GDV-850

**Progressive Scan
DVD-Audio/Video Player**

ADCOM

WELCOME

Dear Fellow ADCOM Product Owner,

Welcome to the ADCOM family! For more than twenty years, ADCOM products have delivered excellent performance and value for customers around the world. Our products are designed by our experienced and demanding engineering team, built to the highest standards in our factory, and sold and serviced through dealers, custom installers, and other retailers whose primary goal is your complete satisfaction.

We know you are anxious to see and hear your new DVD player in action, but please take a few minutes to read this owner's manual before connecting the DVD player to your system. It is particularly important that you connect your DVD player to your preamplifier while the amplifier and preamplifier are unplugged and your other equipment is turned off. This will protect your equipment from potential short circuits that may occur during installation. In addition, it is important that you allow for adequate ventilation around your DVD player and other equipment, since excessive heat buildup can shorten the life of any electronic product, including the DVD player. Once you have correctly connected your new DVD player to your other components, you should be able to enjoy many trouble-free years of performance.

We conduct a thorough quality and performance test on each and every DVD player we build in our factory prior to shipment. In the rare case of a defect that may occur after shipment, we stand behind our DVD players with a two-year parts and labor warranty. To register for this warranty, please complete and mail the enclosed warranty card back to ADCOM. Also, please keep a copy of your sales receipt with the owner's manual so you may provide proof of eligibility for the warranty should the need arise.

We know you will be very happy with the audio and video performance of your new DVD player. We hope you will also consider other ADCOM products, such as our line of multichannel amplifiers and preamplifiers. In addition, we design and manufacture complementary products such as surge suppressors and speaker selectors. Please visit our web site at www.adcom.com to learn more about our complete line of stereo, home theater, and distributed audio/video products.

On behalf of all of us at ADCOM, I want to thank you for selecting our product for your home or business entertainment system.

Sincerely,

Douglas Klein
President

ADCOM is a registered trademark of Klein Technology Group, LLC.

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THE FOLLOWING PRECAUTIONS AND SAFETY INSTRUCTIONS ARE REQUIREMENTS OF UL AND CSA SAFETY REGULATIONS

Warning: To reduce the risk of fire or electric shock, do not expose this unit to rain or moisture.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
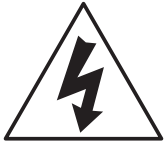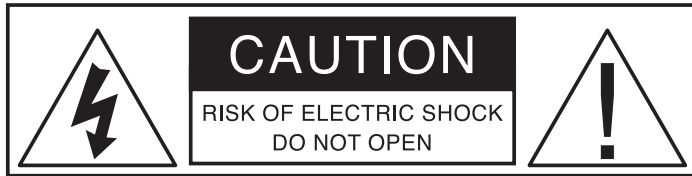
The graphic symbol of a lightning flash with an arrow point within a triangle signifies that there is dangerous voltage within the unit and it poses a hazard to anyone removing the cover to gain access to the interior of the unit. Only qualified service personnel should make any such attempt.

The graphic symbol of an exclamation point within an equilateral triangle warns a user of the device that it is necessary to refer to the instruction manual and its warnings for proper operation of the unit.

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

Read all the safety and operating instructions before connecting or using this unit.

Retain this notice and the owner's manual for future reference.

All warnings on the unit and in its operating instructions should be adhered to.

All operating and use instructions should be followed.

Do not use this unit near water. For example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool.

The unit should be installed so that its location or position does not interfere with its proper ventilation. For example, it should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or placed in a built-in installation, such as bookcase or cabinet, that may impede the flow of air through its ventilation openings.

The unit should be situated away from heat sources such as radiators, heat registers, stoves, or other devices (including amplifiers) that produce heat.

The unit should be connected to a power supply outlet only of the voltage and frequency marked on its rear panel.

The power supply cord should be routed so that it is not likely to be walked on or pinched, especially near the plug, convenience receptacles, or where the cord exits from the unit.

Clean unit only as recommended in its instruction manual.

The power supply cord of the unit should be unplugged from the wall outlet when it is to be unused for a long period of time.

Care should be taken so that objects do not fall, and liquids are not spilled, into the enclosure through any openings.

This unit should be serviced by qualified service personnel when:
A. The power cord or the plug has been damaged; or
B. Objects have fallen, or liquid has been spilled, into the unit; or
C. The unit has been exposed to rain, or liquids of any kind; or
D. The unit does not appear to operate normally, or exhibits a marked change in performance; or
E. The device has been dropped, or the enclosure damaged.

DO NOT ATTEMPT SERVICING OF THIS UNIT YOURSELF. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

ATTENTION
POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR, UNE PRISE CE COURANT OU UNE AUTRE SORTIE CE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

CAUTION
TO PREVENT ELECTRIC SHOCK DO NOT USE THIS POLARIZED PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

CAUTION POWER LINES
Any outdoor antenna must be located away from all power lines.

OUTDOOR ANTENNA GROUNDING
If an outside antenna is connected to your tuner or tuner/preamplifier, be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 701984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

a. Use No.10 AWG (5.3 mm^2) copper, No.8 AWG (8.4 mm^2) aluminum, No.17 AWG (1.0 mm^2) copper clad steel or bronze wire, or larger, as a ground wire.

b. Secure antenna lead-in and ground wires to house with stand-off insulators spaced from 46 feet (1.221.83 m) apart.

c. Mount antenna discharge unit as close as possible to where lead-in enters house.

d. Use jumper wire not smaller than No.6 AWG (13.3 mm^2) copper, or the equivalent, when a separate antenna grounding electrode is used. See NEC Section 810-21 (j).

EXAMPLE OF ANTENNA GROUNDING AS PER NATIONAL ELECTRICAL CODE INSTRUCTIONS CONTAINED IN ARTICLE 810. RADIO AND TELEVISION EQUIPMENT.
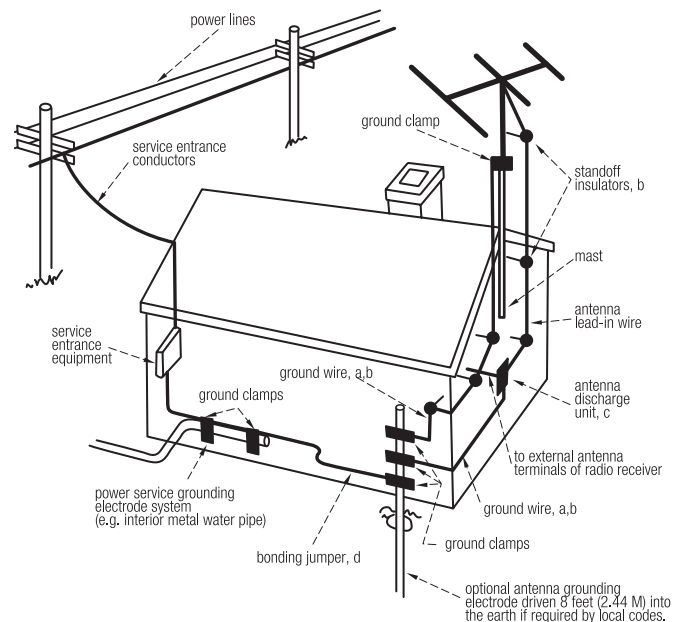
NOTE TO CATV SYSTEM INSTALLER
This reminder is provided to call the CATV system installer's attention to Article 82022 of the National Electrical Code that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Unpacking the GDV-850

Before your new ADCOM DVD player left our factory, it was carefully inspected for physical imperfections and tested for all electrical parameters as a routine part of ADCOM's systematic quality control. This, along with full operational and mechanical testing, should ensure a product flawless in both appearance and performance. After you have unpacked the GDV-850, inspect it for physical damage. Save the shipping carton and all packing material as they are intended to reduce the possibility of transportation damage should the DVD player ever need to be shipped again. In the unlikely event damage has occurred, notify your dealer immediately and request the name of the carrier so a written claim to cover shipping damages can be initiated. The right to a claim against a public carrier can be forfeited if the carrier is not notified promptly in writing and if the shipping carton and packing materials are not available for inspection by the carrier. Save all packing materials until the claim has been settled.

Safety Instructions

APPLICABLE FOR USA, CANADA OR WHERE APPROVED FOR THE USAGE

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT. INSERT FULLY.

ATTENTION: POUR EVITER LES CHOCS ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU AU FOND.

CLASS 1 LASER PRODUCT
Complies with DHHS 21 CFR 1040.10 and 1040.11

DANGER: INVISIBLE LASER RADIATION WHEN YOU OPEN THE TOP COVER. AVOID DIRECT EXPOSURE TO LASER BEAM.

CAUTION: USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED IN THIS MANUAL MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

DANGER: Visible and invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.

WARNING: There are no user serviceable parts inside. Refer all servicing to qualified service personnel.

WARNING: To reduce the risk of fire or electric shock, do not expose the unit to moisture or water. Do not allow foreign objects to get into the enclosure. If the unit is exposed to moisture, or a foreign object gets into the enclosure, immediately disconnect the power cord from the wall. Take the unit to a qualified service person for inspection and necessary repairs. Read all the instructions before connecting or operating the component. Keep this manual so you can refer to these safety instructions. Heed all warnings and safety information in these instructions and on the product itself. Follow all operating instructions. Clean the enclosure only with a dry cloth or a vacuum cleaner. You must allow 10 cm or 4 inches of unobstructed clearance around the unit. Do not place the unit on a bed, sofa, rug, or similar surface that could block the ventilation openings. If the unit is placed in a bookcase or cabinet, there must be ventilation of the cabinet to allow proper cooling. Keep the component away from radiators, heat registers, stoves, or any other appliance that produces heat.

The unit must be connected to a power supply only of the type and voltage specified on the rear panel. Connect the component to the power outlet only with the supplied power supply cable or an exact equivalent. Do not modify the supplied cable. Do not defeat grounding and/or polarization provisions. The cable should be connected to a 3-pin polarized wall outlet, matching the wide blade of the plug to the wide slot of the receptacle. Do not use extension cords. Do not route the power cord where it will be crushed, pinched, bent, exposed to heat, or damaged in any way. Pay particular attention to the power cord at the plug and where it exits the back of the unit. The power cord should be unplugged from the wall outlet if the unit is to be left unused for a long period of time. Immediately stop using the component and have it inspected and/or serviced by a qualified service agency if:

- the power supply cord or plug has been damaged;
- objects have fallen or liquid has been spilled into the unit;
- the unit has been exposed to rain;
- the unit shows signs of improper operation; or
- the unit has been dropped or damaged in any way.

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

- Reorient or relocate the receiving antenna.(TV, radio, etc.)
- Increase the separation between the equipment and receiver
- Connect the equipment to an outlet on circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for additional help.

Caution: This device complies with part 15 of the FCC Rules operation is subject to the following to conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CLASS 1
LASER PRODUCT   C E

Description of Unit

Congratulations on your decision to purchase the ADCOM GDV-850 DVD player. The GDV-850 delivers progressive scan 480p video output with field-adaptive deinterlacing via component video connections. Direct multichannel analog outputs connect you to high-resolution stereo and multichannel playback for your DVD-Audio material. The front panel of the GDV-850 is designed for ease of operation. All controls are logically grouped for intuitive operation. Basic operations can be performed from the front panel, while additional features can be accessed with the provided GRC-815 remote control. Familiarize yourself with the diagrams that follow and read the short explanations of each feature below. When you finish, you will be well on your way to enjoying the GDV-850's convenience, performance, and quality.

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Manufactured under license from Digital Theater System, Inc. US Pat. No. 5,451,942 and other world-wide patents issued and pending. "DTS", "DTS Digital Surround", are trademarks of Digital Theater Systems, Inc."

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

Video Features

• Compatible with NTSC and PAL video hardware plus standard (4:3) and wide-screen (16:9) aspect ratios.

• Progressive scan with reverse 3:2 pulldown for film sources.

• Special playback functions such as frame-by-frame, zoom, and variable slow-motion and high-speed play.

• DVD-Video features include multi-angle, multi-language subtitles, and multi-language audio.

Audio Features

• Supports the following digital audio formats:
  Dolby Digital®
  DTS® (Digital Theater Systems)
  DTS® 96/24
  DVD-Audio
  MLP® (Meridian Lossless Packing)
  MP3 (MPEG 1, Layer 3)
  MPEG Multichannel
  Linear PCM

• Supported audio formats include sampling frequencies up to 192 kHz, linear PCM encoding up to 24-bit resolution, and MLP. DVD-Audio supports up to six channels at sample rates of 48, 88, 96, 176, or 192 kHz and sample sizes of 16, 20, or 24 bits. DVD Video supports 2 channels at sample rates of 48 and 96 kHz and sample sizes of 16, 20, or 24 bits. Audio CD/Video CD is limited to 2 channels, 44.1 kHz at 16 bits.

• Virtual surround sound simulates surround sound with the conventional 2-channel audio system.

• Audio outputs include multichannel (5.1) analog audio outputs, stereo analog outputs and both coaxial and optical digital audio outputs.

Other Features

• User-friendly on-screen displays.
• Full-featured remote control.
• Parental lock.
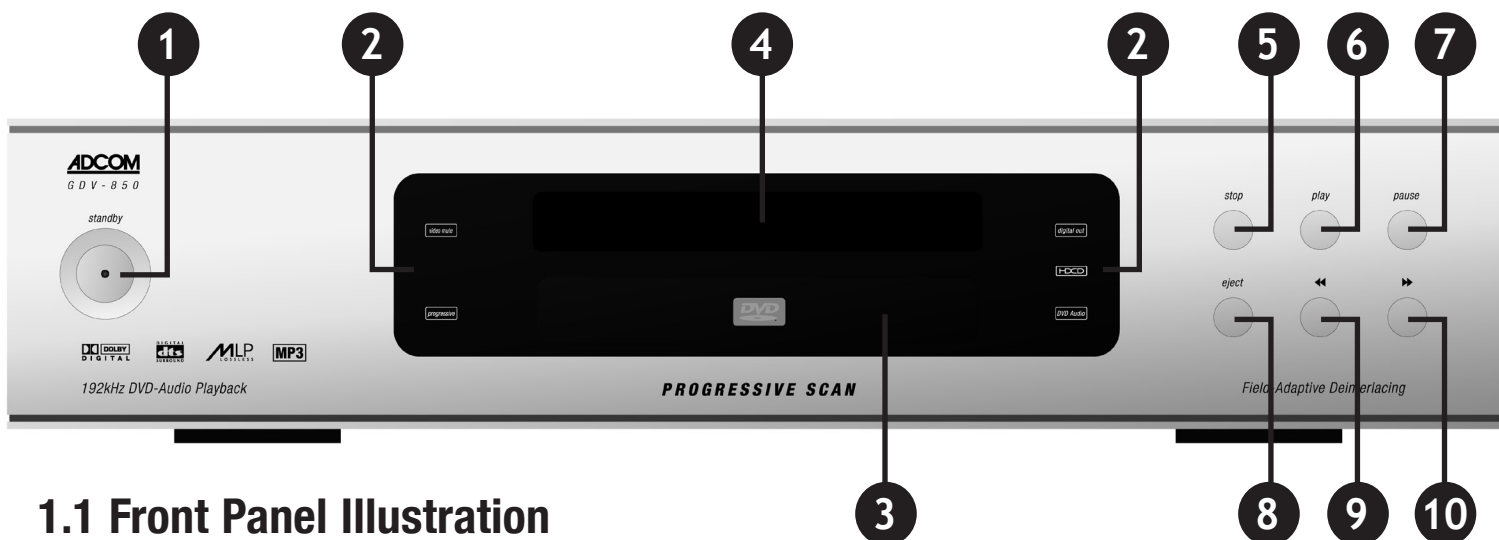
1.1 Front Panel Illustration

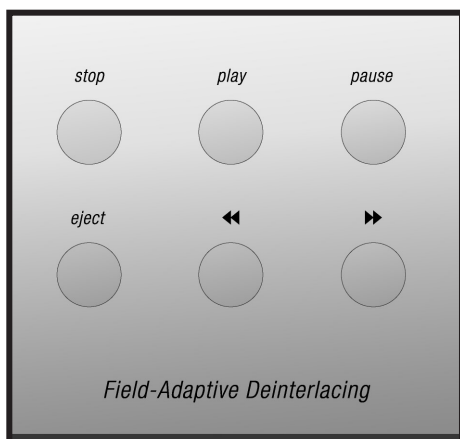## 1.2 Interface Overview

Field-Adaptive Deinterlacing

[1] Standby Power Button

Pressing this button turns the unit on, showing a red LED. Pressing this button again returns the GDV-850 to standby mode, and the LED extinguishes.

Note: The rear panel power switch must be on for this button to function.

[2] Status Indicators

Status indicators provide a quick visual to the following conditions: video mute, progressive, digital out, HDCD, and DVD Audio.

[3] Disc Tray

Pressing the eject button opens and closes the disc tray. The GDV-850 will accept standard CD, CD-R, CD-RW, or DVD discs.

[4] Front Panel Display

The front panel display provides visual feedback about the status of the GDV-850, activation of special features, and track/time information. See section 3.2 for detailed information about the display.

[5] Stop Button

Press the STOP button to stop a disc that is playing. If playback is restarted after one press of the STOP button, the disc will resume playing from the current position on the disc. Press the STOP button twice to cancel the resume feature. Subsequent play will restart from the beginning of the disc. Playback will also stop when the DVD POWER button on the remote is pressed.

[6] Play Button

Press the PLAY/ENTER button to start playing the disc from the beginning or to resume play if playback is paused or to return to normal play from any of the slow motion or fast play modes. If in standby mode, pressing the button activates the unit.

[7] Pause Button

Press the PAUSE button to temporarily suspend play or to advance the still picture frame by frame after playback is paused.
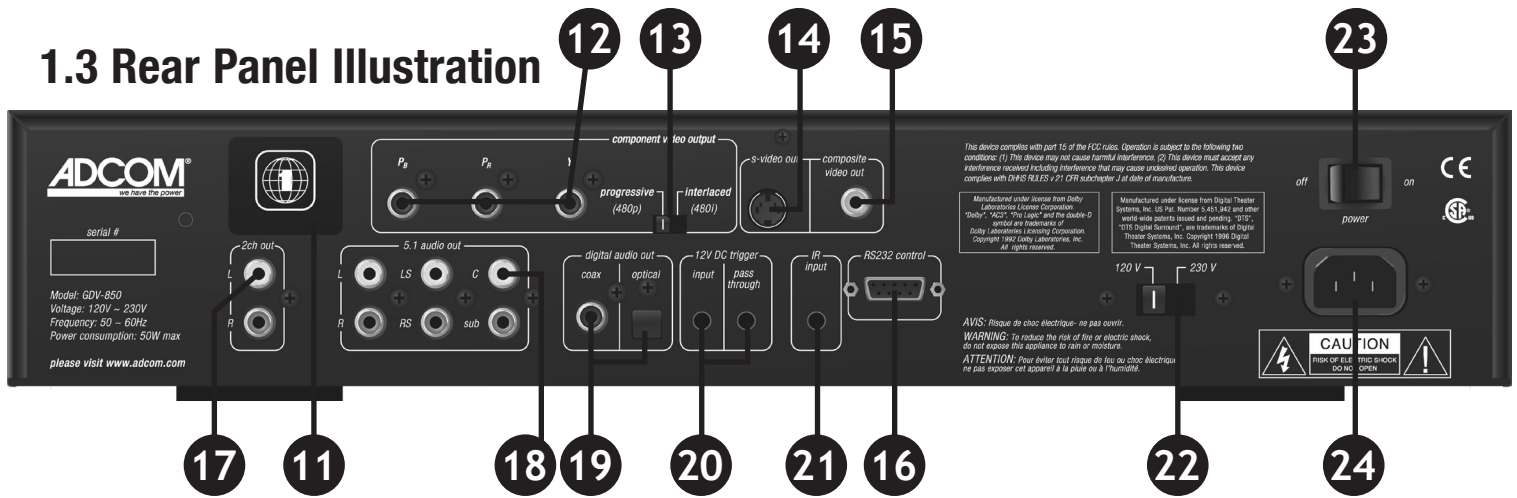
[8] Eject Button

Pressing this button open/closes the disc tray.

[9] / [10] Chapter/Track Step Back and Skip

These buttons are used to navigate forward and backwards through the available chapters or tracks of a disc. Their exact function is dependent on the format and mastering of the disc you are playing.

1.3 Rear Panel Illustration

1.4 Input & Output

System Connections

Like the front panel, the GDV-850's rear panel is carefully arranged to make hookup, configuration, and use as simple as possible. However, the GDV-850's capabilities take some study to use most effectively. We strongly suggest that you read this section of the manual before beginning to hook up your player. You will save yourself much time and effort if you carefully think out what you expect from your system, consider the components you will use, where they'll be placed, and how you will want them to work together. The notes in this section and the connection diagrams that follow will probably answer most of your questions about interfacing the GDV-850 into your system.

[11] Region Code

The GDV-850 is configured for use in specific geographic locations. Geographic regions around the world are assigned a numeric code by the DVD forum which is indicated on this icon. See section 7.0 of this manual for more information.

[12] Component Output

Use this output to connect the GDV-850

to a preamp that accepts component video input or directly to your display. A component video signal typically refers to Y/Pb/Pr, which consists of three 75-ohm channels: one for luminance information, and two for color.

Note: The 480P progressive scan output can only be used with a digital television capable of displaying or converting 480P images.

[13] Video Format Switch

With the GDV-850 you have the ability to switch between progressive-scan (480p) and an interlaced (480i) video signal. Use this switch to set the video output format. When the progressive output is selected the S-video and composite outputs are disabled and the progressive status indicator on the front panel will illuminate.

[14] S-video Output

S-video may also be referred to as Y/C, the abbreviation for luminance/chrominance. The S-video cable uses a four-pin connector that is most com-

monly used with VCRs and DVD players. S-video delivers a better picture than composite connections and should be used whenever possible unless you can use component connections, which typically deliver better video than S-video.

[15] Composite Output

Composite video is used in nearly all consumer video devices. Both chrominance and luminance signals are carried on the same 75-ohm RCA cable. Chrominance is carried in a 3.58-mHz (NTSC) sideband and filtered out by the TV's notch or comb filter. Poor filtering can result in dot crawl, hanging dots, or other image artifacts. We recommend using this output only when component or S-video inputs are not available.

[16] RS232 Input

Allows control of the GDV-850 via computer or home automation system. A DB-9

cable is used to make the connection to the GDV-850. Refer to section 2.3 for more detail.

[17] Analog Audio Output

Using the analog audio output allows the internal DSP and DACs to decode and convert the data from the disc to analog signals. This output is used when connecting the player to an analog stereo preamp, and is necessary for use in many distributed audio setups. This output can also make use of analog direct modes available on many preamplifiers like ADCOM's GTP-880.

[18] 5.1 Audio Output

To enjoy the high resolution playback of multichannel DVD-Audio discs, connect these six RCA jacks to the 5.1 analog inputs on your preamplifier or receiver. Use six separate RCA cables to make the connection to your pre-amp. Due to copy protection issues, the digital output may need to be off during playback of DVD-Audio discs.

[19] Digital Audio Output

Dolby Digital and DTS movie sound tracks will be sent to your preamplifier via the digital audio output. Your preamplifier must be able to decode Dolby Digital and/or DTS digital signals. Otherwise, you will need to use the GDV-850's 5.1 analog outputs to enjoy Dolby Digital and DTS sound.

[20] 12V DC Trigger

A trigger, if properly hooked-up, can prove to be very convenient. Use the 12V DC trigger in conjunction with your preamp to turn the player on and off. The trigger output from your preamp should go in to the trigger input on the rear panel of the GDV-850. A pass-through output jack is provided to allow trigger control of additional components in your system.

[21] IR Input

Use the IR input jack to connect an external IR sensor to the GDV-850 when the unit is installed behind doors or where it is not otherwise visible to the remote.

[22] Voltage Switch

Before plugging the unit in make sure the voltage is set to your country's voltage configuration. The GDV-850 should be unplugged prior to flipping this switch. If you are uncertain, please have your installer or dealer verify before proceeding.

[23] Main AC Power Switch

Turns the current to the GDV-850 on or off. Setting this button to the on position supplies power to the unit, enabling use of the standby power button on the front panel. When the main power switch is in the off position, current is cut off to the unit.

[24] IEC AC Input

Use to connect the supplied IEC removable AC power cord (see page 2 for all warnings). Before proceeding, please observe the following precautions when connecting devices to your new GDV-850.

Do not plug the power cord into your GDV-850 until all other connections have been made.

Insert the supplied power cord into the AC input of the rear panel of the GDV-850. Do not use a power cord other than the one supplied with the GDV-850. It's designed for use with the GDV-850 and should not be used with any other device.

Caution: Before you plug the power cord into an AC wall outlet, confirm that all connections to the GDV-850 have been made correctly.

Warning: Never disconnect the power cord from the GDV-850 while the other end is plugged into an AC outlet. Doing so may cause an electric shock. Always connect power by plugging into the AC outlet last and disconnect by unplugging from the AC outlet first.

1.5 Connection Diagram

GDV-850 DVD Player to the GTP-880
Component Video, S-video, Analog and Digital Audio (typical for DVD video)
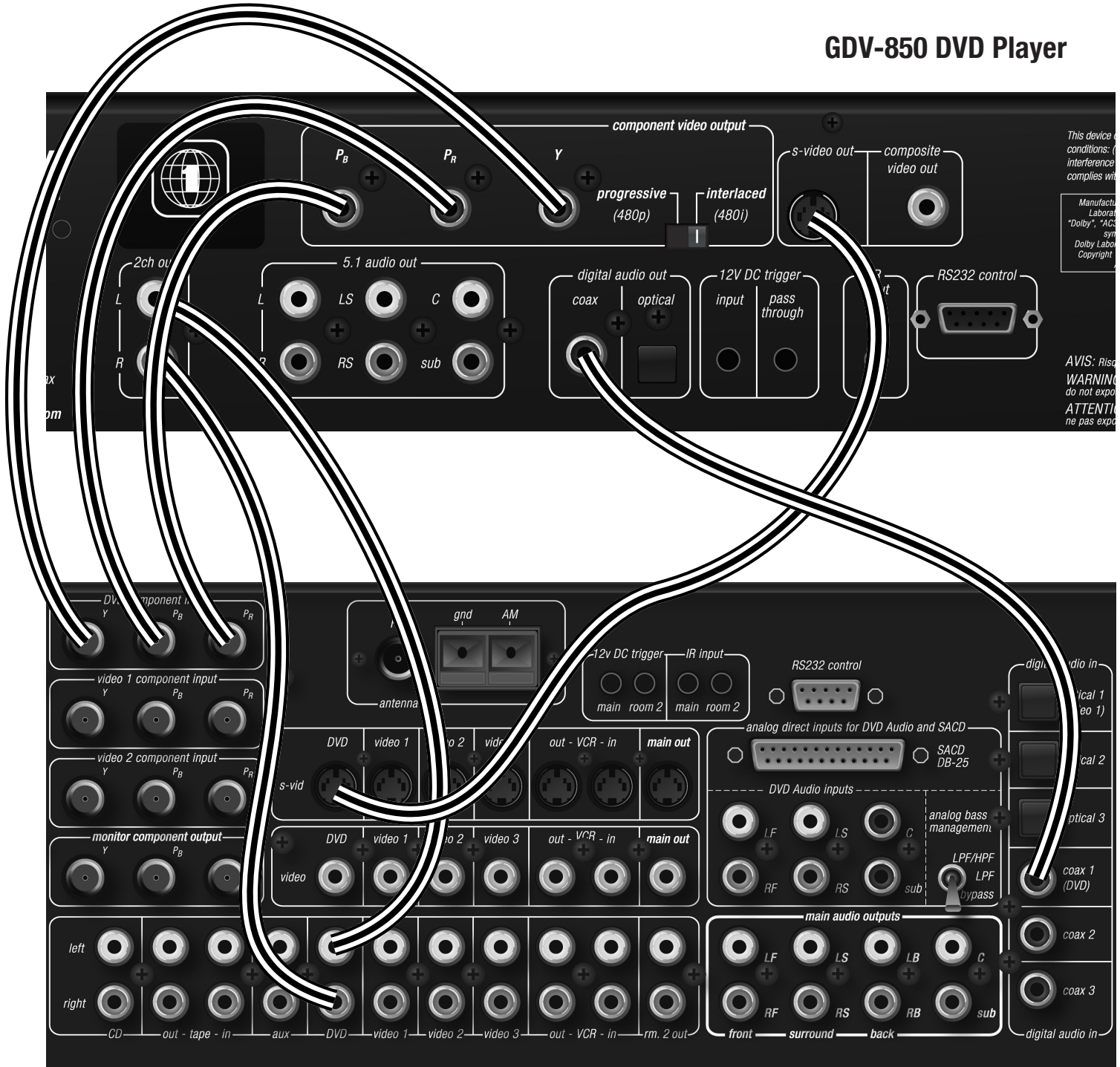
GDV-850 DVD Player

GTP-880 Tuner Preamp

Note: The GTP-880 uses BNC style jacks for component video inputs. Adaptors or dedicated cables are available from your authorized ADCOM dealer.

1.5 Connection Diagram:

GDV-850 DVD Player to the GTP-880
Multichannel Direct Analog Output and Component Video (DVD Audio)
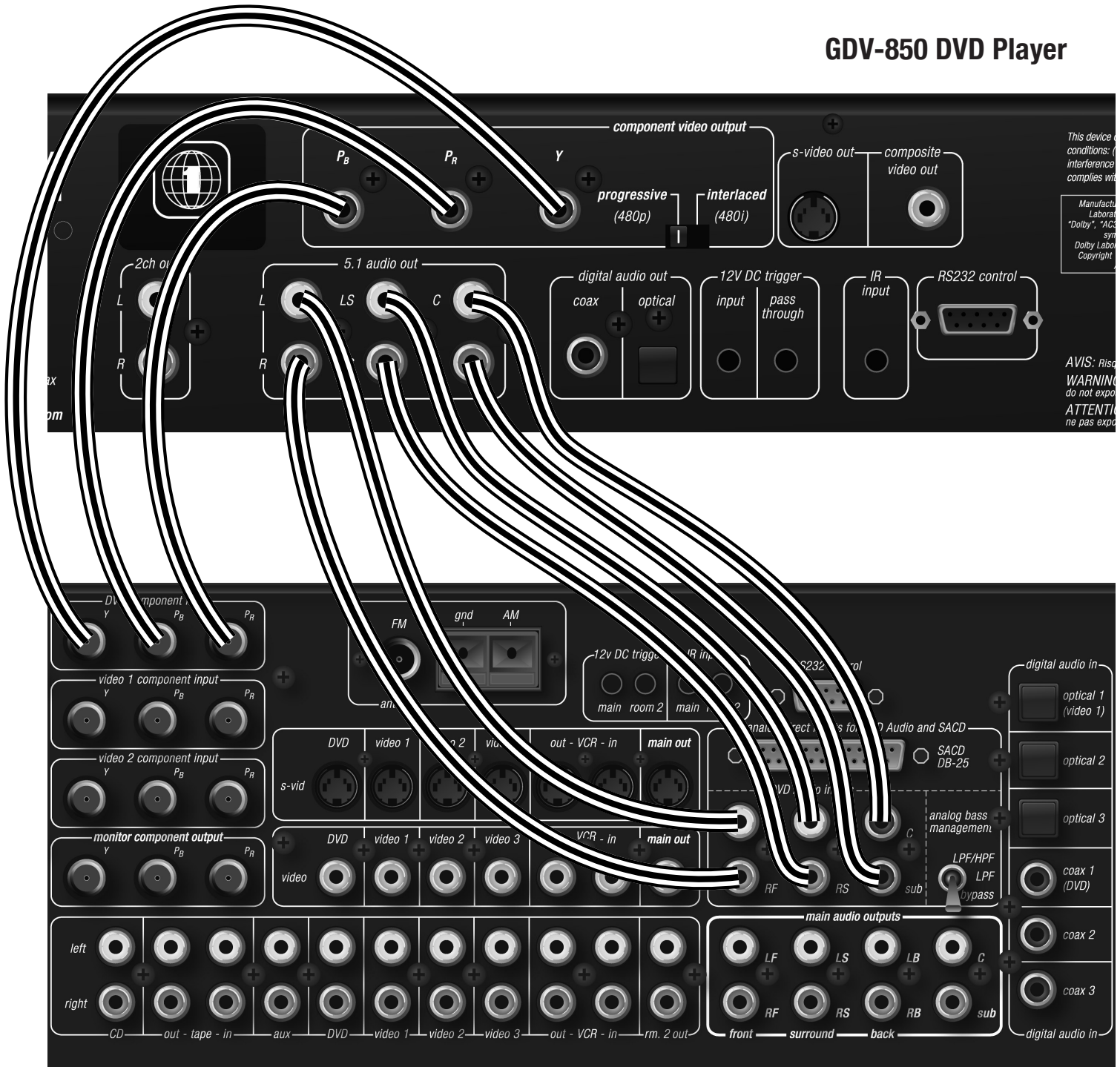
GDV-850 DVD Player

GTP-880 Tuner Preamp

Note: The GTP-880 uses BNC style jacks for component video inputs. Adaptors or dedicated cables are available from your authorized ADCOM dealer.

Remote Control
2.1 Remote Control Illustration
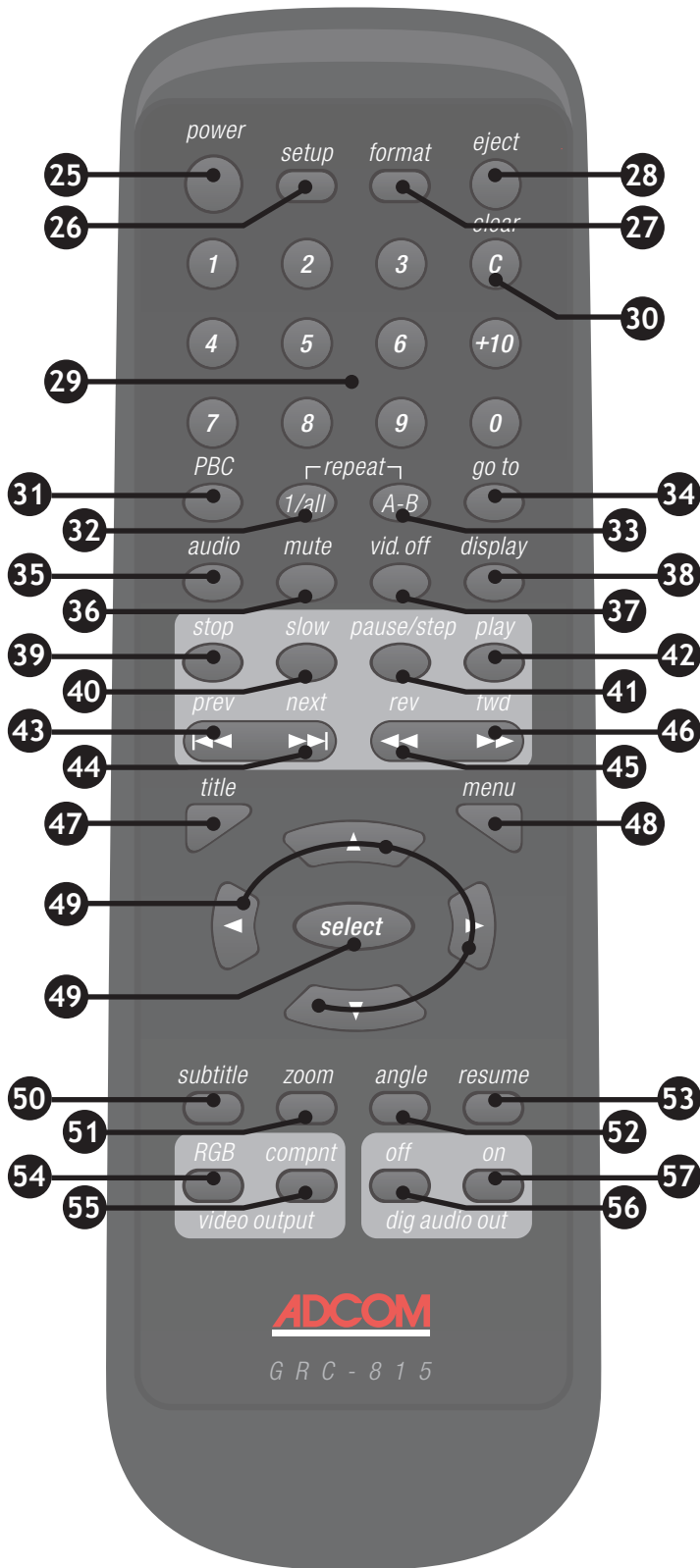
[25] Power Button

[26] Setup Button

[27] Video Format Button

[28] Eject Button

[29] Direct Access Keypad

[30] Clear Button

[31] PBC (Play Back Control) Button

[32] Repeat 1/all Button

[33] Repeat A-B Button

[34] Go To Button

[35] Audio Button

[36] Mute Button

[37] Vid. (Video) Off Button

[38] Display Button

[39] Stop Button

[40] Slow Button

[41] Pause/Step Button

[42] Play Button

[43] Prev (Previous) Button

[44] Next Button

[45] Rev (Reverse) Button

[46] Fwd (Forward) Button

[47] Title Button

[48] Menu Button

[49] Navigation & Select Buttons

[50] Subtitle Button

[51] Zoom Button

[52] Angle Button

[53] Resume Button

[54] RGB Video Output Button

[55] Compnt (Component) Video Output

[56] Dig (Digital) Audio Out Off

[57] Dig (Digital) Audio Out On

2.2 Remote Overview

The GRC-815 remote control is a pre-programmed remote control that has been designed specifically to work with the GDV-850 DVD player. While a disc is spinning up and playing the opening title sequences, some functions may be non-functional.

NOTE: A hand icon is displayed when a button press is not a valid operation accepted by the unit for the disc you are playing.

Alkaline batteries are recommended for maximum operating life. Two AAA (R 03) batteries should be fitted into the battery compartment at the rear of the remote control. When replacing batteries, check that they have been put in correctly, as indicated in the battery compartment.

Remote Features
[25] Power Button

This button turns the DVD player on from a standby state. The main power switch on the rear panel must be in the on position for this button to function.

[26] Setup Button

Pressing the setup button enters the setup OSD menu for the DVD player itself. Setup is covered in the next section of this manual. Some setup procedures will not be available when a media disc is active. Pressing the setup button again will exit the menu and all changes will be saved.

[27] Video Format Button

This button cycles the video output format of the GDV-850 between NTSC and PAL. NTSC is used in North America and in many other countries. PAL is used mainly in Europe and some Asian countries. You should not have to adjust this feature. If you hit this button by mistake and your picture is changed, then simply hit the button again to restore the picture.

[28] Eject Button

Pressing this button open/closes the disc tray.

[29] Direct Access Keypad

A direct access keypad can be used in the setup and operation of the DVD player. For instance the keypad is used to enter passwords in the setup menu and can also be used to navigate to particular chapters on the disc.

[30] Clear Button

The clear button can be used to erase the numerical value entered with the keypad and to exit/step back in the setup menu. During playback of CDs and MP3s hitting the clear button will activate the graphic EQ circuitry. See section 4.7 for more information.

[31] Play Back Control Button

The PBC button turns playback control off and provides direct access to the individual titles on a DVD. Pressing this button brings up a separate menu to navigate and play each title. Information about each title is also displayed in this menu. Different areas of this disc can be navigated with the navigation and select buttons. This function may not be available on all discs. To exit the menu press the PBC button once again. Playback control will resume and the ADCOM DVD player title page will be displayed.

[32] Repeat 1/all Button

The repeat 1/all button sets the option to repeat either the current track or repeat all tracks on an audio based disc, DVD-Audio, CD, etc. When a DVD video disc is playing this button will first bring up the option to repeat the current chapter (repeat 1), and secondly when pressed will set the option to repeat the tile (entire movie). Pressing this button a third time when playing a DVD video disc will exit the repeat option.

[33] Repeat A-B Button

The repeat A-B button will set a looping playback from any starting point in a track/chapter that you select to an ending point that you define. Press this button once to set the first point of reference (A), then press it again to set your ending point (B). To cancel this playback loop, press the repeat A-B button a third time.

[34] Go To Button

The go to button works in conjunction with the direct access keypad and the navigation and select buttons. When pressed, an overlay will appear in the upper portion of the display and you will first have the ability to enter a particular chapter/track to jump to. The option to navigate to a different title is also available. To do this use the left and right navigation buttons to highlight the title. Use your key pad to enter the number of the title. To jump to a specific time press the go to button again and the display will change, allowing you to enter a desired time. Press the select button after you have made your choice.

[35] Audio Button

Pressing the audio button will cycle through the available audio formats available on the disc. Often times you can choose from 2.0 channel, 5.1 channel, different languages and different encoding formats.

[36] Mute Button

The mute button mutes the audio outputs of the DVD player. Pressing this button again unmutes the signal and restores level.

[37] Video Off Button

Pressing the vid. off button will mute the video output on any of your output connections. Pressing this button again will unmute the video feed. Note this button will not pause the playback of your media.

[38] Display Button

Pressing the display button presents status information at the top of your display. The first time the button is pressed the current title, chapter and time are displayed. If the display button is pressed repeatedly the following information will be presented respectively: remaining time in title; how much time has passed in the current chapter; how much time is remaining in the current chapter; and finally normal uninterrupted playback will resume.

[39] Stop Button

Press the STOP button to stop a disc that is playing. If playback is restarted after one press of the STOP button, the disc will resume playing from the current position on the disc. Press the STOP button twice to cancel the resume feature. Subsequent play will restart from the beginning of the disc. Playback will also stop when the DVD POWER button on the remote is pressed.

[40] Slow Button

The slow button, when pressed, modifies the rate of playback of any active media. Both audio and video are affected. Pressing this button cycles through the following options: SF: Slow Forward, SR: Slow Reverse SF 2X, SF 4X, SF 8X, SR 2X, SR 4X, SR 8X, the last option returns to normal playback mode.

[41] Pause/Step Button

Press the PAUSE button to temporarily suspend play or to advance the still picture frame by frame after playback is paused.

[42] Play Button

Press the PLAY/ENTER button to start playing the disc from the beginning or to resume play if playback is paused or to return to normal play from any of the slow motion or fast play modes. If in standby mode, pressing the button activates the unit.

[43] / [44] Prev (Previous) & Next Buttons

These buttons are used to navigate forward and backwards throughout the available chapters or tracks of a disc. Their exact function is dependent upon the format and mastering of the disc you are playing.

[45] Rev (Reverse) Button

Pressing this button once will reverse through current media being played, presenting any video and audio at an advanced rate. Pressing this button again will change the rate of playback. Use this same button to resume normal playback.

[46] Fwd (Forward) Button

Pressing this button once will advance through current media being played, presenting any video and audio at an advanced rate. Pressing this button again will change the rate of playback. Use this same button to resume normal playback.

[47] Title Button

The title button activates the submenu for the current title. The function of this button is dependent on the format and mastering of each disc. On some discs, the title button will call the same menu as the menu button or it may do nothing at all.

[48] Menu Button

The menu button will always display the menu for a disc when pressed. If pressed when in a playback mode, the location is marked and play may be resumed by using the resume button on the remote, as described below.

[49] Navigation Buttons & Select Button

This group of buttons is used to navigate the OSD for the menus of the DVD player itself and the menus for discs during playback. This group of buttons is comprised of four direction buttons and a select button in the center.

[50] Subtitle Button

The subtitle button will display subtitles in languages available on the disc. Continue to press this button to cycle to the next language or to turn subtitles off. If a preference has been set to display subtitles in the DVD player's setup menu, making this selection during playback will only affect that single playback of the DVD-disc.

[51] Zoom Button

Use the zoom button to magnify the video track. Press the zoom button to first set the magnification to a level of X1.5, pressing this button again will set the level to X2.0. Use the navigation buttons to move to different areas of your magnified image. The movie will continue to play while the zoom feature is active. To exit the zoom mode press the zoom button a third time.

[52] Angle Button

An angle is a scene recorded from different viewpoints. Each angle is equal in time length, and an angle block may contain up to nine (9) angles. Pressing this button will cycle through any available angles. If none are available a white hand will be displayed.

[53] Resume Button

The resume button functions much like the play button and will resume playback when using other functions of the DVD player, such as slow/step or while in the menu.

[54] RGB Video Output Button

Pressing this button turns the optional RGB video output on. Note: This feature may be disabled in some regions due to copy protection requirments.

[55] Compnt (Component) Video Output

Pressing this button turns the component video output on. Note: This feature may be disabled in some regions due to copy protection requirments.

[56] Digital Audio Out Off

Pressing this button turns the digital audio output off. When turned off the GDV-850 will output the highest resolution signal via the analog output jacks. Note: This feature may be disabled in some regions due to copy protection requirments.

[57] Digital Audio Out On

Pressing this button turns the digital audio output on. The bitstream selected on disc will be sent to preamp. Due to copy protection requirments, when playing a DVD-Audio with digital audio out on, DVD-Audio will be truncated to 16bit/48k operation.

2.3 RS232 / IR Control

The Adcom GDV-850 can be controlled via its serial RS-232 port. The serial port can be connected to a PC or 'dumb terminal' via a straight-through standard 9-pin serial port cable (MALE on one end and FEMALE on the other end).

When using a PC, a terminal emulator program, such as ProComm or the Windows "Terminal" program can be used.

The communications parameters should be set as follows: 9600 baud, 8 data bits, no parity, 1 stop bit and Hardware Flow Control

Some of the commands can only be sent to the Video Switch when it has been 'unlocked'. This protects it against inadvertent re-programming of its serial number, and its default settings.

NOTE: all commands are CAPITAL letters (ASCvII characters)...lower case letters, or unrecognized commands are ignored and a '?' may be returned. Data bytes associated with a command can be upper or lower case letters and numbers as appropriate.

Commands can only be entered after the ">" prompt character is displayed. The exception to this rule is that the GDV-850 does not echo the command prompt when first plugged in. After the first command is received, prompts are then automatically generated.

When a command has been received, the command letter is echoed, followed by a CR/LF, then ">" as a prompt character.

If the command is one that returns data (e.g. "S" – Status), then the data is returned, followed by the echoed command letter, and a CR/LF, then ">" as a prompt character.

Command echoing can be turned on and off by issuing the "E" command (see below). The GDV-850 echoes commands by default on line cord power-up.

GDV-850 Command Set

E. Echo: Enable/Disable command echo (Power-up default = Enabled)

Syntax: "E", <char>

Returns: "1", "E", <CR>, <LF>, ">" (if Enable command received)

Where: <char> is expressed as an ASCII value "1" = Enable & "0" = Disable

P. Power: On / Standby / Status

Syntax: "P",<char>

Returns: <char>,"P", <CR>, <LF>, ">"

Where: <char> is expressed as an ASCII value; "1" = On, "0" = Standby, and "2" = Request for Power Status (returns "1" or "0")

R. Remote: Issue a Remote Control Command.

Syntax: "R", <char1>, <char2>

Returns: "R",<CR>,<LF>,">" (i.e. 0x52, 0x0D, 0x0A, 0x3E)

Where: <char1> & <char2> are expressed as ASCII 'hexadecimal' values per the following table.

R 20 (i.e. 0x52, 0x32, 0x30) = OPEN/CLOSE (EJECT)

R 21 (i.e. 0x52, 0x32, 0x31) = SETUP

R 22 (i.e. 0x52, 0x32, 0x32) = PLAY BACK CONTROL

R 23 (i.e. 0x52, 0x32, 0x33) = 0

R 24 (i.e. 0x52, 0x32, 0x34) = 1

R 25 (i.e. 0x52, 0x32, 0x35) = 2

R 27 (i.e. 0x52, 0x32, 0x37) = 4

R 28 (i.e. 0x52, 0x32, 0x38) = 5

R 29 (i.e. 0x52, 0x32, 0x39) = 6

R 2A (i.e. 0x52, 0x32, 0x41) = 7

R 2B (i.e. 0x52, 0x32, 0x42) = 8

R 2C (i.e. 0x52, 0x32, 0x43) = 9

R 2D (i.e. 0x52, 0x32, 0x44) = +10

R 2F (i.e. 0x52, 0x32, 0x46) = CLEAR

R 30 (i.e. 0x52, 0x33, 0x30) = SLOW

R 31 (i.e. 0x52, 0x33, 0x31) = PAUSE/STEP

R 32 (i.e. 0x52, 0x33, 0x32) = STOP

R 33 (i.e. 0x52, 0x33, 0x33) = TITLE

R 34 (i.e. 0x52, 0x33, 0x34) = FAST FORWARD

R 35 (i.e. 0x52, 0x33, 0x35) = PREVIOUS

R 36 (i.e. 0x52, 0x33, 0x36) = SELECT NTSC/PAL TOGGLE

R 37 (i.e. 0x52, 0x33, 0x37) = SELECT NTSC

R 38 (i.e. 0x52, 0x33, 0x38) = SELECT PAL

R 39 (i.e. 0x52, 0x33, 0x39) = NEXT

R 3C (i.e. 0x52, 0x33, 0x43) = NAVIGATE LEFT

R 3D (i.e. 0x52, 0x33, 0x44) = NAVIGATE DOWN

R 60 (i.e. 0x52, 0x36, 0x30) = ANGLE

R 61 (i.e. 0x52, 0x36, 0x31) = SUB-TITLE

R 62 (i.e. 0x52, 0x36, 0x32) = AUDIO

R 63 (i.e. 0x52, 0x36, 0x33) = MENU

R 64 (i.e. 0x52, 0x36, 0x34) = NAVIGATE UP

R 65 (i.e. 0x52, 0x36, 0x35) = POWER ON/OFF TOGGLE

R 68 (i.e. 0x52, 0x36, 0x38) = NAVIGATE RIGHT

R 69 (i.e. 0x52, 0x36, 0x39) = POWER ON

R 6A (i.e. 0x52, 0x36, 0x41) = POWER OFF

R 6C (i.e. 0x52, 0x36, 0x43) = BITSTREAM ON

R 6D (i.e. 0x52, 0x36, 0x44) = BITSTREAM OFF

R 6F (i.e. 0x52, 0x36, 0x46) = IRE 0

R 70 (i.e. 0x52, 0x37, 0x30) = IRE 7.5

R 71 (i.e. 0x52, 0x37, 0x31) = PLAY

R 72 (i.e. 0x52, 0x37, 0x32) = DISPLAY

R 73 (i.e. 0x52, 0x37, 0x33) = ZOOM

R 74 (i.e. 0x52, 0x37, 0x34) = GOTO

R 75 (i.e. 0x52, 0x37, 0x35) = RESUME

R 76 (i.e. 0x52, 0x37, 0x36) = RGB OUTPUT

R 77 (i.e. 0x52, 0x37, 0x37) = COMPONENT OUTPUT

R 78 (i.e. 0x52, 0x37, 0x38) = VIDEO ON/OFF TOGGLE

R 79 (i.e. 0x52, 0x37, 0x39) = MUTE

R 7A (i.e. 0x52, 0x37, 0x41) = REPEAT 1/ALL

R 7B (i.e. 0x52, 0x37, 0x42) = REPEAT A-B

R 7C (i.e. 0x52, 0x37, 0x43) = FAST REVERSE

R 7F (i.e. 0x52, 0x37, 0x46) = 3

S. Status: Request I/O status information.

Syntax: "S"

Returns: <char1>, <space>, <char2>, <space>, <char3>, <space>, <char4>, <space>, <char5>, <space>, <char6>, <space>, <char7>, <space>, <char8>, <space>, "S", <CR>, <LF>, ">"

Where: <char1> ~ <char8> = the ASCII 'binary' value representing the status of the GDV-850 according to the following table.

char1 POWER ON: 1 = Unit is Powered UP, 0 = Unit is Powered Down

char2 STANDBY: 1 = Unit is in Standby mode, 0 = Unit is out of Standby

char3 VIDEO OFF: 1 = Video is OFF, 0 = Normal operation

char4 AUDIO OFF: 1 = Audio is OFF (mute), 0 = Normal operation

char5 DIGITAL OUT: 1 = SPDIF output is ON, 0 = SPDIF output is OFF

char6 HDCD: 1 = HDCD disk playing, 0 = Not HDCD

char7 DVD AUDIO: 1 = DVD Audio disk playing, 0 = Not DVD Audio

char8 P-SCAN: 1 = Video format 480p, 0 = Video format 480i

V. Version: Request firmware version information.

Syntax: "V"

Returns: "v",<n1>,<n2>,<CR>,<LF>,">"

Where: <n1> and <n2> are ASCII characters indicating the firmware revision level.

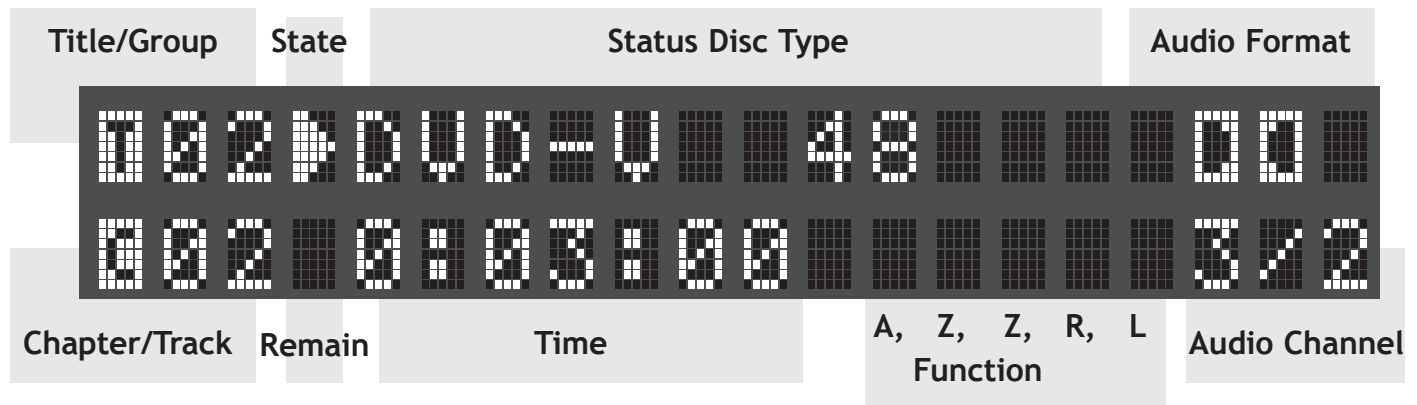# Function and Data List for GDV-850 (Discrete) Remote Control via IR

Custom Code: 1Ah E5h   Code Type: NEC   Carrier Frequency: 38kHz

Command	GDV-850 Function	IR: D7~D0	Deci
eject_key	opens/closes disc tray	0000 0100	32
setup_key	enters GDV-850 setup mode	1000 0100	33
pbc_key	turns playback control on/off	0100 0100	34
key_0	_key_0	1100 0100	35
key_1	_key_1	0010 0100	36
key_2	_key_2	1010 0100	37
key_3	_key_3	1111 1110	127
key_4	_key_4	1110 0100	39
key_5	_key_5	0001 0100	40
key_6	_key_6	1001 0100	41
key_7	_key_7	0101 0100	42
key_8	_key_8	1101 0100	43
key_9	_key_9	0011 0100	44
key_plus_10	_key_plus_10	1011 0100	45
clear_key	disguards numbers entered by remote	1111 0100	47
slow_key	retards playback	0000 1100	48
step_key	advances frame-by-frame	1000 1100	49
stop_key	exits playback	0100 1100	50
title_key	plays/enters title on disc	1100 1100	51
ff_key	forward advanced rate of playback	0010 1100	52
previous_key	selects chapter before current, start track	1010 1100	53
ntsc_pal_toggle	switches between video formats	0110 1100	54
select_ntsc	selects ntsc	1110 1100	55
select_pal	selects pal	0001 1100	56
next_key	selects next chapter/track	1001 1100	57
zoom/left_key	navigates left in menu and zoom mode	0011 1100	60
zoom/down_key	navigates down in menu and zoom mode	1011 1100	61
angle_key	selects alternate angle when available	0000 0110	96
sub_title_key	turns subtitles on/off	1000 0110	97
audio_key	selects alternate audio track	0100 0110	98
menu_key	enters dvd digest	1100 0110	99
zoom/up_key	navigates up in menu and zoom mode	0010 0110	100
power_key	turns GDV-850 on/off	1010 0110	101
zoom/right_key	navigates right in menu and zoom mode	0001 0110	104
power_on	turns GDV-850 on	1001 0110	105
power_off	turns GDV-850 off	0101 0110	106
bitstream_on	engages bitstream from disc	0011 0110	108
bitstream_off	deselects bitstream from disc	1011 0110	109
select_ire_0	sets IRE level to 0	1111 0110	111
select_ire_7.5	sets IRE level to 7.5	0000 1110	112
play_key	engages available media	1000 1110	113
_no_key	turns screen on	0100 1110	114
zoom_in_key	scales images up	1100 1110	115
goto_key	goes to a specified part of disc	0010 1110	116
resume_key	resumes playback	1010 1110	117
select_rgb_out	selects rgb output	0110 1110	118
component_out	selects component output	1110 1110	119
video_off_key	mutes video output	0001 1110	120
mute_key	mutes audio output	1001 1110	121
repeat_key	repeats current track/chapter or all	0101 1110	122
set_a_key	creates a looping playback from selection	1101 1110	123
_no_key	_fb_key	0011 1110	124

3.1 Front Panel Display Illustration

Title/Group	State		Status Disc Type			Audio Format

002 ▶ DVD-V 48 00

002 0:03:00 3/2

Chapter/Track	Remain	Time	A, Z, Z, R, L Function	Audio Channel

3.2 Display Overview

A lighted display on the front panel of the GDV-850 provides information about the status of the unit, activation of special features, and track/time information. See the illustration above for the location of each section of the display.

3.3 Display Features

Title/Group: displays the number of the current Title or Group.

Chapter/Track: displays the number of the current Chapter or Track.

State Play/Pause: shows a play or pause indication.

Status/Disc Type: displays the current status of the unit (Open, Close, No Disc, etc.). When a disc is playing, this section of the display shows the sampling rate and format of the disc (DVD-V 48kHz, DVD-A 96kHz, etc.)

Audio Format: displays the audio format of the inserted disc (Dolby Digital, DTS, PCM, etc.)

Remain: shows the letter R when the remaining time of disc or selection is being displayed.

Time: displays the elapsed time when a disc is playing.

Function: indicates which special features are activated, A in the first segment for angle, Z in the second and third segment for zoom, an indicator for the type of repeat in the fourth segment, and an L in the fifth segment when the OSD is being shown during setup or when playback is stopped with the resume feature storing the current position on the disc.

Audio Channel: shows which of the six possible audio channels are in use. 2/0 indicates a stereo signal, 3/2 indicates a five channels with three front and two surround, and 1CH to 6CH for DVD-A discs.

3.4 OSD Overview

The GDV-850 displays icons, status indicators, and interactive menus on the TV monitor. Many of these screens are used to set up preferences and activate advanced features of the unit. Others offer information and choices useful during normal operation of the unit.

NOTE: The default language for all GDV-850 On-Screen Displays can be changed. See the General Setup topic in the Setup section of this manual.

Status Indicators

During operation of the unit, various status indicators appear on screen such as NO DISC, LOADING, PLAY, PAUSE, etc. These information displays are self-explanatory. When using specific features during playback (such as

Language selection, Time Display, Repeat Mode, etc.), indicators appear in the On-Screen Display showing the current status of that feature as you make changes.

NOTE: A hand icon is displayed when a button press is not a valid operation accepted by the unit for the disc you are playing.

Menu Screens

A number of menu screens can appear during configuration of the GDV-850 such as the sample below:

```
SETUP MENU – MAIN PAGE

GENERAL SETUP
SPEAKER SETUP
AUDIO SETUP
PREFERENCES

EXIT SETUP

GO TO GENERAL SETUP PAGE
```
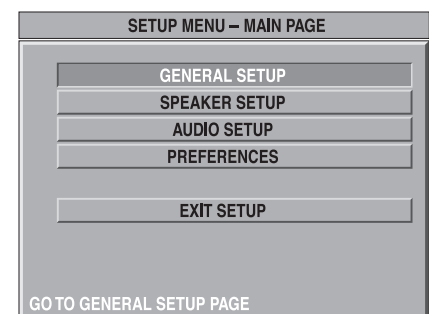
The menu screens provide access to various settings and features described in the next section of this manual. The menu system appears when the setup button is pressed, typically whether the disc or stopped or playing. The on-screen display ("OSD") menu does not appear when a DVD-A disc is playing. The Preferences menu screens are only available when disc playback is stopped.

GDV-850 Setup Menu

4.1 Setup Overview

All configurations for the GDV-850 are made in the setup menu. The setup menu is displayed on the OSD and accessed with the s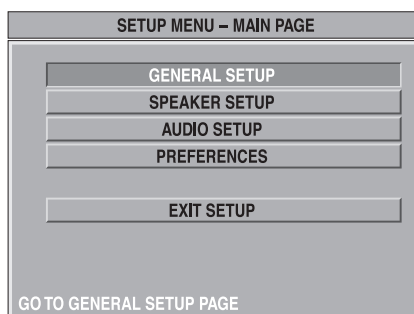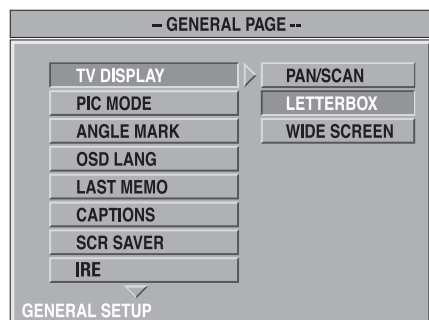etup button on the GRC-815 remote control. When the setup button is pressed your source material, if playing, is paused and a transparent blue menu is displayed over the source video. Please note that not all options can be modified while source material is active. Use the navigation keys on the remote to navigate the setup menu, all selections will be saved when you exit setup. Pressing the setup button while in the setup menu will exit the menu and playback of your material will resume. Changes can be made to the GDV-850 in four main areas: general setup, speaker setup, audio setup and preferences.

```
          SETUP MENU – MAIN PAGE

          GENERAL SETUP
          SPEAKER SETUP
          AUDIO SETUP
          PREFERENCES

          EXIT SETUP

GO TO GENERAL SETUP PAGE
```
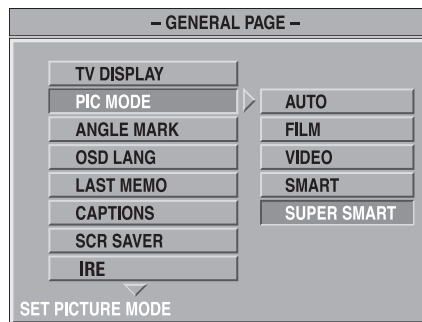
4.2 General Setup

The General Setup page provides a number of setup items relating to the type of TV monitor, progressive scanning, and the appearance of On-Screen Displays and the front panel display.

TV Display

```
          – GENERAL PAGE --

     TV DISPLAY    ▷   PAN/SCAN
     PIC MODE          LETTERBOX
     ANGLE MARK        WIDE SCREEN
     OSD LANG
     LAST MEMO
     CAPTIONS
     SCR SAVER
     IRE

GENERAL SETUP
```

The TV display option allows the DVD player video output to be configured to match the size of your TV and your viewing preferences. First, you need to decide which type of TV you are using. There are two different aspect ratio TVs available today: standard (4:3) and widescreen (16:9). If your TV is a widescreen set, then you should select the "widescreen" option. If your TV is the standard 4:3 then you should select either pan/scan or letter box. The letter box option will display black bars at the top and bottom of the picture when you are watching widescreen material. If you don't want to see the bars, then you should select the pan/scan option. When you are viewing widescreen material, the pan/scan options cuts off the extreme left and right sides of the picture, and fills your entire TV screen.

PIC Mode

```
          – GENERAL PAGE –

     TV DISPLAY
     PIC MODE      ▷   AUTO
     ANGLE MARK        FILM
     OSD LANG          VIDEO
     LAST MEMO         SMART
     CAPTIONS          SUPER SMART
     SCR SAVER
     IRE

SET PICTURE MODE
```

This setting optimizes the Progressive Scan mode. The setting is only in effect if you are using an NTSC TV monitor. It has no effect unless your monitor accepts progressive scan video signals and the GDV-850's Progressive Scan feature is activated. Progressive scanning combines two interlaced (480i) fields into a single progressive (480p) image for display on digital monitors. When source material was originally filmed with video cameras, this is a relatively straightforward digital conversion since video is shot with a frame rate of 60 interlaced frames per second which is then displayed at 30 progressive frames per second. However, material originally shot on film presents a more difficult challenge since it was shot at a frame rate of 24 frames per second. When converted to video with 30 frames per second, this material may show artifacts on fast motion scenes. An advanced film mode technique known as reverse 3:2 pulldown improves the picture with film-based recordings.

Auto

The GDV-850 recognizes the picture type based on ID codes embedded at the start of the disc.
Film: This option activates the reverse 3:2 pulldown feature and is optimized for film source images. It should only be used to force the progressive scanning into film mode.

Video

This option is optimized for video source material and is used to force the progressive scanning into video mode.

Smart

The option may be best for discs with mixed film source and video source material that cannot rely on an identifying code inserted at the beginning of the disc. The GDV-850 senses the type of recording for each scene and adjusts the progressive scanning accordingly.

Super Smart

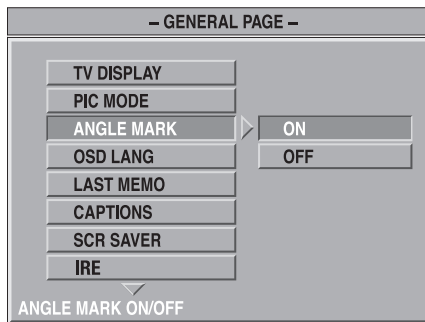This option is the default setting and usually provides the best performance. In addition to activating film or video modes based on embedded codes, it analyzes the video signal in real time and uses motion adaptive interpolation to optimize the display for rapidly moving images or still images.

Angle Mark

You can choose whether or not to have the unit display an angle icon in the corner of the screen to inform you

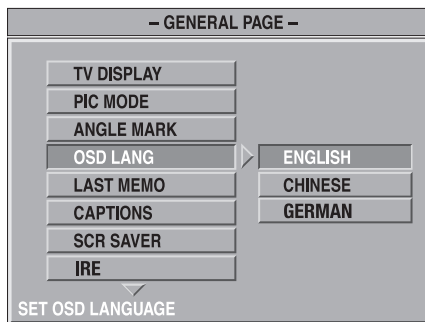when alternate angles are available for a scene on a DVD Video disc.

– GENERAL PAGE –

TV DISPLAY
PIC MODE
ANGLE MARK ▷ ON
OSD LANG OFF
LAST MEMO
CAPTIONS
SCR SAVER
IRE
ANGLE MARK ON/OFF

On: Activates the display of the angle icons, indicating that alternate angles are available for the current scene.
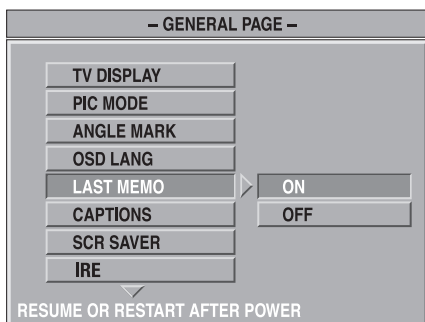**Off:** Turns off the display of angle icons.
Note: Even with Angle Mark off, the angle icons appear when the ANGLE button on the remote is pressed.

OSD Language

– GENERAL PAGE –

TV DISPLAY
PIC MODE
ANGLE MARK
OSD LANG ▷ ENGLISH
LAST MEMO CHINESE
CAPTIONS GERMAN
SCR SAVER
IRE
SET OSD LANGUAGE

The language that the OSD displays may be changed to your preference. The options are English, Chinese and German.

Last Memo

– GENERAL PAGE –

TV DISPLAY
PIC MODE
ANGLE MARK
OSD LANG
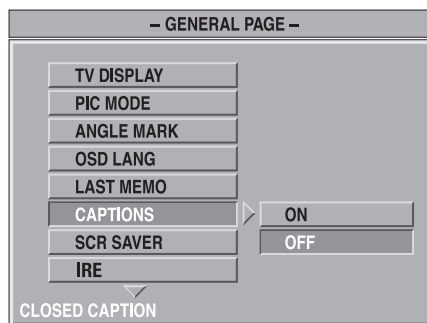LAST MEMO ▷ ON
CAPTIONS OFF
SCR SAVER
IRE
RESUME OR RESTART AFTER POWER

Some DVDs have the ability to let you watch part of a movie, take the disc out, then re-start the movie from where you left off. Not all discs have this feature.
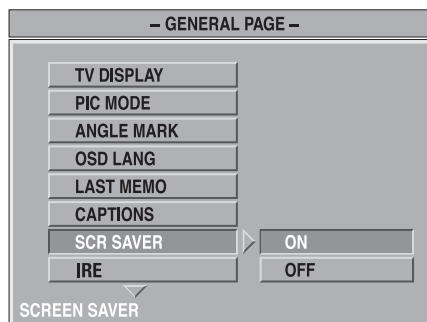
Captions

– GENERAL PAGE –

TV DISPLAY
PIC MODE
ANGLE MARK
OSD LANG
LAST MEMO
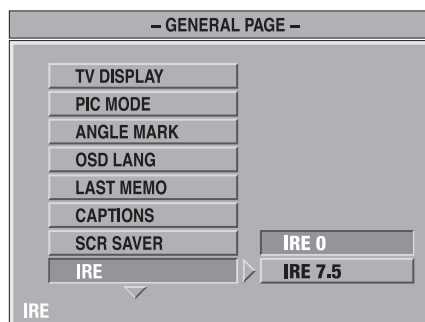CAPTIONS ▷ ON
SCR SAVER OFF
IRE
CLOSED CAPTION

Much like subtitles, captions are a textual representation of the audio information in a video program. Captions are usually intended for the hearing impaired, and therefore include additional text to identify the person speaking, off-screen sounds, and so on. The options are on and off.

Scr (Screen) Saver

– GENERAL PAGE –

TV DISPLAY
PIC MODE
ANGLE MARK
OSD LANG
LAST MEMO
CAPTIONS
SCR SAVER ▷ ON
IRE OFF
SCREEN SAVER

After your player sits idle for a few minutes the screen saver will be activated. This option will help to increase the life span of your monitor by preventing images from burning into the display. The options are on and off.

IRE

– GENERAL PAGE –

TV DISPLAY
PIC MODE
ANGLE MARK
OSD LANG
LAST MEMO
CAPTIONS
SCR SAVER IRE 0
IRE ▷ IRE 7.5
IRE

Grayscale in video is measured and tracked on a scale of 0 (black) to 100 (white) IRE units. In NTSC video is traditionally assigned the 7.5 IRE value as being the black cutoff in a picture. Setting the output to a 0 IRE signal will present richer, deeper black tones in every image. The options are IRE 0 and IRE 7.5.

Dimmer

– GENERAL PAGE –

PIC MODE – – 0
ANGLE MARK – – 1
OSD LANG – – 2
LAST MEMO – – 3
CAPTIONS – – 4
SCR SAVER – – 5
IRE – – 6
DIMMER ▷ – – 7
– – OFF
ADJUST VFD DIMMER
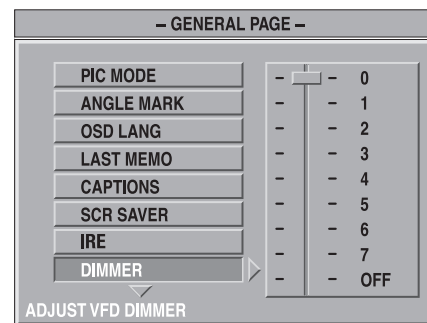
The brightness of the front panel display can be reduced to avoid distraction while viewing in a darkened room. To adjust, use the CURSOR buttons to select a setting on the vertical slider control on the right side of the menu screen. A setting of "1" is the brightest setting. A setting of "7" is the dimmest setting. The "OFF" setting turns the front panel display off.

4.3 Speaker Setup

SETUP MENU – MAIN PAGE

GENERAL SETUP
SPEAKER SETUP
AUDIO SETUP
PREFERENCES

EXIT SETUP

GO TO SPEAKER SETUP PAGE
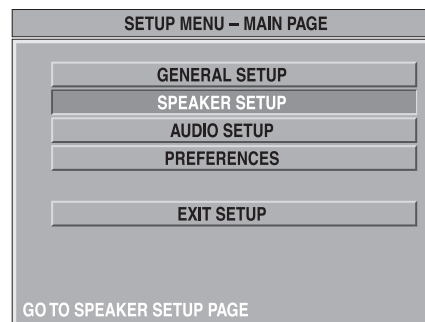
Speaker setup is an important step to ensure you get the most out of your system.

Output Mode

```
–– SPEAKER SETUP PAGE ––
  OUTPUT MODE      ▷   5.1CH SURROUND
  CENTER               2CH STEREO
  REAR                 2CH PROLOGIC
  SUBWOOFER            2CH VIRTUAL
  CNTR DELAY
  REAR DELAY
  TEST TONE
  REAR/CNTR SIZE
SET DOWNMIX MODE
```
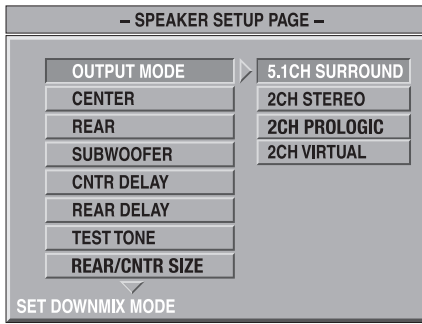
Setting the output mode determines what outputs are active and how the signals will be dispersed to your pre-amp. The options are 5.1Ch Surround, 2Ch Stereo (R_OL_O), 2Ch Pro Logic (R_TL_T), and 2Ch Virtual.

Center

```
–– SPEAKER SETUP PAGE ––
  OUTPUT MODE
  CENTER          ▷   ON
  REAR                OFF
  SUBWOOFER
  CNTR DELAY
  REAR DELAY
  TEST TONE
  REAR/CNTR SIZE
SETUP CENTER SPEAKER SIZE
```

You have the option to turn the center channel on and off. If you select "Off" the audio for the center channel will be processed and dispersed between the left and right front channels.

Rear

```
–– SPEAKER SETUP PAGE ––
  OUTPUT MODE
  CENTER
  REAR            ▷   ON
  SUBWOOFER           OFF
  CNTR DELAY
  REAR DELAY
  TEST TONE
  REAR/CNTR SIZE
SETUP REAR SPEAKER SIZE
```
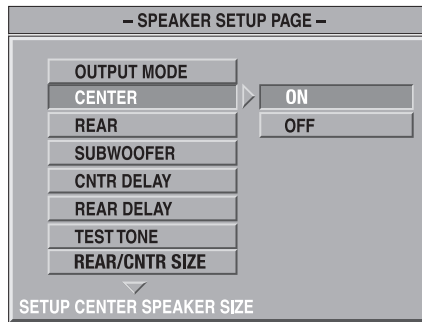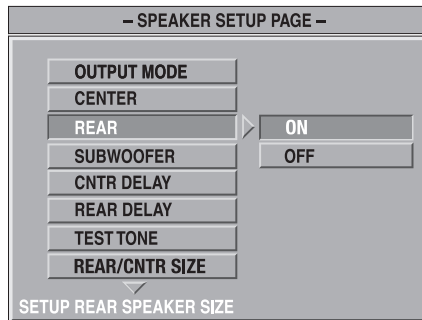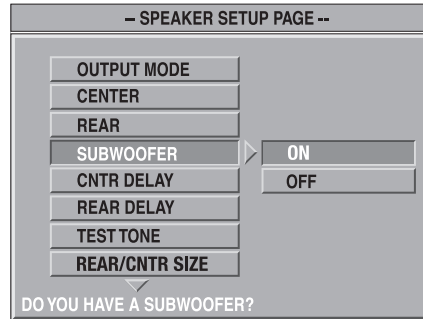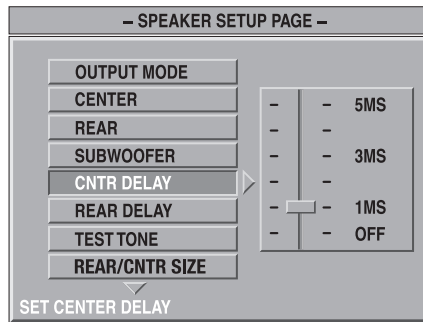
You also have the option to turn the rear channels on and off. If "off" is selected, rear channel information will be sent to the front speakers.
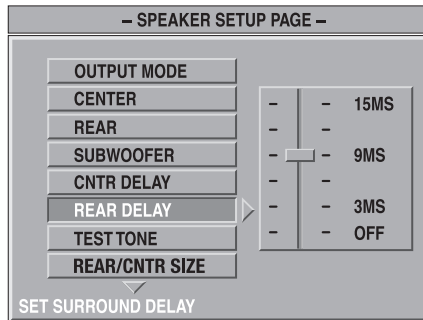
Subwoofer

```
–– SPEAKER SETUP PAGE ––
  OUTPUT MODE
  CENTER
  REAR
  SUBWOOFER       ▷   ON
  CNTR DELAY          OFF
  REAR DELAY
  TEST TONE
  REAR/CNTR SIZE
DO YOU HAVE A SUBWOOFER?
```

If you have a subwoofer select "On," otherwise select "Off."

Cntr (Center) Delay

```
–– SPEAKER SETUP PAGE ––
  OUTPUT MODE
  CENTER               –  –  5MS
  REAR                 –  –
  SUBWOOFER            –  –  3MS
  CNTR DELAY      ▷    –  –
  REAR DELAY           –  –  1MS
  TEST TONE            –  –  OFF
  REAR/CNTR SIZE
SET CENTER DELAY
```

Sometimes your center channel cannot be placed at a distance that is equal to that of your left and right speaker. For every foot of difference apply one milli-second delay. The options are 5ms to 1ms and off, in 1ms steps.

Rear Delay

```
–– SPEAKER SETUP PAGE ––
  OUTPUT MODE
  CENTER              –  –  15MS
  REAR                –  –
  SUBWOOFER           –  –  9MS
  CNTR DELAY          –  –
  REAR DELAY      ▷   –  –  3MS
  TEST TONE           –  –  OFF
  REAR/CNTR SIZE
SET SURROUND DELAY
```
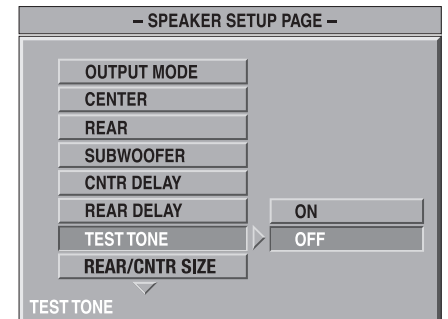
If your rear speakers are closer to your listening spot than your fronts, adjust this setting by adding delay to the rear speakers. Add delay such that the sound will arrive at the listening spot from the front speakers and the rear speakers simultaneously. Sound travels about 1 foot per msec, so if your rear speakers are three feet closer to the listening spot than your fronts, add 3 msec. of delay.

Delays set in the DVD player will not be duplicated by your preamp when the signal goes out from your DVD player's digital output.

Test Tone

```
–– SPEAKER SETUP PAGE ––
  OUTPUT MODE
  CENTER
  REAR
  SUBWOOFER
  CNTR DELAY
  REAR DELAY      ▷   ON
  TEST TONE           OFF
  REAR/CNTR SIZE
TEST TONE
```

Test tones are noise signals with a standardized level. An audible tone will play in each of your speakers in a sequential order, starting with left front. If any channel has been deactivated in the speaker setup, the test tone will pass over this channel, without pausing the test. If you do not hear a test tone from a particular speaker, first ensure the physical connection is correct and secure. Then check to see if the channel is active in the setup.

Rear/Cntr Size

```
–– SPEAKER SETUP PAGE ––
  OUTPUT MODE
  CENTER
  REAR
  SUBWOOFER
  CNTR DELAY
  REAR DELAY
  TEST TONE           LARGE
  REAR/CNTR SIZE  ▷   SMALL
SET BASS REDIRECTION
```
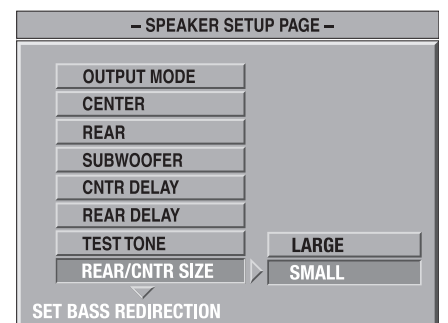
The speaker size is important to set in relation to your setup. The front left and right speakers are always set to large. If needed, this setting can usually be

adjusted by your preamp. But you have the option to change the size of rear and center speaker in relation to your configuration using the DVD player's settings. The options are large and small.

4.4 Audio Setup

```
          SETUP MENU – MAIN PAGE

              GENERAL SETUP
              SPEAKER SETUP
              AUDIO SETUP
              PREFERENCES

               EXIT SETUP


   GO TO AUDIO SETUP
```
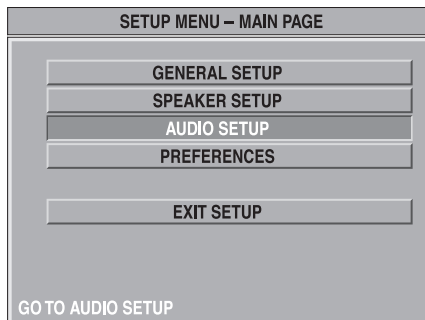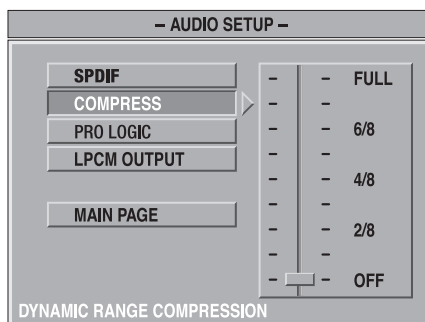
S/PDIF: S/DIF stands for Sony/Philips Digital Interface and is a standard digital audio file transfer format. The options are on and off.

Compress

```
              – AUDIO SETUP –

        SPDIF                 –  –  FULL
        COMPRESS              –  –
        PRO LOGIC             –  –  6/8
        LPCM OUTPUT           –  –
                              –  –  4/8
        MAIN PAGE             –  –
                              –  –  2/8
                              –  –
                              –  –  OFF
   DYNAMIC RANGE COMPRESSION
```
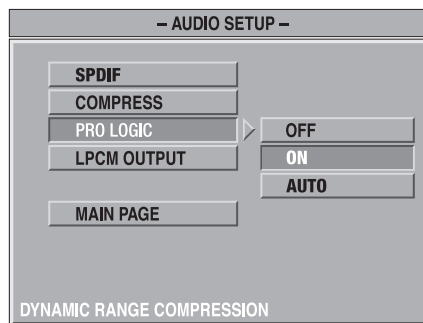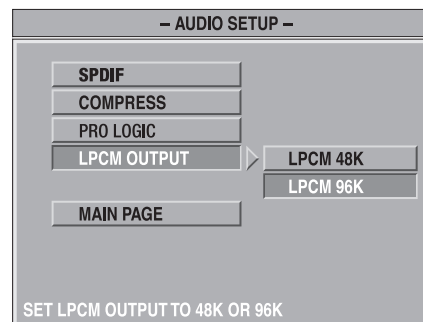
Compressing the signal is most commonly used in night mode listening, when a lot of bass is not desirable. The options are full to 1/8 and off in 1/8 steps. Compression only works with the player's analog outputs.

Pro Logic

Pro Logic is an algorithm created by Dolby to enhance the playback of a stereo signal. The signal is remixed to provide surround sound. You can choose how and when the DVD player enables this function. The options are on, off and auto.
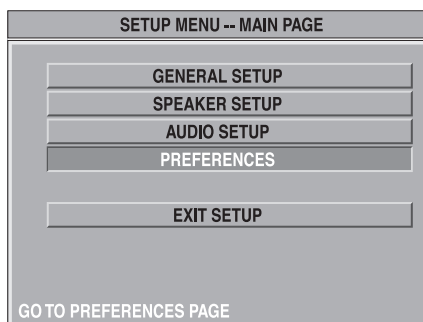
```
              – AUDIO SETUP –

        SPDIF
        COMPRESS
        PRO LOGIC          ▷   OFF
        LPCM OUTPUT            ON
                              AUTO
        MAIN PAGE


   DYNAMIC RANGE COMPRESSION
```

LPCM (Linear PCM) Output

```
              – AUDIO SETUP –

        SPDIF
        COMPRESS
        PRO LOGIC
        LPCM OUTPUT    ▷   LPCM 48K
                           LPCM 96K
        MAIN PAGE


   SET LPCM OUTPUT TO 48K OR 96K
```
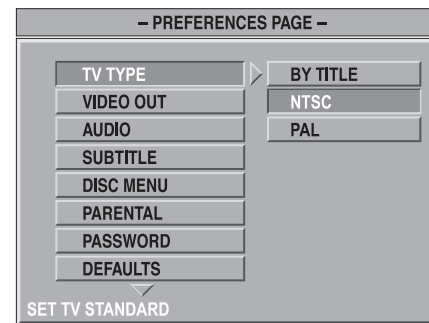
PCM is a digital stereo bitstream that S/PDIF outputs. LPCM 48k down samples 96k or higher material to 48k. When 96k is selected any material higher than 96k will be downsampled. The options are LPCM 48k and LPCM 96k.

4.5 Preferences

```
          SETUP MENU -- MAIN PAGE

              GENERAL SETUP
              SPEAKER SETUP
              AUDIO SETUP
              PREFERENCES

               EXIT SETUP


   GO TO PREFERENCES PAGE
```
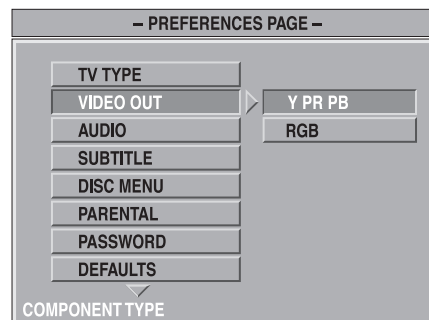
TV Type

Setting this preference determines the format of video sent to your TV. The options are: NTSC, PAL or by Title. For best performance, your TV type should match the format of the disc you are watching. The United States uses NTSC and much of Europe uses PAL.
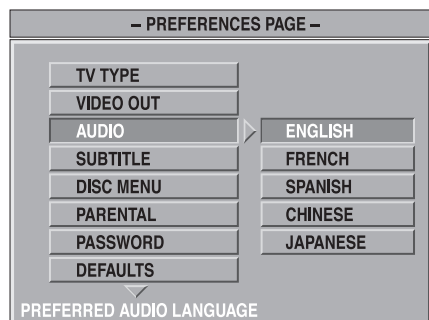
```
          – PREFERENCES PAGE –

        TV TYPE        ▷   BY TITLE
        VIDEO OUT          NTSC
        AUDIO              PAL
        SUBTITLE
        DISC MENU
        PARENTAL
        PASSWORD
        DEFAULTS
   SET TV STANDARD
```

Video Out

```
          – PREFERENCES PAGE –

        TV TYPE
        VIDEO OUT      ▷   Y PR PB
        AUDIO              RGB
        SUBTITLE
        DISC MENU
        PARENTAL
        PASSWORD
        DEFAULTS
   COMPONENT TYPE
```

This option allows you to select the format of the video output. The RGB option is a professional video format that requires a hardware upgrade.

Audio

```
          – PREFERENCES PAGE –

        TV TYPE
        VIDEO OUT
        AUDIO          ▷   ENGLISH
        SUBTITLE           FRENCH
        DISC MENU          SPANISH
        PARENTAL           CHINESE
        PASSWORD           JAPANESE
        DEFAULTS
   PREFERRED AUDIO LANGUAGE
```
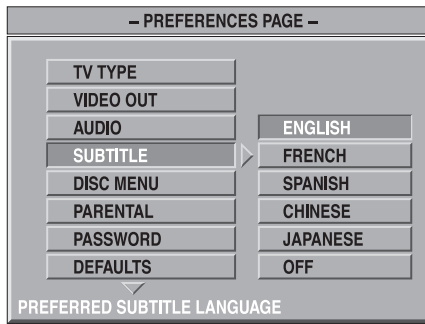
Many DVDs provide additional tracks with translations of the movie on the disc. This option can be set from the disc menu or as default from this audio preference setting. The options are English, French, Spanish, Chinese and Japanese.
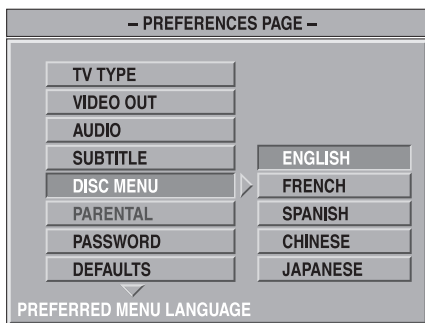
Subtitle

Subtitles are the lines of translated dialogue at the bottom of a movie screen. The language in which they are displayed

– PREFERENCES PAGE –

TV TYPE
VIDEO OUT
AUDIO .... ENGLISH
SUBTITLE .... FRENCH
DISC MENU .... SPANISH
PARENTAL .... CHINESE
PASSWORD .... JAPANESE
DEFAULTS .... OFF

PREFERRED SUBTITLE LANGUAGE

may be changed to your preference. The options are English, French, Spanish, Chinese, Japanese and off.

Disc Menu

– PREFERENCES PAGE –

TV TYPE
VIDEO OUT
AUDIO
SUBTITLE .... ENGLISH
DISC MENU .... FRENCH
PARENTAL .... SPANISH
PASSWORD .... CHINESE
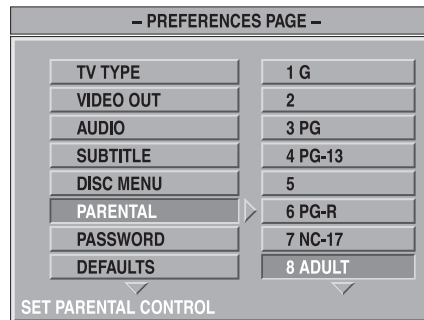DEFAULTS .... JAPANESE

PREFERRED MENU LANGUAGE

Set a disc's menu to be displayed in your preferred language. This setting will automatically default the menu of a disc to your desired language, if and when this option is available on the disc, without having to make this selection each time you watch or listen to a new disc. The options are English, French, Spanish, Chinese and Japanese.
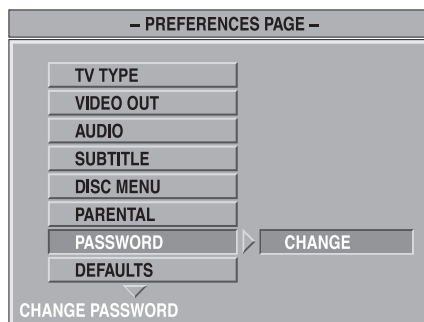
Parental

The GDV-850 has a parental lock feature to prevent children from watching inappropriate DVD-Video discs. The feature relies on standard ratings codes embedded on the DVD disc and may not be available for all discs. The parental lock feature sets the restriction to one of eight steps from Level 1 (G Rating) to Level 8 (Adult rating). A disc with a rating higher than the specified level requires entry of a password for playback. Thus, if you specify a Level 4 (PG-13) restriction, any discs rated

PG-13 or lower will play without a password, but discs rated at Level 5 or higher require a password. To adjust the parental setting, use the navigation buttons to select the desired restriction level on the vertical slider control on the right side of the menu screen. Scrolling down to the "NO PARENTAL" setting disables the parental lock feature.

– PREFERENCES PAGE –

TV TYPE .... 1 G
VIDEO OUT 2
AUDIO .... 3 PG
SUBTITLE 4 PG-13
DISC MENU 5
PARENTAL .... 6 PG-R
PASSWORD 7 NC-17
DEFAULTS .... 8 ADULT

SET PARENTAL CONTROL

After you have selected a new parental lock setting, a prompt will ask for the four-digit password. Enter the password to complete the change to the new setting.

Password

– PREFERENCES PAGE –

TV TYPE
VIDEO OUT
AUDIO
SUBTITLE
DISC MENU
PARENTAL
PASSWORD .... CHANGE
DEFAULTS

CHANGE PASSWORD

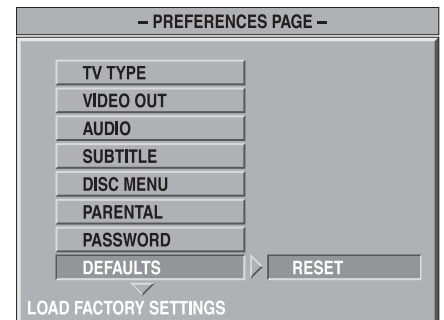This menu item allows setting of a new parental lock password.

• Highlight the PASSWORD item, then press the CURSOR buttons to move to the right side of the screen, highlighting the CHANGE item.

• Press PLAY/ENTER to display the change password screen.

• Enter the existing 4-digit password in the first box, using the NUMERIC (0-9) buttons on the remote. If you enter the wrong password, an invalid password prompt appears and you

cannot proceed. If you enter the correct password, the highlight moves to the second box.

• Enter the new 4-digit password in the second box. Then, enter the new 4-digit password again in the third box. Press PLAY/ENTER to memorize the new password.

NOTE: If you forget your password, enter the master password: 3308.

Defaults

– PREFERENCES PAGE –

TV TYPE
VIDEO OUT
AUDIO
SUBTITLE
DISC MENU
PARENTAL
PASSWORD
DEFAULTS .... RESET

LOAD FACTORY SETTINGS

This item restores the factory default settings.

• Highlight the DEFAULTS item, then press the navigation buttons to move to the right side of the screen, highlighting the RESET item.

• Press PLAY/ENTER to restore the factory default settings.

Note: the default TV type setting is NTSC.

4.6 MP3 and JPEG files

The GDV-850 can play recorded MP3, VCD, and JPEG files from most CD-R, CD-RW, and DVD discs. These discs, often recorded on computer drives, have a file structure similar to computer discs, with files stored in folders. Selecting files for playback and other features are made using a special Smart Navi menu.

Smart Navi Menu

Whenever a disc containing MP3, MPEG or JPEG files is inserted in the GDV-850 or when the PLAY/ENTER button is pressed, the SMART NAVI menu appears:

On the left side of the menu is a list of folders on the disc. When a folder is selected, the list of files in that folder is displayed down the right side of the screen. The single field at the bottom right of the screen shows the current play mode. To move between the three areas of the screen (folder list, track list, and play mode), repeatedly press the Navigation buttons until the selection highlight is in the desired area.

To select a folder: Use the navigation buttons to move to the left side of the screen. Then, use the navigation buttons to select the desired folder.

To select a track: Use the navigation buttons to move to the left side of the screen. Then, use the navigation buttons to select the desired track.

Play Modes

The Play Mode field at the bottom right of the SMART NAVI menu allows selection of numerous play mode options. To select an option: Use the Navigation buttons to move to the play mode field on the screen. Then, use the Navigation buttons to select the desired option from the list below. Press PLAY/select to begin playback. Press STOP to exit the playback and return to the Smart Navi menu.

Single: Play a single track or image.

Rep-One: Repeat the single track or image continuously until playback is stopped by pressing the STOP button.

Folder: Play all of the tracks in the selected folder.

Folder Rep: Repeat all of the tracks or images in the selected folder continuously until playback is stopped by pressing the STOP button.

Disc Scan: Scan quickly through all of the MP3 tracks or images on the disc, playing just the first ten seconds of each.

Disc: Play all the MP3 tracks or images in all of the folders on the disc.

Disc Rep: Repeat all the MP3 tracks or images in all of the folders on the disc continuously until playback is stopped by pressing the STOP button.

Random: Play all of the MP3 tracks/images in the selected folder in random order.

Shuffle On: Play all of the MP3 tracks or images in all folders on the disc in random order.

Note: Five folders maximum on disk and names can be no longer than eleven characters.

Program & Prog-End: Plays selected tracks or images in the order you choose. To use program play:
1. Select PROGAM in the play mode field using the Navigation buttons.
2. Press the PLAY/ENTER button.
3. Use the Navigation buttons to select the folder or track list. Then, select the desired tracks in the order you wish to play them by using the Navigation buttons to highlight the first track, then the second track, then the third track, etc.
4. After selecting the desired tracks, press the STOP button. PROG-END will be displayed in the play mode field.
5. Press the PLAY/ENTER button to begin programmed play.
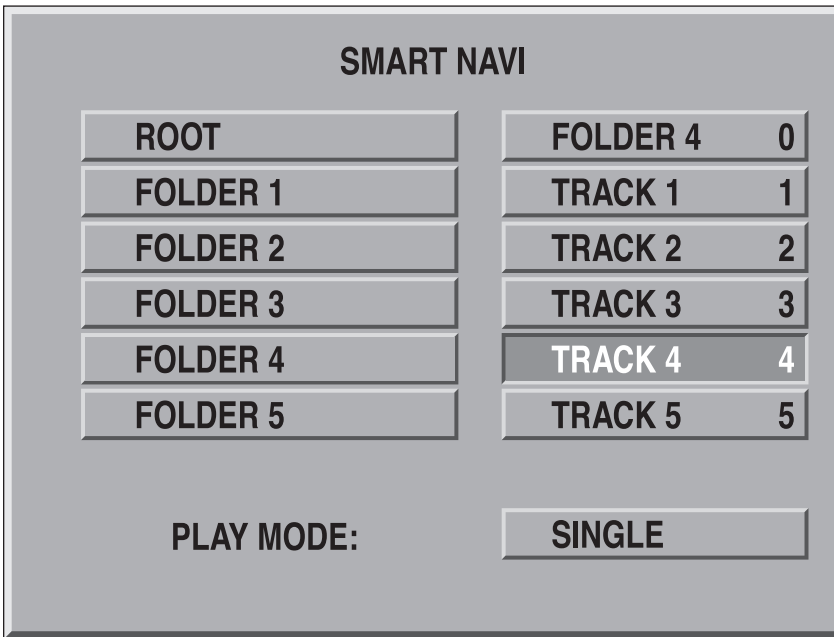
Additional JPEG features

When displaying JPEG photo images, the following additional features are available:

Slide Show: Press the RESUME button repeatedly to select one of 11 slide show modes that automatically display images. You can also select RANDOM play or NONE (no slide show).

Rotate: Except in Zoom mode, press the navigation buttons to rotate the image clockwise or counterclockwise.

Repeat: In addition to the repeat options described in the previous section, press the two repeat buttons to cycle through the available repeat modes.

Zoom: To zoom a displayed image, press the ZOOM button. Then, press the reverse and forward buttons repeatedly to make the image progressively smaller or larger. In zoom mode, the navigation buttons move the image in any direction to show the desired area of the image.

SMART NAVI

ROOT	FOLDER 4	0
FOLDER 1	TRACK 1	1
FOLDER 2	TRACK 2	2
FOLDER 3	TRACK 3	3
FOLDER 4	TRACK 4	4
FOLDER 5	TRACK 5	5

**PLAY MODE:** SINGLE

Tips on Displaying Images

Use the remote control to make changes to the playback of images and sound files. Here are a couple of helpful reminders when displaying images. Many options are not available when playing sound files.

• Press PAUSE when in slideshow mode to hold on an image then press the PREV or NEXT buttons to advance image-by-image.

• Press the RESUME button to change the transitions in your slideshow, there are 11 different transitions in all, including the option to display random or no transitions.

• Press ZOOM and the REV or FWD buttons to scale the image, playback is paused while image is scaled. Use the NAVIGATION buttons to pan across the image.

4.7 Equalizer Settings

The GDV-850 DSP processor includes a spectrum analyzer and a graphic equalizer. This feature is available during playback of CDs and MP3 discs and can be accessed by pushing the "C" button on the remote. Note, the equalizer has several presets and a user adjustable memory location.

The optional eq. settings are: personal, standard, classic, jazz, rock, pop, ballad, and dance. To cycle through this list of eq. settings press your play button. To adjust the personal settings use your NAVIGATION buttons.
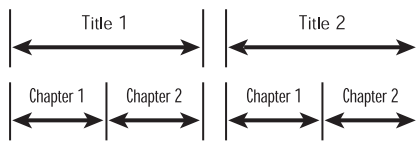
60   150   400   1K   2K   6K   15K

jazz

60   150   400   1K   2K   6K   15K
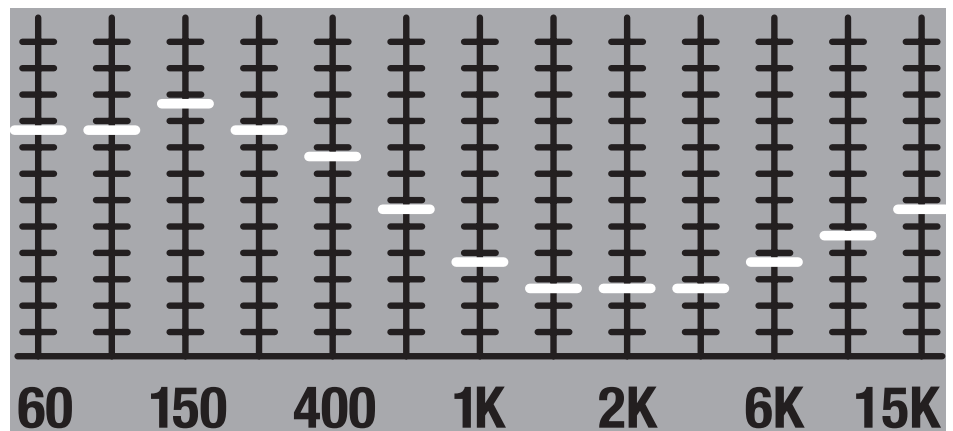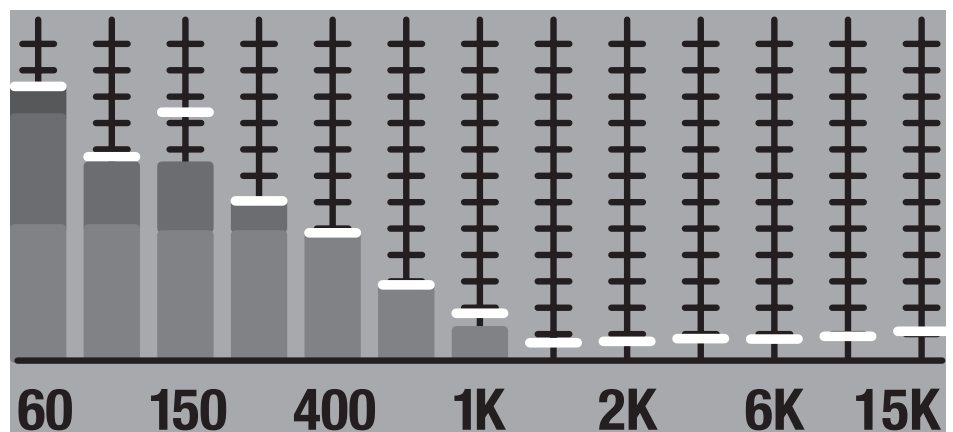
5.1 Technology Overview

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:

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

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:

Group 1			Group 2	
Track 1	Track 2	Track 3	Track 1	Track 2
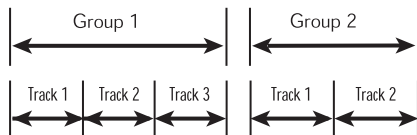
A DVD-Audio disc contains Groups, with each group divided into Tracks. Some DVD-Audio discs also contain a Bonus Group that can only be played back by entering a Key Number password. Most DVD-Audio discs include other information in addition to audio, such as still pictures, movies and text.

Audio CD:

Track 1	Track 2	Track 3

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

Progressive Scan: Most plasma displays, LCD monitors and projectors use a feature called progressive scan. This displays all the line of a picture at the same time, in one very fast burst, which is in contrast to an aging process called interlacing. Interlacing displays every other line in two successive scans of the monitor to complete the picture. The GDV-850 has a switch on the rear panel to select progressive scan.

Field-Adaptive Deinterlacing: The field-adaptive deinterlacing is an algorithm that enhances progressive scan video outputs by examining individual pixels across three or more fields of an image and selectively interpolates regions of the picture to form a progressive scan image that is clear and artifact free.

Dolby: Dolby Digital can deliver 5.1-channel sound from DVD-Video and DVD-ROM discs, laser discs, and digital TV broadcasts, satellite transmissions, and cable systems. It differs from Dolby Surround (Pro Logic) by providing two separate surround channels for greater realism, and an additional ".1" or "LFE" channel for low-frequency (bass) special sound effects. The LFE channel is sometimes identified as the "subwoofer" channel. While a subwoofer can be helpful in reproducing low bass in general, it is not necessary to have one if one or more of the speakers in the playback system have extended bass response. Without a subwoofer, the LFE channel's bass effects can be directed to those speakers with extended bass. Furthermore, not all multichannel soundtracks have the ".1" channel; it is used primarily for explosions, rumbles, and the like on movie soundtracks, and is not present on all programs.

DTS: This compressed digital data format is similar to Dolby Digital. DTS also provides 5.1 channel surround channels and is available on compact disc, DVD and laser discs. Audio-only DTS discs may be used with any CD, LD or DVD player with a digital audio output.

DVD Audio: DVD-Audio is an extension of the highly popular DVD format, distinguished by its capability for delivering a new standard of quality previously unavailable in packaged audio media. A highly compelling feature of DVD-Audio is its multichannel audio capability, which is proving to be optimal in an automotive environment. DVD-Audio also includes a host of value-added multimedia features not previously available on compact disc.

MLP: Utilizing Meridian Lossless Packing technology, DVD-Audio discs can store up to six channels of 24-bit/96 kHz audio, including a separate low-frequency bass channel. Compare that to two channels of 16-bit/44.1 kHz sound from CDs. For stereo buffs, a DVD-Audio disc can alternatively hold two channels of 24-bit/192 kHz audio, for stereo recordings that exceed the quality of any music audio format previously available.

HDCD: High Definition Compatible Digital, or HDCD, is a patented process for delivering 20 bits of musical information on a standard CD. HDCD overcomes the standard 16 bit limitation of the CD format by using a sophisticated system to encode the additional 4 bits onto the CD while remaining completely compatible with the CD format.

MP3 CD-R: The GDV-850 will play MP3 files on a CD-R. A separate menu will be displayed to navigate the disc. MP3 format is a compression system for audio tracks. This format helps to reduce the number of bytes in a song and create a file size that is significantly smaller, allowing faster transfer and the ability to store more music on a disc. MP3 tracks, while more compact, usually do not maintain all the fidelity of CD audio.

5.2 Troubleshooting

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

No Power: make sure the unit is plugged in properly and make sure the rear panel power switch is in the ON position.

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

No picture: check the video cable connection and input setting on your TV. Turn off the progressive scan feature via the rear panel switch or change the video output setting using the remote control.

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 does not fill screen: Set TV DISPLAY type correctly.

No sound: check the audio cable connection and input settings on preamplifier. Make sure the SPDIF output is activated when using a digital connection.

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.

5.3 Resolving Problems

Use the troubleshooting notes above to solve common situations that don't require professional attention. If the steps stated in possible solution do not resolve your problem, then please contact your ADCOM dealer or call the ADCOM customer service department. Any problems not covered here should be brought to the attention of your ADCOM dealer or ADCOM customer service department.

A special note on "hum:" When there is a low-volume "hum" audible throughout your speakers, even with the main volume turned all the way down, you have a common phenomenon known as a "ground loop." A ground loop is basically a difference in ground voltages between two or more components which are connected electrically and which creates multiple current paths where there must only be one. This difference in potentials creates a 60Hz low-level sound (approximately a low A), that seems to "hum."

It can be caused by adding new components to your system, but that does not imply there is anything electrically wrong with any new component. With the advent of audio/video and home theater systems, the problem has become commonplace. Generally, the cause is the Cable-TV incoming signal line. This new incoming line may add an additional ground at a different potential to the AC line ground of your other equipment (refer to note 1 and 2, to troubleshoot a hum problem).

Note 1: Cable TV systems can sometimes contribute to ground loop problems which cause "hum." To determine if your cable system is the contributing factor, disconnect the Cable-TV incoming signal line (round, 75Ω) at the wall, or the first component the cable is connected to (i.e. the cable box, or VCR). If the hum is no longer present, you must insert a "75Ω ground loop isolator" before reconnecting the line. You should check with your ADCOM dealer to obtain one. If the "75Ω ground loop isolator" works only partially or not at all, then please read note 2 to complete the troubleshooting procedure.

Note 2: Make sure that the power amplifier is at least 6" from the GDV-850. Usually putting another component between them is sufficient to minimize the hum. If this does not reduce the hum, turn the system off and disconnect all Inputs from the amplifier. If the hum still persists, then your dealer or service center must examine the unit/system. If the

hum disappears, try another set of RCA cables. Connect one RCA cable at a time to see if one specific cable is responsible. If any or all cables cause the hum to appear, then the unit should be evaluated for proper operation by your dealer or authorized service center. Please see our website or call us for a list of authorized service centers in your area.

5.4 System Reset

In rare cases the GDV-850 internal processor may freeze or lock-up causing abnormal operation. This is common to all micro-processor controlled devices when the unit is subject to excessive static discharge, AC line noise, or power spikes.

In most cases it is easy to solve this problem by simply unplugging the GDV-850 from its AC power source for about five minutes. After waiting, reconnect the power cord and turn the unit on. If the unit functions normally, no further action is needed.

In the event that the unit still does not operate properly, it may be necessary to manually reset the processor. Note, however, that when the processor is reset you will lose all settings including surround mode settings, and speaker configurations. For this reason we strongly recommend that you record these settings so that it is easy to restore them after resetting the processor.

To reset the unit to factory default settings you will need to enter the discrete remote control command. Please refer back to the discrete remote control commands table. The command name is "Factory Defaults," the IR code is 86h. This should reset the system.

If the manual reset does not solve the problem, contact your authorized ADCOM dealer, an authorized ADCOM service center or contact ADCOM's service department directly for further advice.

5.5 Caring for your GDV-850

Great care has been taken by ADCOM to ensure that your DVD player is as flawless in appearance as it is electronically. The front panel is a heavy-gauge, high-grade aluminum extrusion carefully finished and anodized for durability. The chassis, top cover and rear panel are heavy-gauge steel that has been powder coated and baked to ensure a lasting finish. If the front panel, top or sides become dusty or fingerprinted, they can be cleaned with a soft lint-free cloth, slightly dampened with a very mild detergent solution or glass cleaner.

If you will not be using your home theater system for an extended period of time, it is always a good idea to turn the unit off using the power switch on the rear panel of the GDV-850. This will prevent the automatic turn on circuits from accidentally turning the system on during your absence.

6.0 Servicing

ADCOM has a technical service department to answer questions pertinent to the installation and operation of your unit. In the event of difficulty, please contact us for prompt advice. If your problem cannot be resolved through our combined efforts, we may refer you to an authorized repair agency, or authorize return of the unit to our factory. To aid us in directing you to a convenient service center, it would be helpful if you indicate which major city is accessible to your home.

Please address mail inquires to:
ADCOM Service
8541 East Anderson Drive
Scottsdale, Arizona 85255 USA

Phone, Fax or Email inquires to:
Voice: (480) 607-2277 or Fax: (480) 348-9876
Monday through Friday, 8:00 AM to 4:00 PM MST
Email: service@adcom.com

For fax inquires, please include a return fax number for the reply. When calling or writing about your ADCOM product, be sure to note and refer to its serial number as well as the date of purchase and the dealer from whom it was purchased. In any communications to us, please include a daytime phone number where we may reach you. In the event the unit must be returned to our factory for service, you will be instructed on the proper procedure when you call or write for a return authorization. **Under no circumstances should your unit be shipped to our factory without prior authorization, or packed in other than its original carton and fillers.**

If the original shipping carton and its fillers have been lost, discarded, or damaged, a duplicate carton may be obtained from our service department for a nominal charge.

Always ship prepaid via United Parcel Service (UPS) or other approved carrier. Do not ship via parcel post, since the packing was not designed to withstand rough parcel post handling. Improper shipment of the product will void your warranty coverage.

6.1 Warranty

ADCOM, a division of Klein Technology Group, LLC, makes the following limited warranties. These limited warranties extend to the original purchaser or any person receiving this product as a gift from the original purchaser and to no other purchaser or transferee. **There is no warranty provided by ADCOM for products purchased from unauthorized outlets or dealers or from previous owners.**

Limited Two Year Warranty (Home, Non-Commercial Use Only)

ADCOM warrants this product against defects in materials or workmanship for a period of two (2) years after the date of original retail purchase from an ADCOM authorized dealer. During this period, ADCOM will repair or replace a defective product or part, at our option, with a new or refurbished product or part without charge to you, as long as you follow the procedures listed below.

Limited Ninety (90) Day Warranty (Commercial Use Only)

ADCOM warrants this product against defects in materials or workmanship for a period of ninety (90) days after the date of original purchase from an ADCOM authorized dealer. During this period, ADCOM will repair or replace a defective product or part, at our option, with a new or refurbished product or part without charge to you, as long as you follow the procedures listed below.

All implied warranties, including implied warranties of merchantability and fitness for a particular purpose are limited in duration to the duration of the warranty period.

This warranty excludes all incidental and consequential

damages, unless contravened by state law. This warranty gives you specific rights and you may have other rights which vary from state to state.

No person, agent, distributor, dealer, or company is authorized to change, modify or extend the terms of these warranties in any manner whatsoever.

6.2 Your Responsibilities

The above warranties are subject to the following conditions:

(1) You must retain and present your dated invoice or bill of sale to provide proof of original purchase from an ADCOM Authorized Dealer and coverage under the warranty period.

(2) You must notify us within ten (10) days after you discover a defective product or part.

(3) All warranty servicing of this product must be done by ADCOM or an authorized ADCOM Service Center.

(4) This warranty is only valid if this product has been purchased and used in the United States. Warranty coverage for products purchased and used outside of the United States is provided by local ADCOM authorized distributors.

(5) Charges by third parties for set-up, installation, adjustments, shipment, insurance, and other charges are not covered by this warranty.

(6) This warranty extends only to defects in material or workmanship as limited above and does not extend to any product or part which has been lost or discarded by you or to damage to products or parts caused by misuse, accident, Acts of God such as lightning or fluctuations in electrical power, improper installation, improper maintenance or use in violation of instructions provided in this Owner's Manual, or to products which have been altered or modified. This warranty does not extend to products which have had the serial number removed, altered, defaced, or rendered illegible.

(7) Physically damaged products are not covered by this warranty and will be returned as received without repair.

7.0 Specifications

Readable discs

DVD-Audio, DVD-Video, Audio CD, Video CD, SVCD, MP3, JPEG in CD-R/RW

DVD Video	DVD VIDEO™
DVD Audio	DVD AUDIO™
Video CD	COMPACT disc DIGITAL VIDEO / VIDEO CD
SVCD	COMPACT disc SUPER VIDEO / VIDEO CD
Audio CD	COMPACT disc DIGITAL AUDIO

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.

ALL	1	2 5	2 3 4 5	1 2 3 4 5 6

A disc can only be played if its region code matches the code printed on the back-panel of the GDV-850.

Notice:

All specifications are accurate at the time of printing. ADCOM reserves the right to make improvements without notice. ADCOM and the ADCOM logo are registered trademarks of Klein Technology Group, LLC. of Scottsdale, Arizona.

Power requirements:	AC 120/230 Volt, 50/60 Hz, switchable
Power consumption:	45 W
Weight:	17 lbs (7.7 kg)
Dimensions (W x H x D):	431.8 mm x 92 mm x 381 mm
	17" x 3.62" x 15"
Front Panel Height:	89 mm/3.5"
(feet removed/for rack mount)	

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:	67 dB

Audio output

Analog Out (pin jack):	1.0 Vrms (50 ohms)
Digital Out:	Optical: –21dBm to –15dBm (Peak)
	Coaxial: 0.5 Vp-p (75 ohm)

Audio characteristics

Frequency response:	CD (44.1 kHz): 2 Hz to 20 kHz
	DVD (48 kHz): 2 Hz to 22 kHz
	DVD (96/88.2 kHz): 2 Hz to 44 kHz
	DVD (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:	16/20/24 bit: less than 0.004%

External Control

RS-232 (db9 pin):	8 NONE 1 Hardware, 9600 Baud
	(see protocol section 2.3)
IR (3.5mm mini):	Tip = Signal, Sleeve = GND
	(see protocol section 2.3)
12V trigger (3.5mm mini):	Tip = +V , Sleeve = -V

Installer's notes