC menus:

- Press the PLAY **▶** button. The following display window appears on the TV screen, showing the available selections.



- Press the NUMERIC buttons to select a scene. To select item 1, press the 1 button. To select item 14, press the +10 button and then the 4 button. Playback of the selected scene begins automatically.
- Press the RETURN button on the remote to display the menu again.
- If NEXT or PREVIOUS appear on screen during playback, use the TRACK **◀◀ ▶▶** buttons to move to the next or previous scene. This feature may differ on some discs.

To disable the PBC feature, start playback by entering the scene number using the NUMERIC buttons instead of pressing PLAY **▶**. See the next topic for direct access selection using the NUMERIC buttons.

To reactivate the PBC feature: If you have disabled the PBC feature and want to reactivate it, press STOP **■** to halt playback, then PLAY **▶** to display the PBC menu. The PCB feature can also be reactivated from the On-Screen Display:

- Press ON-SCREEN to display the Video CD or SVCD CONTROL screen.
- Use the CURSOR **▲/▼** buttons to move the **⌂** over the PBC CALL field.
- Press ENTER to display the PBC menu.

Entering a Scene Number

NUMERIC Buttons **0-9**

+10 Button **S**

Another method of locating a scene on the disc is to enter the number of the scene using the NUMERIC buttons on the remote.

On DVD Video, DVD Audio, and Audio CD discs, this direct access feature is available at any time when the disc is stopped or during playback (except when a menu screen is already displayed on the TV screen).

On Video CD and SVCD discs, this feature is available when the disc is stopped or during playback with the PCB feature disabled.

To select a Title/Group/Track number:

Enter the desired number using the NUMERIC buttons on the remote. The selected number appears in the front-panel display and playback at the beginning of selected scene begins automatically.

Examples:

To select 1, press: 1
 To select 14, press: +10 ⇨ 4
 To select 28, press: +10 ⇨ +10 ⇨ 8
 To select 30, press: +10 ⇨ +10 ⇨ 10

The specific item selected varies with the disc, its contents, and whether the player is stopped or playing as follows:

When playback is stopped:

DVD Video:	<i>Title or Chapter*</i>
DVD Audio:	<i>Group or Track*</i>
Video CD/SVCD:	<i>Track</i>
Audio CD:	<i>Track</i>

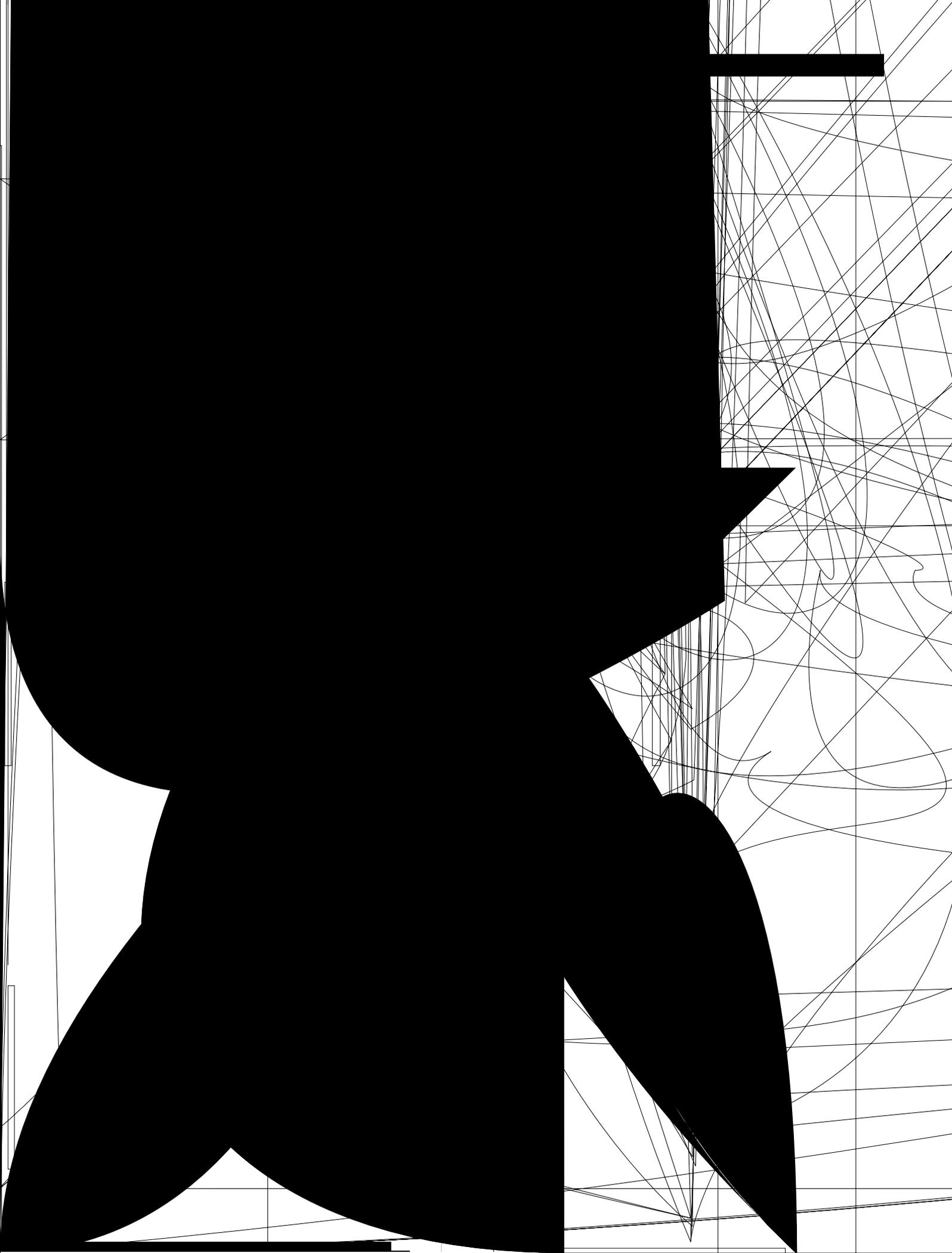
** If the disc contains only one Track or Group.*

During playback:

DVD Video:	<i>Chapter</i>
DVD Audio:	<i>Track</i>
Video CD/SVCD:	<i>Track</i>
Audio CD:	<i>Track</i>

NOTE: If the  icon appears, the scene you have selected is not available.

NOTE: The direct access feature is not available during DVD playback when a menu is being shown on screen. This feature is also not available during PBC playback on Video CD/SVCD discs.



Play the Bonus Group on a DVD Audio Disc

Some DVD Audio discs contain a Bonus Group of tracks available only to users with a key number password. When a disc with such a Bonus Group is loaded, the word BONUS appears in the front-panel display. The Bonus Group is always assigned to the last group on the disc, i.e. if there are five groups, the Bonus Group will be Group 5.

After obtaining the key number, you can play the Bonus Group by selecting it with the NUMERIC buttons and entering the key number:

- With the DVD Audio disc stopped, enter the number for the Bonus Group, using the NUMERIC buttons on the remote.

Examples:

To select 1, press: 1
 To select 14, press: +10 ⇨ 4
 To select 28, press: +10 ⇨ +10 ⇨ 8
 To select 30, press: +10 ⇨ +10 ⇨ 10

The following prompts appear in the front-panel display and on the TV screen:



- Enter the key number password using the NUMERIC (0–9) buttons.
- Example:*
 To enter 1234, press: 1 ⇨ 2 ⇨ 3 ⇨ 4
- If the key number is entered correctly, playback of the Bonus Group begins automatically. If the wrong password is entered, the prompts reappear. Try again.
 - To clear the prompts from the screen, press STOP ■.
 - Opening the disc drawer or turning the unit off removes the successfully-entered password from memory. It will need to be re-entered the next time.

Selecting Still Pictures on a DVD Audio Disc

PAGE Button [R]

Most DVD Audio discs contain still pictures which appear automatically as the disc plays. Some discs contain extra pictures which can be manually viewed during playback. When a DVD Audio disc with this B.S.P. (Browsable Still Pictures) feature is played, a B.S.P. indicator lights up in the front-panel display.

At the beginning of a selection with B.S.P. images, the word PAGE appears on the TV screen. Here's how to view the extra images:

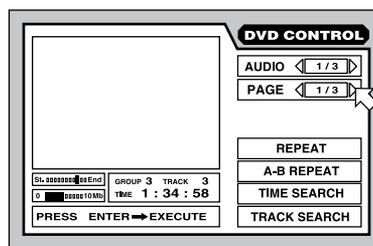
From the normal screen:

- Press the PAGE button on the remote. Icons appear indicating which of the available still pictures is being displayed.

PAGE ◀ 1 / 3 ▶

- Press the PAGE button again or press the CURSOR ◀/▶ buttons to display the next available B.S.P. image.

From the On-Screen Display:



- Press the ON-SCREEN button to show the DVD CONTROL screen.
- Use the CURSOR ▲/▼ buttons or press PAGE to move the ⊞ over the PAGE field as shown above.
- Each time you press the CURSOR ◀/▶ buttons, the next available B.S.P. image appears on screen.
- Press the ON-SCREEN button to close the display window.

NOTE: If the ⊙ icon appears, B.S.P. images are not available.

More Playback Features

Four additional playback features are described in this section of the manual: RANDOM for playing selections in random order, PROGRAM for rearranging the order in which selections are played, REPEAT which repeats the current selection or the entire disc, and A-B REPEAT which repeats a desired part. In addition, you can change the TIME DISPLAY.

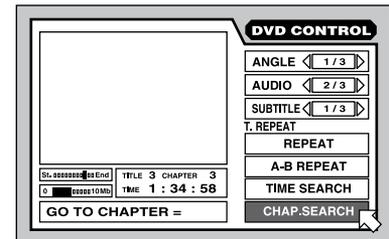
Play in Random Order

RANDOM Play

The Random Play feature is available for DVD Video, Audio CD, and Video CD/SVCD disks. When activated, the features plays all of the Tracks on the Disc (except Bonus Group Tracks)

in random order, continuing until all have been played once, but none have been repeated. At that point, Random play automatically stops.

- While the disc is stopped, press the ON-SCREEN button to show the CONTROL screen. The screen may appear slightly different for different types of discs.



- Use the CURSOR ▲/▼ buttons to move the ⊞ over the RANDOM field.
- Press ENTER to begin Random play.
- Press the ON-SCREEN button to close the display window.
- During Random Play, press STOP ■ to halt playback and cancel the Random feature.

NOTE: During Random Play of an Audio CD, selecting RANDOM from the On-Screen Display and pressing ENTER will cancel the Random feature and return to normal play mode.

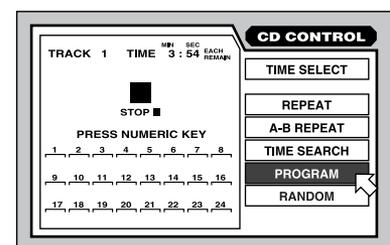
Play in Desired Order

PROGRAM Play

The Program Play feature is available for DVD Audio, Audio CD, and Video CD/SVCD disks. The feature can specify up to 24 Tracks to be played in a specified order. The same Track may be programmed more than once.

To begin Program Play:

- While the disc is stopped, press the ON-SCREEN button to show the CONTROL screen. The screen may appear slightly different for different types of discs.



- Use the CURSOR ▲/▼ buttons to move the  over the PROGRAM field.
- Use the NUMERIC buttons to enter *Tracks* in the desired order. Each number appears in the display of 24 available “slots”.

For DVD Audio discs, you must enter the *Group* number, followed by the *Track*. For example, to enter Track 14 of Group 2:

Press: 2  +10  4

For Audio CD and Video CD/SVCD discs, just enter the *Track*. For example, to enter Track 24:

Press: +10  +10  4

- If you make a mistake, press the CANCEL 



TV Monitor Type

There are two types of TVs: standard 4:3 aspect ratio and new wide-screen 16:9 aspect ratio monitors. The RDV-1080 must know which type of TV you are using. With the standard aspect ratio TV, you also need to tell the RDV-1080 how to adjust wide-screen video images to fit. Use this preference item to configure the video output to match your TV:

4:3 LB (Letter Box)



Select this option for a standard TV and to display wide-screen video images full-width with black letterbox masks, top and bottom.

4:3 PS (Pan Scan)



Select this option for a standard TV and to display wide-screen video images with portions of the image cut off the left and right sides.

16:9 AUTO (Wide Screen)



Select this option for a wide-screen TV that automatically senses and adjusts the aspect ratio to match the incoming video signal. All aspect-ratio matching is handled by the TV.

16:9 NORMAL (Wide Screen)

Select this option for a wide-screen TV that always displays a wide-screen image regardless of the aspect ratio of the incoming video signal. The RDV-1080 automatically adjusts the aspect ratio to match the wide-screen TV and sends the proper video signal. If you play a normal 4:3 aspect program in this mode, the picture quality may change as the RDV-1080 converts it to fill the screen.

4:3 MULTI LB 4:3 MULTI PS 16:9 MULTI AUTO 16:9 MULTI NORMAL

These four options provide the same functions as those listed above, except that they are selected for a TV monitor that accepts either an NTSC or a PAL video signal. The RDV-1080 sends an NTSC or a PAL signal depending on the format of the disc, regardless of the setting of the back-panel NTSC/PAL switch. Most consumer TVs do not have this feature.

To change TV MONITOR TYPE setting:

- **On the PREFERENCE 1 screen**, use the CURSOR ▲/▼ buttons to move the ⌂ over the MONITOR TYPE item.
- Press the CURSOR ◀/▶ buttons to choose the desired setting.

PROGRESSIVE SCAN Mode

This setting optimizes the progressive (non-interlaced) scanning when the Progressive Scan feature is used. The setting is only in effect if you are using an NTSC TV monitor with the back-panel NTSC/PAL switch set to NTSC. It has no effect unless your monitor accepts progressive scan video signals and you activate the RDV-1080's Progressive Scan feature.

To change PROGRESSIVE SCAN setting:

- **On the PREFERENCE 1 screen**, use the CURSOR ▲/▼ buttons to move the ⌂ over the PROGRESSIVE MODE item.
- Press the CURSOR ◀/▶ buttons to choose the desired setting.

AUTO: The DVD-1080 recognizes the picture type (film source or video source) based on information embedded at the start of the disc. This is the default setting and generally does not need to be changed unless you are experiencing a "noisy" picture on certain discs.

Video 1: This option is optimized for static still-frame images.

VIDEO 2: This option is optimized for dynamic full-motion images.

FILM: This option is optimized for film source images.

SMART: The option may be best for discs with both film source and video source material. The RDV-1080 senses the source for each scene and adjusts accordingly.

DIGITAL AUDIO OUTPUT Mode

Discs are encoded with a variety of digital formats and sampling frequencies, from the PCM bistream used for Audio CDs to formats designed to handle multichannel surround sound. The signal provided at the digital outputs must be suitable for the preamp or processor that will decode it. For example, you cannot send a Dolby Digital bitstream to a two-channel preamp designed only to accept a PCM signal from a CD player. Likewise, there is no point in sending a DTS bitstream to a surround processor that does not have DTS processing. This preference setting ensures that the digital data stream from the digital output of the RDV-1080 matches the preamp or processor it is sent to. The RDV-1080 sends compatible signals and converts other types of digital signals to formats specified in the setting.

There are three available settings. The specifics of what digital output format is sent for each setting and each type of program material is supplied in the table shown in Figure 5.

To set the DIGITAL OUTPUT MODE:

- **On the PREFERENCE 2 screen**, use the CURSOR ▲/▼ buttons to move the ⌂ over the DIGITAL OUTPUT MODE item.
- Press the CURSOR ◀/▶ buttons to choose the desired setting.

PCM ONLY: Supplies only a linear PCM digital signal. Use this setting with preamps expecting a bitstream from an CD Player.

STREAM/PCM: Supplies almost all possible digital formats to the outputs without conversion. Use with surround processors that have DTS, Dolby Digital, and MPEG processing. In this configuration, you will be using the surround processor's digital processing instead of the RDV-1080's.

DOLBY DIGITAL/PCM: Supplies a Dolby Digital or PCM digital output signal. Use with surround processors that have Dolby Digital processing, but not DTS or MPEG processing.

NOTE: If the DIGITAL AUDIO OUTPUT mode is set to "STREAM/PCM", the speaker settings described later in the manual are disabled. Use the settings on the surround processor to configure your speakers.

DOWN MIX Mode

The RDV-1080 can provide fully decoded 5.1 channel surround signals at the analog audio outputs. To take full advantage of this decoded signal, the preamp or amplifier receiving it should be equipped with 5.1 channel analog audio inputs. If not, the RDV-1080 can “downmix” the full surround sound signal to a signal the preamp or surround processor can handle. This setting only affects the analog output signal when playing a DVD Video disc with multichannel surround audio. Choose the setting that best matches your system.

To change DOWN MIX MODE setting:

- **On the PREFERENCE 2 screen**, use the CURSOR ▲/▼ buttons to move the \mathfrak{R} over the DOWN MIX MODE item.
- Press the CURSOR ◀/▶ buttons to choose the desired setting.

Lt/Rt: Downmixes the full 5.1 channel signal into an encoded 2-channel surround signal. Use this setting to send the analog audio signal to a surround sound decoder that has analog surround processing (such as Dolby® Pro Logic®), but does not have 5.1 channel analog inputs.

Lo/Ro: Downmixes the 5.1 channel signal to a conventional 2-channel stereo signal. Use this setting to send the analog audio signal to a preamp, TV, or recorder with conventional two-channel stereo input and no surround sound decoding capability.

OFF: Supplies the full 5.1 channel signal to the analog audio outputs. Use this setting for surround processors that have 5.1 channel audio inputs. This setting must be used when you select the 5.1 CHANNEL or EXPERT setting in the SPEAKER SETTING preferences.

NOTE: The DOWN MIX feature does not work when the VSS function is activated.

COMPRESSION Setting

When playing a Dolby Digital DVD Video Disc, the RDV-1080 can compress the dynamic range of the audio signal. This reduces the difference between quiet sounds and loud sounds. It may be desirable if your system is routinely taxed by loud passages or for listening at low volume settings. Choose the setting that best matches your system.

To change the COMPRESSION setting:

- **On the PREFERENCE 2 screen**, use the CURSOR ▲/▼ buttons to move the \mathfrak{R} over the COMPRESSION item.
- Press the CURSOR ◀/▶ buttons to choose the desired setting.
 - ON:** Activates the Compression feature (only for DVD Video Discs with Dolby Digital recordings).
 - OFF:** No compression. Full dynamic range.

DTS BASS MANAGEMENT Setting

Settings described later in this section enable you to match the RDV-1080's 5.1 channel audio output to the specific capabilities of your speakers (i.e. for large or small speakers.) This setting gives you the option to override these settings and treat all speakers as “large” when playing DTS-encoded disc. This setting only functions when playing a DTS disc; the default speaker settings are in effect for all other discs.

To change the setting:

- **On the PREFERENCE 2 screen**, use the CURSOR ▲/▼ buttons to move the \mathfrak{R} over the DTS BASS MANAGEMENT item.
- Press the CURSOR ◀/▶ buttons to choose the desired setting.
 - OFF:** This is the default setting for DTS recordings. Overrides the speaker settings and treats all speakers as “large”.
 - ON:** All speaker settings are effective, even when playing a DTS recording. Although this setting will not match the full DTS specification, it may be preferred if you have small speakers that cannot handle significant bass information.

AUTO STANDBY Setting

The RDV-1080 has an Auto Standby feature that will put the unit in standby mode following either 30 or 60 minutes of inactivity.

To change the setting:

- **On the PREFERENCE 2 screen**, use the CURSOR ▲/▼ buttons to select the AUTO STANDBY item.

- Press the CURSOR ◀/▶ buttons to choose the desired setting.

60: Puts the unit in standby mode after 60 minutes of inactivity.

30: Puts the unit in standby mode after 30 minutes of inactivity.

OFF: The Auto Standby function is disabled. The unit will stay on until it is manually put in standby mode.

SCREEN SAVER Setting

TV Monitors can be easily damaged if a static image is displayed for a long time. The Screen Saver feature automatically replaces a steady image with a safer image following several minutes of inactivity. There are four optional settings.

To change the setting:

- **On the PREFERENCE 2 screen**, use the CURSOR ▲/▼ buttons to select the SCREEN SAVER field.
- Press the CURSOR ◀/▶ buttons to choose the desired setting.
 - MODE 1:** The Screen Saver image appears and “scrolls”.
 - MODE 2:** The Screen Saver image appears and does not scroll.
 - DIMMER:** The existing image is darkened to protect the screen.
 - OFF:** The Screen Saver function is disabled.

NOTE: If Mode 1 causes picture instability with your TV, select a different mode.

SPEAKER Settings

The SPK. SETTING page of the PREFERENCES DISPLAY provides a simple “5.1 CHANNEL” or “2 CHANNEL” selection that is adequate for most users to configure the output of the RDV-1080 for their loudspeakers. Alternatively, you can select the “EXPERT” setting for access to more detailed configuration options.

To configure the SPEAKER setting:

- **On the SPK. SETTING screen**, the top field will be automatically highlighted.
- Press the CURSOR ◀/▶ buttons to choose the desired setting.

2 CHANNEL: Use this setting when connecting to a 2-channel stereo system or a TV set with only two speakers.

5 CHANNEL: Use this setting when connecting to a 5.1 channel amplifier with front, rear, center, and subwoofer speakers.

EXPERT: This setting is the same as the 5.1 CHANNEL option, except that it gives access to the additional adjustments grayed out on the SPK. SETTINGS display. These allow you to fine-tune the performance of your surround system, but may require some expertise to fully understand. See the next section for instructions on these settings.

NOTE: If you select 5.1 CHANNEL or EXPERT, set the DOWN MIX preference to OFF.

NOTE: The Dolby LFE (Low Frequency Effect) signal is sent to the Subwoofer output, regardless of the speaker setting so you can always connect a subwoofer to your system.

NOTE: If you connect the Digital Output to a surround processor and set the DIGITAL AUDIO OUTPUT option to "STREAM/PCM", the speaker settings described here are disabled. Use the settings on the surround processor to configure your speakers.

EXPERT SPEAKER Settings

These additional options on the SPK. SETTING page of the PREFERENCES display are only available if you have selected "EXPERT" for the top item. Otherwise, these settings are grayed out.

SPEAKER SIZE Settings:

These are used to tailor the surround sound audio processing to match your specific speakers. To configure the SPEAKER setting:

- **On the SPK. SETTING screen**, use the CURSOR ▲/▼ buttons to move the ⌂ over the speaker you wish to configure.

F.SP: front speakers
C.SP: center speaker
R.SP: rear speakers

- Press the CURSOR ◀/▶ buttons to choose the desired setting:

LARGE: for large speakers which can handle significant bass energy

SMALL: for speakers which cannot fully reproduce the sometimes heavy bass of digital surround sound. This setting redirects low-frequency from these speakers to those that can better handle it.

NONE: use this setting if you have no speakers connected in the speaker position you are configuring (for example, no center speaker).

NOTE: If you set the front speakers to SMALL, you cannot set the other speakers to LARGE.

BASS REDIRECT Settings:

If you have specified any SMALL speakers in the previous item, the low frequencies intended for those speakers will be redirected to either the subwoofer or to the front speakers, depending on the setting of this item. If you have not configured any speakers as SMALL, bass redirect is disabled and "NONE" appears in the setting field.

- **On the SPK. SETTING screen**, use the CURSOR ▲/▼ buttons to move the ⌂ over the BASS field.
- Press the CURSOR ◀/▶ buttons to choose the desired setting:

S. WOOFER: redirects bass from small speakers to the subwoofer.

L/R: redirects bass from small speakers to the front speakers. If the front speakers are configured as SMALL, the S. WOOFER option is automatically selected.

NOTE: The L/R option is only effective when playing a Dolby Digital DVD Video disc. Generally, you should select the S. WOOFER option.

SPEAKER LEVEL Settings:

You can adjust the relative volume of the speakers in your system. The ideal is for the sound from the front, rear, center, and subwoofer speakers to be equal at your listening position in order to reproduce surround sound audio as it was recorded. Alternatively, you can adjust to suit personal preference.

- **On the SPK. SETTING screen**, use the CURSOR ▲/▼ buttons to move the ⌂ over the LEVEL field, then press the ENTER button. The LEVEL field changes color to indicate that the levels can be adjusted.

- Use the CURSOR ▲/▼ buttons to move the ⌂ over the speakers you wish to adjust:

F.SP: front speakers (level is fixed at 0db)

C.SP: center speaker

R.SP: rear speakers

S. WOOFER: subwoofer

- Press the CURSOR ◀/▶ buttons to change the level up or down in 1 dB increments between -6dB and +6dB.

- To exit the LEVEL setting mode, use the CURSOR ▲/▼ buttons to move the ⌂ back over the LEVEL field, and press ENTER. The LEVEL field changes back to its original color.

DELAY Settings:

You can delay the signal from any of the speakers in your system. The ideal is for the sound from the front, rear, center, and subwoofer speakers to reach your listening position at the same time in order to reproduce surround sound audio as it was recorded. Generally, you increase the delay for speakers located close to you and decrease the delay for speakers located farther away.

- **On the SPK. SETTING screen**, use the CURSOR ▲/▼ buttons to move the ⌂ over the DELAY field, then press the ENTER button. The DELAY field changes color to indicate the delay settings can be adjusted.

- Use the CURSOR ▲/▼ buttons to move the ⌂ over the speakers you wish to adjust:

F.SP: front speakers (delay is fixed at 0ms)

C.SP: center speaker (adjustable in 1ms increments from 0ms to -5ms)

R.SP: rear speakers (selectable: 0ms, -5ms, -10ms, and -15ms)

- Press the CURSOR ◀/▶ buttons to change the delay up or down.

- To exit the DELAY setting mode, use the CURSOR ▲/▼ buttons to move the ⌂ back over the DELAY field, and press ENTER. The DELAY field changes to its original color.

Test Tone

To assist in the SPEAKER LEVEL setting procedure, you can turn on a pink-noise test tone signal. This signal makes it easier to hear the relative volumes of the speakers or it can be used with an SPL meter for more accurate setup. To turn on the test tone feature, first make sure that you are in the SPEAKER LEVEL mode.

- **On the SPK. SETTING screen**, use the CURSOR ▲/▼ buttons to move the ⌂ over the TEST TONE field, then press the ENTER button. The field changes color and the test tone begins, shifting from one speaker to the next sequentially.
- When you move use the CURSOR ▲/▼ buttons to move the ⌂ over the speakers you wish to adjust, the test tone signal shifts to that speaker.
 - F.SP:** front speakers
 - C.SP:** center speaker
 - R.SP:** rear speakers
 - S. WOOFER:** subwoofer (no test tone)
- Press the CURSOR ◀/▶ buttons to change the level up or down. You should hear the test tone get louder or softer.
- To exit the LEVEL setting mode, use the CURSOR ▲/▼ buttons to move the ⌂ back over the TEST TONE field, and press ENTER. The field changes back to its original color and the test tone is turned off.

NOTE: The test tone is also available when setting the DELAY, however it serves no useful purpose for this adjustment.

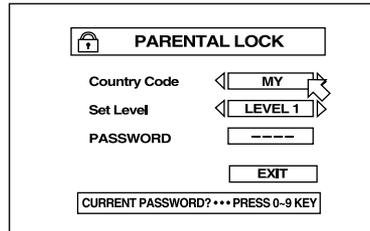
Parental Lock

The RDV-1080 has a Parental Lock feature to prevent children from watching inappropriate DVD Video discs. The feature relies on ratings systems (specific to each country) that set a rating level for discs starting from material suitable for viewing by all children and increasing as the subject matter becomes more inappropriate for children. The Parental Lock feature allows you to set the restriction anywhere from Level 1 to Level 8. A disc with a rating higher than the specified level requires entry of a password for playback. Thus, if you specify a Level 5 restriction, any discs rated Level 6 or higher require a password.

Setting the Parental Lock

With playback stopped or no disc in the unit:

- Press STOP ■ and ENTER on the remote simultaneously. The PARENTAL LOCK screen appears on the TV with the ⌂ over the COUNTRY CODE field.



- Press the CURSOR ◀/▶ buttons to scroll through the list of country codes and make a selection. The codes can be found in Figure 6. Use the country whose standards were used to rate your discs, generally the country where you live.
- Press ENTER. The ⌂ moves to the SET LEVEL field.
- Press the CURSOR ◀/▶ buttons to scroll through the list of setting levels and make a selection. The available options are:

NONE: no restriction

LEVEL 1: the most restrictive

LEVELS 2-7: progressively less restrictive

LEVEL 8: the least restrictive

- Press ENTER. The ⌂ moves to the PASSWORD field.
- Enter a 4-digit password using the NUMERIC (0-9) buttons on the remote. If you make a mistake, you can reenter a different password. Write down your password for safe keeping!
- Press ENTER. The ⌂ moves to the EXIT field. Press ENTER again to exit the Parental Lock screen and return to the Opening Screen.

To Change Parental Lock Settings

With playback stopped or no disc in the unit:

- Press STOP ■ and ENTER on the remote simultaneously. The PARENTAL LOCK screen appears on the TV with the ⌂ over the PASSWORD field.
- Enter your 4-digit password using the NUMERIC (0-9) buttons on the remote. If you enter the wrong password "Wrong! Retry...." appears on the screen and you

cannot proceed. If you enter it wrong more than three times, "NO!" is displayed and the ⌂ jumps to EXIT field. If you enter the correct password, the ⌂ moves to the COUNTRY CODE field.

NOTE: If you forget your password, enter the master password "8888".

- Press the CURSOR ◀/▶ buttons to change the COUNTRY CODE, if desired.
- Press ENTER. The ⌂ moves to the SET LEVEL field.
- Press the CURSOR ◀/▶ buttons to set the desired LEVEL, if desired.
- Press ENTER. The ⌂ moves to the PASSWORD field.
- If you want to change your password, enter a new 4-digit password using the NUMERIC (0-9) buttons on the remote. If not, enter the old password.
- Press ENTER. The ⌂ moves to the EXIT field. Press ENTER again to exit the Parental Lock screen and return to the Opening Screen.

Playback with Parental Lock

When you play a disc that has a rating less than or equal to your specified Level, playback proceeds normally. If you attempt to play a disc that is rated above your specified Level, the following display appears on the TV screen asking if you want to temporarily override the Parental Lock and play the disc:



- To eject the disc, use the CURSOR ▲/▼ buttons to move the ⌂ over the NO field, then press the ENTER button. Eject the disc.
- To play the disc, use the CURSOR ▲/▼ buttons to move the ⌂ over the YES field, then press the ENTER button. The ⌂ moves to the PASSWORD field.
- Enter your 4-digit password using the NUMERIC (0-9) buttons on the remote. If you enter the wrong password "Wrong! Retry...." appears on the screen. If you enter it wrong more than three times, the ⌂ jumps to the NO field. If you enter the correct password, the Parental Lock is temporarily removed and playback begins.

Troubleshooting

If you are experiencing difficulties, consult the following list for possible solutions:

No Power: make sure the unit is plugged in properly.

Remote does not work: check the battery installation, install new batteries, aim remote at unit.

TV/VIDEO-CANCEL, CURSOR, or NUMERIC buttons do not work: TV-DVD switch must be set to TV to operate the TV functions and DVD to operate the RDV-1080.

No picture: check the video cable connection and input setting on TV, turn off Progressive scan feature.

Picture is noisy: do not connect unit directly to VCR (copyguard feature may disrupt video signal), turn off Progressive scan feature or set its mode to VIDEO.

Picture is garbled: Change Screen Saver mode to something other than Mode 1.

Picture does not fill screen: Set TV Monitor type correctly.

No sound: check the audio cable connection and input settings preamplifier.

Garbled sound: Clean the disc surface.

Unit does not operate properly: To reset the microprocessor, turn off the power, unplug the power cord, and reconnect the power cord. Following a sudden temperature change (such as bringing unit or discs inside from extreme cold), allow several hours for possible condensation to clear.

Specifications

General

Readable discs:
DVD Audio, DVD Video, Audio CD, Video CD, SVCD

Video format:
For NTSC discs, the scanning mode can be selected between Interlaced scan and Progressive scan. For PAL discs, only the interlaced scan mode is available.

Other

Power requirements:
AC 110-240 V, 50/60 Hz

Power consumption:
20 W (POWER ON)
1.5 W (STANDBY mode)

Weight:
5.1 kg (11.2 lbs)

Dimensions (W x H x D):
430 mm x 121 mm x 340 mm
16-15/16 inch x 4-13/16 inch x 13-7/16 inch

Video output

COMPONENT (pin jack):
Y Output: 1.0 Vp-p (75 ohm)
PB/PR Output: 0.7 Vp-p (75 ohm)

VIDEO OUT (pin jack):
1.0 Vp-p (75 ohm)

S-VIDEO OUT (S jack):
Y Output: 1.0 Vp-p (75 ohm)
C Output (NTSC): 286 mVp-p (ohm)
C Output (PAL): 300 mVp-p (75 ohm)

Horizontal resolution:
500 Lines

Signal to noise ratio:
65 dB

Audio output

Analog Out (pin jack):
2.0 Vrms (10 k ohm)

Digital Out:
Optical: -21dBm to -15dBm (Peak)
Coaxial: 0.5 Vp-p (75 ohm)

Audio characteristics

Frequency response:

CD (at 44.1 kHz): 2 Hz to 20 kHz
DVD (at 48 kHz): 2 Hz to 22 kHz
DVD (at 96/88.2 kHz): 2 Hz to 44 kHz
DVD (at 192/176.4 kHz) : 2 Hz to 88 kHz

Dynamic range:

16 bit: more than 100 dB
20 bit: more than 110 dB
24 bit: more than 110 dB

Wow and flutter:

Unmeasurable (less than ± 0.002%)

Total harmonic distortion:

16 bit: less than 0.0018%
20/24 bit: less than 0.0012%

All specifications are accurate at the time of printing.

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