PARASOUND

P/SP-1500 AV Processor/Preamplifier
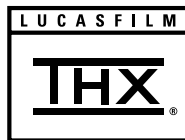
LUCASFILM
THX®

DOLBY SURROUND
PRO · LOGIC

Table of Contents

Introduction

Congratulations on your purchase of this precision audio/video component and thank you for your selection of Parasound. We designed your P/SP-1500 AV Processor/Preamplifier to be the heart of the finest home theater systems and to provide you with years of listening enjoyment. Easy to use on-screen display and an intuitive remote control makes your P/SP-1500 one of the most user-friendly processor/control centers available. Six different processing modes including Dolby Pro Logic and THX Home Cinema, provide you with a wide variety of listening experiences. To keep pace with the latest processing technology, your P/SP-1500 also has a DB-25 connector on its rear panel to accommodate an outboard 5.1 digital processor. Please take the time now to read these instructions thoroughly to fully appreciate the numerous capabilities of your P/SP-1500 AV Processor/Preamplifier.

Unpacking

Carefully unpack your P/SP-1500 AV Processor/Preamplifier and remove all the enclosed accessories including the remote control and detachable AC cord. Be sure to inspect the unit for any possible shipping damage. If you see any, contact your Parasound Dealer immediately. Be sure to save both cartons and the packing inserts for future transport and always pack the inner carton into a protective outer carton before shipment.

Before you proceed, find the serial number located on the rear panel of your unit. Record it here for future reference. _____

Placement of Your P/SP-1500

Install your P/SP-1500 near all of your source equipment to allow for reasonably short interconnects. Keep your P/SP-1500 out of direct sunlight because it could interfere with the remote control sensor. You should also keep the unit away from heat sources such as hot air ducts or radiators.   You may wish to reserve about two to three inches of space for the addition of the companion Parasound P/DD-1500 Dolby Digital (AC-3) Decoder. Your P/SP-1500 will occupy two rack spaces (3 1/2 inch) in a standard equipment rack. The optional P/DD-1500 occupies a single rack space (1 3/4 inch).

Setting Up Your Home Theater System
Refer to Diagram on Page 4

Speaker Placement

Proper speaker placement is essential for optimum performance of your home theater system. Improper placement of speakers can produce an unnatural sound and greatly diminish the home theater experience. Here are some basic guidelines for speaker placement based upon idealized conditions. However, it may be necessary to make compromises for furniture, windows, doorways, and other aesthetic reasons.

Front Speakers

Try to locate your front left and right speakers an equal distance from your television monitor or projection screen. Ideally, your viewing/listening position should be at the point of an equilateral triangle with the left and right speakers at the other points.

Center Speaker

The center speaker's main function is to reproduce dialog and to join the sonic image from the speakers with the visual image on the screen. It is best to place your center speaker directly above or below the television monitor for a more realistic effect. The distance from your listening position to the center channel speaker should be the same distance as from your listening position to the left and right speakers. This necessitates placing the center speaker somewhat behind the left and right speakers. This placement assures the sound from all three front speakers will arrive at your listening position at precisely the same time. If you are using a direct view television with a picture tube, we strongly recommend a shielded center channel speaker if you intend to locate it near the monitor. The magnetic field of an unshielded speaker will cause an extreme discoloration of most direct view TV screens. If you are placing your front speakers behind a high-quality perforated projection screen, locate your center speaker at the same height as your left and right speakers.
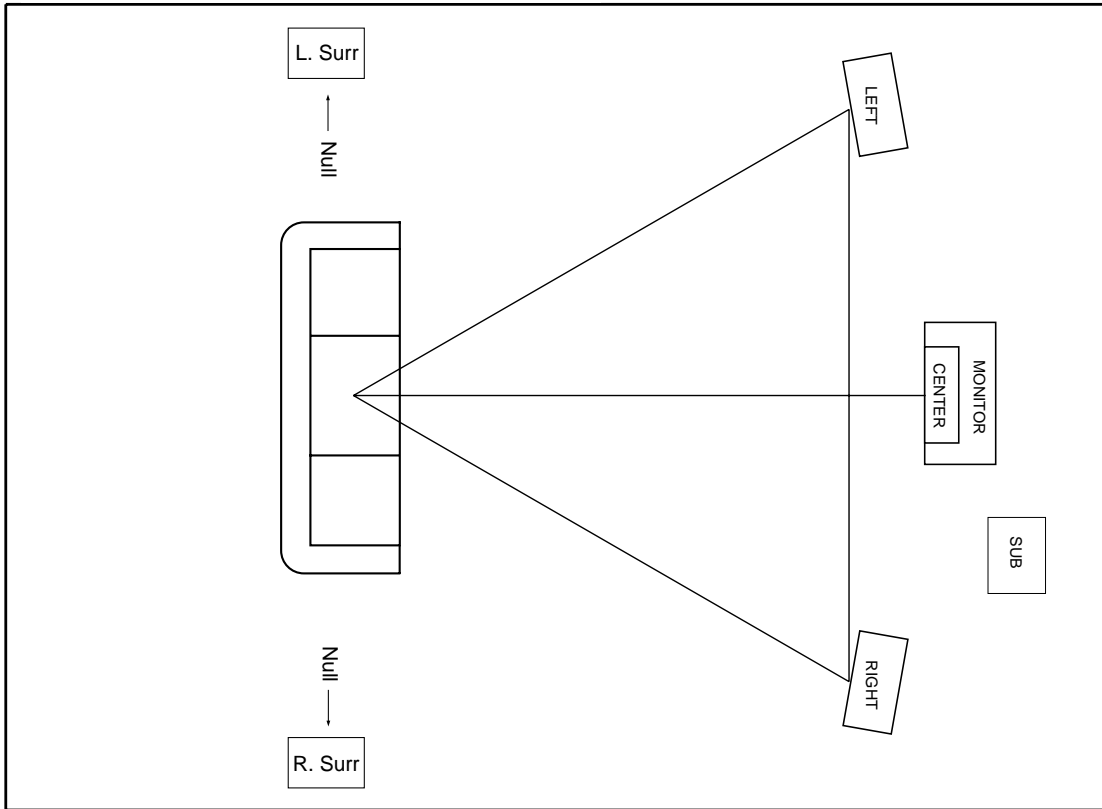
Conventional Surround Speakers

Surround speaker placement is a little more flexible than the front speakers. In the Dolby Pro Logic and even Dolby Digital (AC-3) mode surround speakers are intended to create a more diffuse ambient effect rather than a precise sonic image. To avoid drawing your attention away from the action on the screen, you should not be able to localize the sound coming from your surround speakers. Therefore, you should try to avoid pointing the surround speakers directly toward your listening position and place them behind you and at least three feet above your ear level when you are seated. You may even want to try aiming them at the wall or ceiling for a greater ratio of reflected to direct sound to help reduce localization. Experimentation with surround speaker placement is often required to yield optimum results.

THX Dipole Surround Speakers

THX certified dipole surround speakers are designed for superior surround channel performance. If you are using THX Home Cinema front and rear firing dipole surround speakers, locate them at least two feet above and to the sides of your listening area. This places you in the "null" of the dipole speakers to minimize localization of the surround speakers.

Subwoofer

The best way to position your subwoofer is to first hook it up and place it close to your listening position. Next, stand in various spots within your room and find the location that will give you the strongest and most balanced bass without excessive boominess. Once you have found the optimum location, simply relocate the subwoofer to that spot.

Typical home theater setup using THX dipole surround speakers.
Note that all three front speakers are the same distance to the listening area.
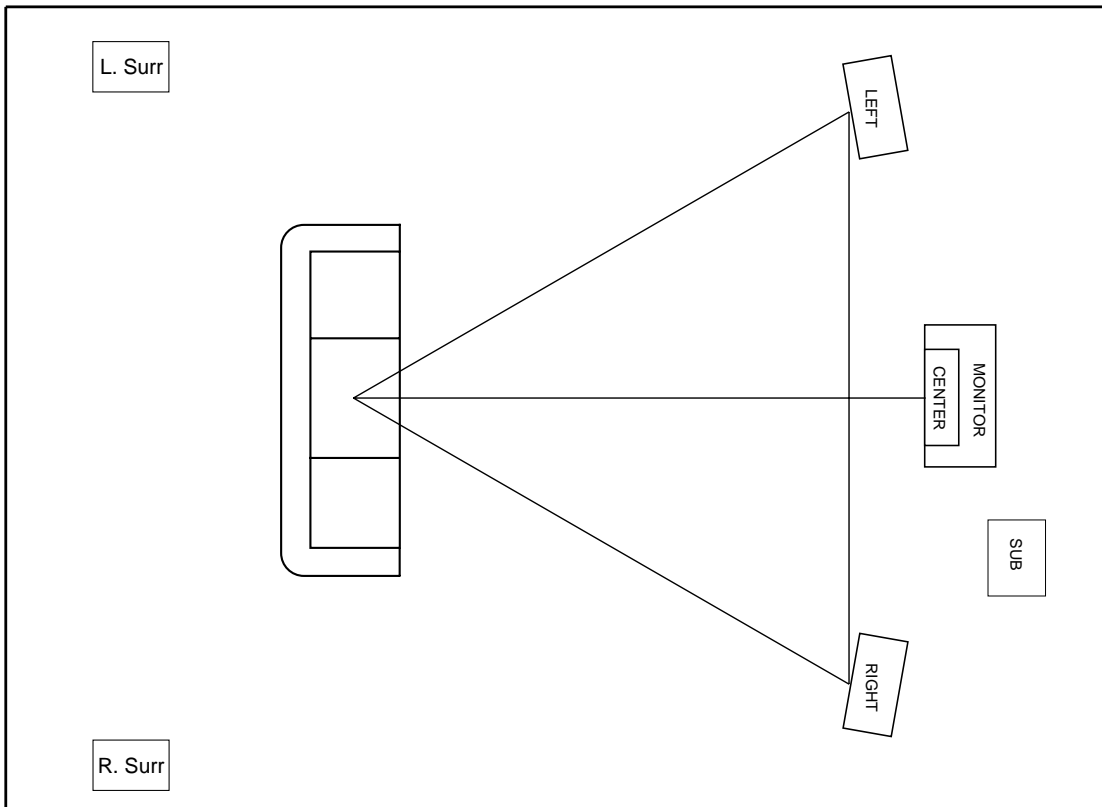
Typical home theater setup using conventional surround speakers
Note that all three front speakers are the same distance to the listening area

Making Connections to Your P/SP-1500
Refer to Diagram on Page 6

Input Connections

Before making any connections to your P/SP-1500, be sure to turn off the power to your amplifiers. Also, make sure there is no strain or tension on any connections that could make them pull loose.

Audio/Video Input Connections

Your P/SP-1500 comes equipped with four audio/video line inputs, three audio-only inputs, plus a six channel discrete input for an external digital surround adaptor. All seven inputs are compatible with any typical analog line level source such as a compact disc player, digital to analog converter, tuner, tape deck, or the audio output of a laser disc player or video cassette recorder. The four audio/video inputs also have switching capability for both NTSC composite video or S-video. You may use just the audio jacks of any of the audio/video inputs if your system needs to accommodate more audio than video source components.

Video Inputs 1-3 (Playback Only)

Connect the audio and video outputs of any audio/video source such as a laser disc player, video cassette recorder, satellite receivers, etc. to these inputs. This input has accompanying S-video or composite video connections, but it does not provide an audio/video record output. If your video cassette recorder has only a mono output you can use either the left or right audio input jack of your P/SP-1500. However, the internal circuitry will not produce surround effects from mono signals.

Video Input 4 (Record and Playback)

Use this input for to the video cassette recorder you also intend to use for recording. The **Video 4** input has accompanying composite and S-video switching and full audio/video recording output capability. Its record input accepts signals from any of the other six line inputs. Connect the left and right audio output connectors from the video cassette recorder you will use for recording to the **Video 4 Play** connectors of the P/SP-1500. Next, connect the left and right audio input connectors of the video cassette recorder you will use for recording to the **Video 4 Rec** connectors of the P/SP-1500.
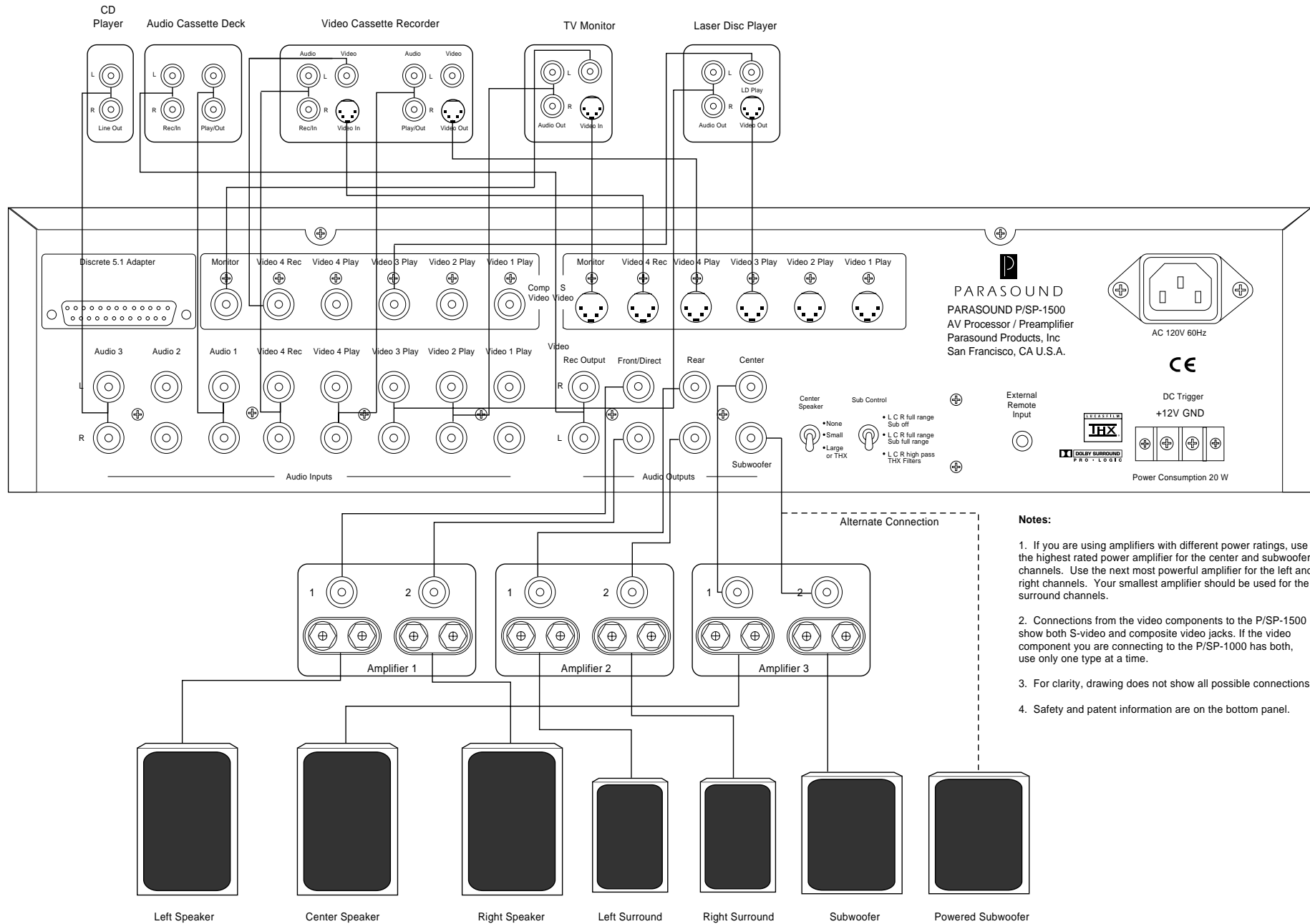
Audio 1-3 (Audio Only)

Connect a line level source to these audio-only inputs such as a compact disc player, digital to analog converter, tuner, or tape deck.

S-Video and Composite Video Connections

Your P/SP-1500 has both composite RCA and S-video circuits with separate video amplifiers for each of the four audio/video inputs. If you connect a video signal to one of the RCA composite input connectors, the signal will only be available through the RCA composite Monitor and Video 4 Record output connectors. Likewise, if you connect a video signal to the S-video input, the video signal will only be available through the S-video Monitor and Video 4 Record output connections.

Connecting the Television Monitor or Video Projector

Connect the RCA composite or S-video Monitor output connector of your P/SP-1500 to the input connector of your monitor or projector. If you have a monitor with a separate S-video and composite inputs, connect the P/SP-1500 S-video output to one of the monitor's inputs (such as External 1) and the composite output to another input (such as External 2). This way, you can view both composite or S-video sources by selecting External 1 or External 2 on your video monitor or projector.

CD Player

Audio Cassette Deck

Video Cassette Recorder

TV Monitor

Laser Disc Player

L
R
Line Out

L
R
Rec/In

Play/Out

Audio   Video
L
R
Rec/In   Video In

Audio   Video
L
R
Play/Out   Video Out

L
R
Audio Out   Video In

L
R   LD Play
Audio Out   Video Out

Discrete 5.1 Adapter

Monitor   Video 4 Rec   Video 4 Play   Video 3 Play   Video 2 Play   Video 1 Play   Comp   S   Video Video

Monitor   Video 4 Rec   Video 4 Play   Video 3 Play   Video 2 Play   Video 1 Play

PARASOUND

PARASOUND P/SP-1500
AV Processor / Preamplifier
Parasound Products, Inc
San Francisco, CA U.S.A.

AC 120V 60Hz

CE

Audio 3   Audio 2   Audio 1   Video 4 Rec   Video 4 Play   Video 3 Play   Video 2 Play   Video 1 Play

Video
Rec Output   Front/Direct   Rear   Center

L

R

Subwoofer

Center Speaker
•None
•Small
•Large or THX

Sub Control
•L C R full range Sub off
•L C R full range Sub full range
•L C R high pass THX Filters

External Remote Input

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THX

DOLBY SURROUND
PRO·LOGIC

DC Trigger
+12V GND

Power Consumption 20 W

Audio Inputs

Audio Outputs

Alternate Connection

1   2

Amplifier 1

1   2

Amplifier 2

1   2

Amplifier 3

Notes:

1. If you are using amplifiers with different power ratings, use the highest rated power amplifier for the center and subwoofer channels. Use the next most powerful amplifier for the left and right channels. Your smallest amplifier should be used for the surround channels.

2. Connections from the video components to the P/SP-1500 show both S-video and composite video jacks. If the video component you are connecting to the P/SP-1000 has both, use only one type at a time.

3. For clarity, drawing does not show all possible connections.

4. Safety and patent information are on the bottom panel.

Left Speaker   Center Speaker   Right Speaker   Left Surround   Right Surround   Subwoofer   Powered Subwoofer

Input and Output Connections to the Parasound P/SP-1500

5.1 Outboard Adaptor Input Connection

The DB-25 connector on the rear panel of your P/SP-1500 will accept the processed analog output of an outboard 5.1 digital adaptor such as the Parasound P/DD-1500 Digital Surround Processor (available Fall, 1996). With this advanced feature, you can play Dolby Digital AC-3 sources and keep up-to-date with the latest advancements in digital surround and home theater technology.

Audio Output Connections

Front Left and Right Channel Outputs

Connect the left and right **Front/Direct** outputs of your P/SP-1500 to the inputs of the two channel amplifier or multi-channel amplifier that will power your front left and right (L, R) speakers.

Center Channel Output

Connect the **Center** output of your P/SP-1500 to the input of the amplifier or the channel of a multi-channel amplifier that will power your center (C) speaker.

Left and Right Surround Channel Outputs

Connect the left and right **Rear** outputs of your P/SP-1500 to the inputs of the two channel amplifier or multi-channel amplifier that will power your left and right surround (LS, RS) speakers.

Subwoofer Output

Connect the **Subwoofer** output of your P/SP-1500 to the input of the power amplifier or channel of a multi-channel amplifier that will power your subwoofer or to the line input of a powered subwoofer (Sub).

Audio Only Record/Play Connections

Use these outputs in conjunction with any of the audio inputs and an audio tape deck. Connect the left and right **Play/Output** of your tape deck to the left and right input connectors of **Audio 1**, **Audio 2** or **Audio 3**. Next, connect the left and right **Rec Output** of your P/SP-1500 to the left and right **Audio Record/Input** connectors of your tape deck.

Recording From Your P/SP-1500

You can use your P/SP-1500 for both audio/video and audio only recording with the **Video 4** and **Audio Rec Output** connections. To record through either of these recording output connectors, simply select the source you want to record on the front panel or remote control and the P/SP-1500 simultaneously routes the audio and video to the connectors of **Video 4 Rec** and to the audio connectors of **Audio Rec Output**.

Subwoofer Control Switch

The three position **Subwoofer Control** switch allows you to configure the subwoofer output jack to suit your speaker system. If your front speakers are designed to run full range and you are not using a subwoofer, set the **Subwoofer Control** switch to the **L, C, R, Full Range/Sub off** position. If your front speakers are designed to run full range and you are using a subwoofer with a built in low-pass filter, set the switch to the **L, C, R, Full Range/Sub full range** position. If you are using a THX-approved speaker system that includes a subwoofer, set the switch to the **L, C, R, Sub/THX Filters** position. This activates the built-in THX designed asymmetrical low pass and high pass crossover for the subwoofer and front left, center, and right speakers. The low-pass filter for the subwoofer has a high frequency roll-off of 24 dB per octave starting at 80 Hz. The high-pass filter has a low frequency roll-off of 12 dB per octave starting at 80 Hz for the front left, center, and right speakers.

Center Channel Speaker Selector

Set this rear panel switch to accommodate the type of center channel speaker you will be using. Following are descriptions of the preferred center channel switch settings based upon the center speaker you will be using.

Large or THX (Wide Band)

Switch to the **Large or THX** position for center channel speakers that have extended low bass capability and can play as loud as your front left and right speakers without bass distortion. Use this setting for THX Home Cinema center speakers. In this position, the P/SP-1500 routes the entire audio bandwidth (20 Hz - 20 kHz) to the center channel output.

Small (Normal)

Switch to the **Small** position for smaller sized center channel speakers. In this position, the P/SP-1500 protects your center channel speaker from bass overload and distortion by diverting bass frequencies below 100 Hz to the left and right channels. In this position, front channel imaging remains tonally balanced even with the limited bass capability of a smaller center channel loudspeaker.

None (Phantom)

Switch to the **None** position if you do not have a center channel speaker. In this position, the front right and left speakers share reproduction of the mono center channel signal to create a "phantom" image in the center. However, without a good quality center channel speaker, you will be missing one of the key benefits of Dolby Pro Logic and THX Cinema processing.

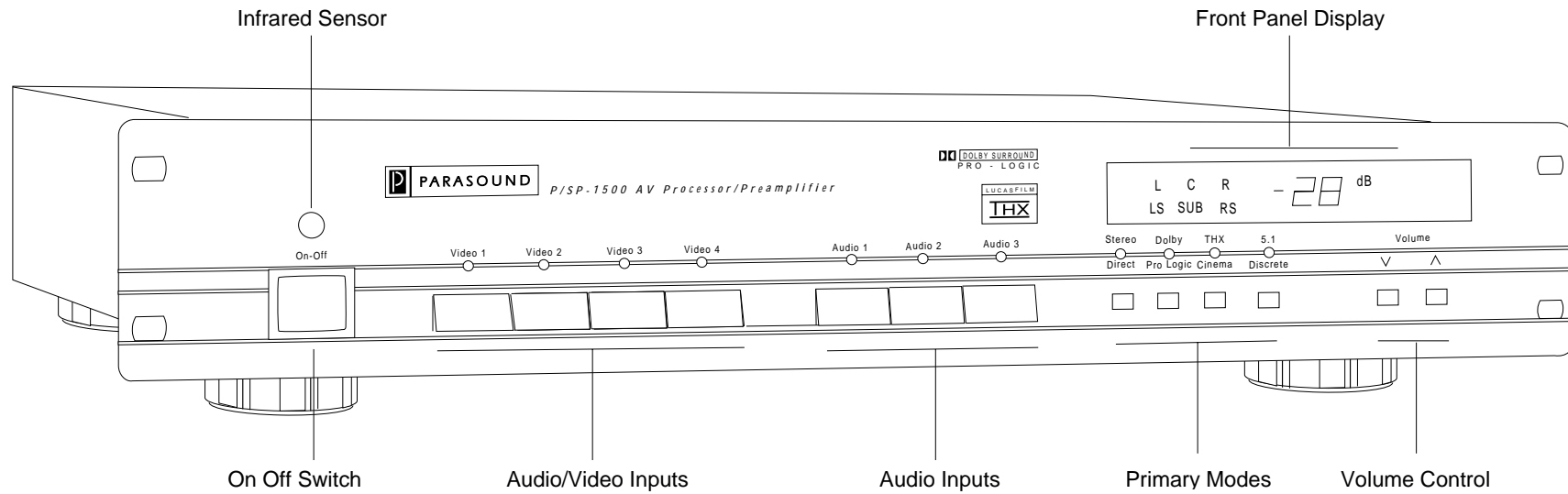### External Remote Control Input

The external infrared input works with many popular infrared repeater systems to allow for remote control operation when infrared signals cannot directly reach the front panel receiver. The external remote input connector is a standard 1/8 inch (3.5 mm) mini jack. Wire the tip for this plug positive and the sleeve negative. Your Authorized Parasound Dealer or Custom Installer can recommend a compatible repeater system for your P/SP-1500.

DC Trigger

This connector provides a +12 Volt DC 350 milliampere capacity trigger whenever you turn on the P/SP-1500. Use this connector to activate equipment such as relays, rear screen projectors, motors for film screens, power amplifiers or other components that can be triggered with DC voltage. You can also use this **DC Trigger** connection to activate the two 15 Ampere relays in the optional Parasound SCAMP Signal Controlled Amplifier Power automatic switching component. Contact your Parasound Dealer or Custom Installer for more information about the SCAMP.

AC Line Cord Receptacle

The rear panel mounted IEC standard AC receptacle accepts an audiophile-grade AC cord supplied with your P/SP-1500. Plug the female end of the AC cord firmly into the AC receptacle and make sure that it is properly seated. Connect the male end directly to an AC wall outlet that is always "live" so that the P/SP-1500 retains all its memorized settings. Avoid use of an extension cord or power strip since these often degrade sound quality.

Infrared Sensor

Front Panel Display

PARASOUND *P/SP-1500 AV Processor/Preamplifier*

DOLBY SURROUND
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LUCASFILM
THX

L C R   -28 dB
LS SUB RS

On-Off

Video 1 Video 2 Video 3 Video 4   Audio 1 Audio 2 Audio 3   Stereo Dolby THX 5.1   Volume
                                                                   Direct Pro Logic Cinema Discrete   ∨ ∧

On Off Switch

Audio/Video Inputs

Audio Inputs

Primary Modes

Volume Control

Off Mute and On Buttons

Off Mute On

PARASOUND R-15

Input Level Calibration
and Trim Controls

Cal
▲
Input
▼
Trim

Volume
▲

Volume Controls

▼

Delay and Display Buttons

Display Delay

Video 1

Video 2 Video 3 Video 4

Input Section

Audio 1 Audio 2 Audio 3

Hall 5.1 Ch Mono

Mode Section

Ambiance THX Pro Logic Stereo Direct

LUCASFILM
THX

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P/SP-1500 Front Panel and Remote Control

Operating Your P/SP-1500
Refer to Diagram on Page 9

Using the Remote Control with On Screen and Front Panel Displays

The remote control included with your P/SP-1500 gives you complete access to all functions including power, direct input selection, modes, volume, and calibration. The advanced on-screen and front panel displays keep you informed of all of the various functions of the P/SP-1500.

On and Off Switches

There are separate **On** and **Off** remote control commands for the P/SP-1500 and a combined **On-Off** button on the front panel. Press the **On** button to turn the unit on and press the **Off** button to turn it off. When the P/SP-1500 is first turned on, the on-screen display shows the previously selected input, mode, input level, and master volume level. At the same time, the front panel indicates the selected input, one of three key processing modes, active channels, and master volume level. The on-screen status remains on the screen for about four seconds. Whenever you turn on the P/SP-1500, it displays the source, mode, and volume that were present when the unit was last turned off.
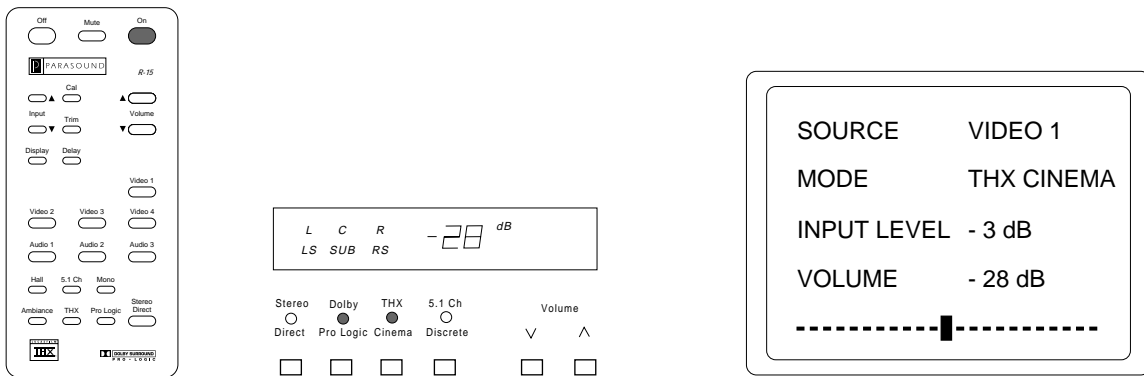
Mute

Press the mute button to completely interrupt the audio signal from reaching the output of the P/SP-1500. When the mute function is engaged, **Mute** is displayed on the front panel and on-screen. The mute button will not affect the **Video 4** and **Audio Rec** output jacks.

Display

Pressing the **Display** button will show you the status of the P/SP-1500's primary functions: selected input, processing mode, input level, and master volume level. This display will remain on until you press **Display** again or unless the unit is turned off. If there is no video source playing when you press display, the P/SP-1500 shows the current status on a blue background. If a video source is playing, the status appears over the video signal.
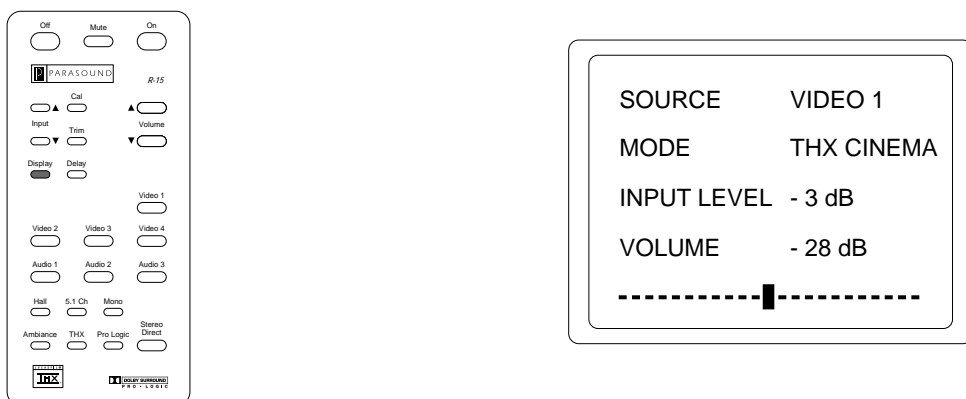
Volume

You can adjust the **Volume** from the remote control or on the front panel. The on-screen and front panel displays indicate the volume level in decibels relative to THX Reference Level and all active channels will flash for three about seconds each time you change the volume. The volume keys are also used in conjunction with the **Cal** and **Trim** functions (see page 14 and 16).

Input Level Controls and Input Overload Indicator

These remote control adjustments limit the amount of signal sent to the surround processor from your source components to maximize headroom. You can attenuate the **Input** level from its maximum of 0 dB to a minimum of -12 dB. Any time the input circuitry is being overdriven, the P/SP-1500 displays **Over** on the front panel display and ✶ in the upper right hand corner of the on-screen display any time there is an overload. Set the **Input** level so the overload indicators flicker only with the highest peak levels. If the **Over** indicators flash frequently, reduce the **Input** level accordingly.
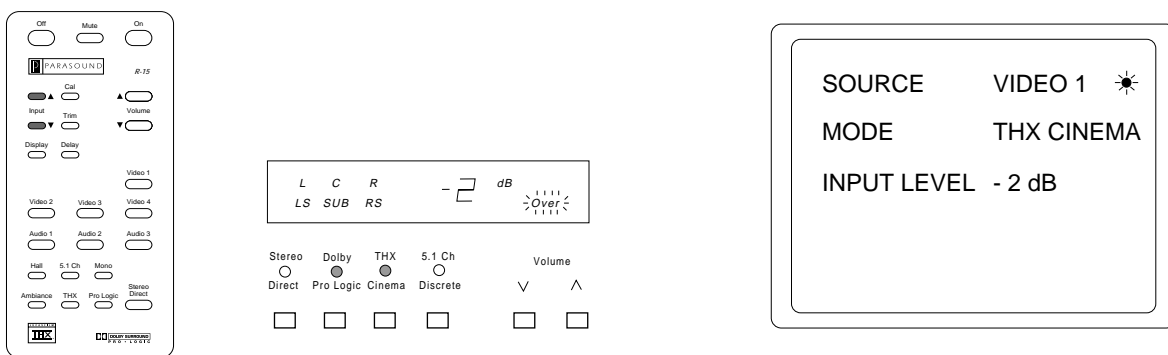
Input Selectors

You can select any of the seven inputs from the remote control or on the front panel. When you select an input, a green LED on the front panel will illuminate corresponding to the selected input The on-screen display will show the selected input, mode and input level.

Processing Modes

There are seven processing modes available with your P/SP-1500. All seven modes are accessible from the remote control while the four most used processing modes are also accessible on the front panel.

Dolby Pro Logic

You can select the **Dolby Pro Logic** mode from the remote control or on the front panel. This mode accurately decodes Dolby Surround encoded material to provide multi-channel playback including dedicated center and surround channels. Most video releases of major movies and many television programs, compact discs and video games are Dolby Surround encoded. You may use the **Dolby Pro Logic** mode on a wide variety of non-encoded material with good results. Most stereo recordings will produce surround effects to varying degrees, and center channel signals such as vocals will emanate more naturally from the center channel. All output channels are operative in this mode.

THX Cinema

When you select the **THX Cinema** mode on the front panel or remote control, the P/SP-1500 engages proprietary Lucasfilm circuitry along with Dolby Pro Logic processing. These THX processing circuits include re-equalization, timbre matching, and de-correlation. **THX Cinema** processing greatly enhances the film experience by equalizing excess treble mixed into many soundtracks and optimizing the performance of surround speakers. If you are using THX Home Cinema speakers, you will probably want to engage the THX Cinema mode for the playback of most film soundtracks. You can choose the THX Cinema mode from either the remote control or on the front panel.

Stereo Direct

For critical listening, the **Stereo Direct** mode engages a precision bypass relay to route the selected input source around all the surround processing circuitry of the P/SP-1500 and directly to its preamp section. As a result, only the front left, right and subwoofer channels are active in the **Stereo Direct** mode. You can select this mode from the remote control or on the front panel.

Hall

The **Hall** mode simulates the reverberant sonic characteristics of a concert hall. This mode enhances both classical and rock music recordings. You can select the **Hall** mode only from the remote control. All channels are operative in this mode.

Ambiance

The **Ambiance** mode adds a sense of spaciousness from the surround channels without any processing of the front left and right channels. You can select the **Ambiance** mode only from the remote control. All channels except center are operative in this mode. The ambiance mode is designed primarily as a subtle enhancement to music rather than films.

Mono

When you select the **Mono** mode, the P/SP-1500 routes the summed left and right signals to the center and subwoofer channels only. This mode works well for classic films, and older mono music recordings. If you have the rear panel center speaker selected to the **None** position, the mono signal will appear in the front left and right speakers to form a phantom image.

5.1 Discrete

When you select the **5.1 Discrete** mode, the P/SP-1500's output circuitry "looks" to the DB-25 connector on its rear panel for analog signals decoded from a digital 5.1 outboard processor. There is an expanding library of films available that are encoded in either Dolby Digital (AC-3) or DTS (Digital Theater Sound). We designed the Parasound P/DD-1500 Dolby Digital (AC-3) processor (available Fall, 1996) specifically to connect to this input. Be aware that if you have not connected a compatible outboard processor to the DB-25 input, there will be no output from the P/SP-1500 when you select the **5.1 Discrete** mode. You can select the 5.1 mode from the remote control or on the front panel.

Storing Input Levels and Modes to Specific Inputs

For ease of operation, you can program the P/SP-1500 to memorize the input level and mode for a specific input. For example, you may want your laser disc player connected to **Video 1** to automatically be activated in the THX Cinema mode with an input level of -3 dB each time this input is selected. You can use either the remote control or front panel to memorize the input level and mode for a given input. Simply set the desired input level and select the mode you want to store, then hold down the source select input button where you want it stored until the word MEMORIZE flashes within the on-screen display. When MEMORIZE stops flashing after three seconds, the P/SP-1500 has stored the input level and mode for the input displayed on the screen. Whenever you return to a programmed input, the P/SP-1500 recalls its memorized input level and mode.
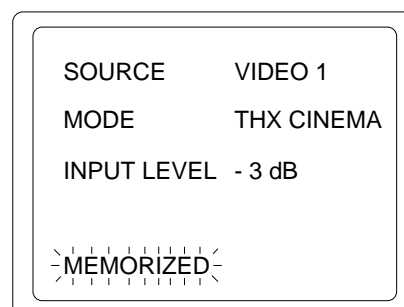
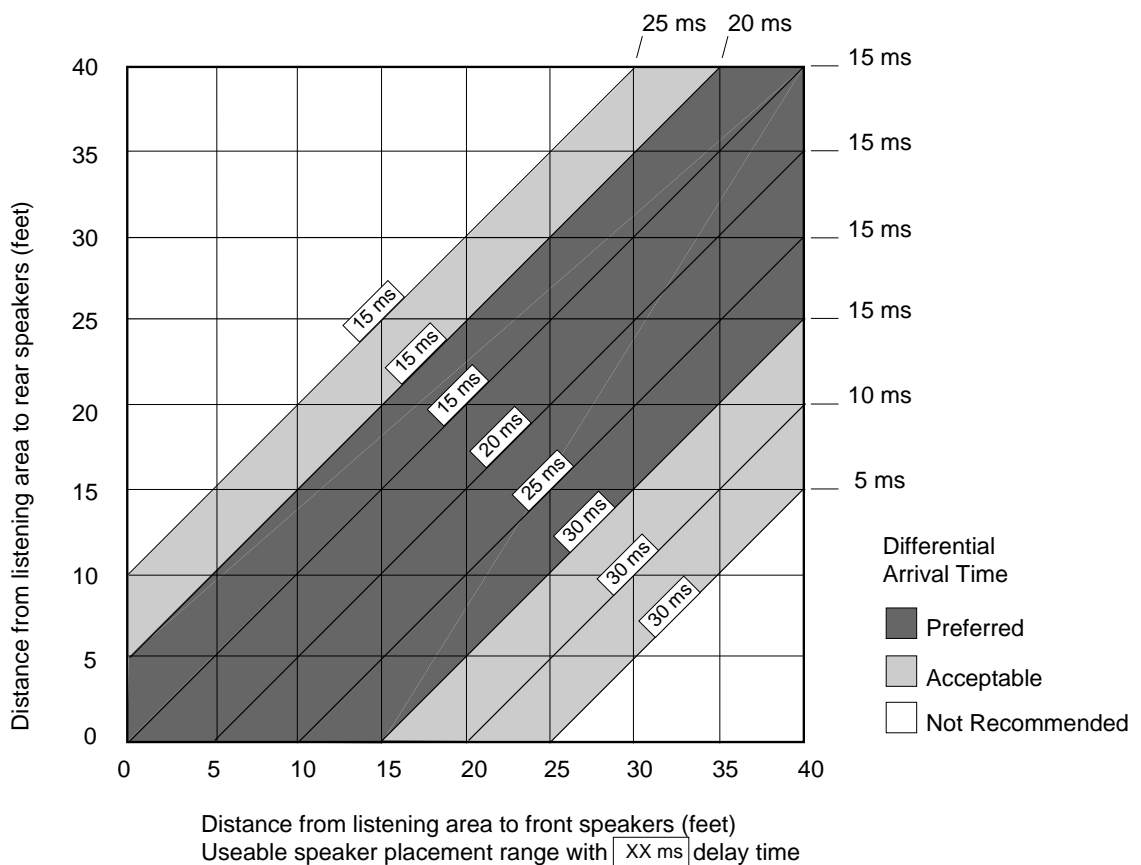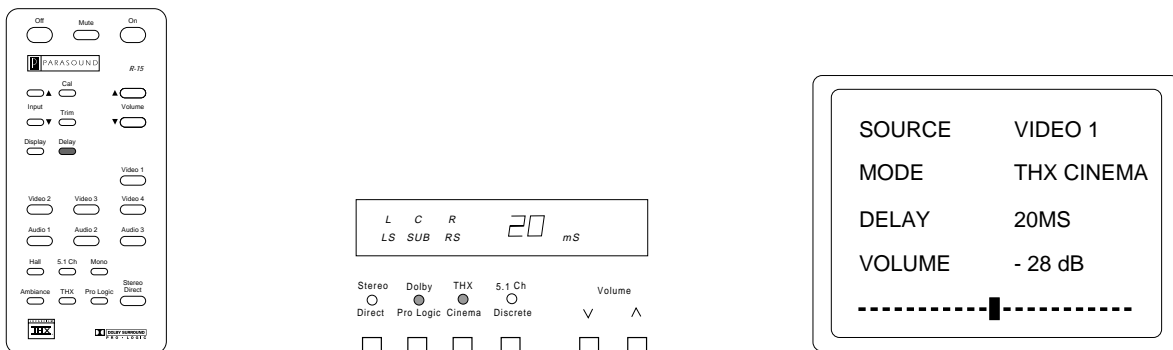❶ Set input level   ❷ Select mode   ❸ Hold down input

SOURCE   VIDEO 1

MODE   THX CINEMA

INPUT LEVEL - 3 dB

MEMORIZED
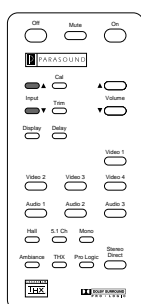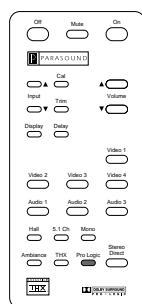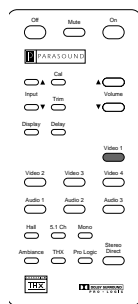
Surround Channel Delay

The surround delay circuitry allows you to choose the amount of time it takes sound from the surround channel speakers to follow the sound from the front left, right, and center speakers. This establishes the precedence effect for the front channel speakers and helps you associate the sound with the image on the screen rather than from behind you. (The precedence effect is how our hearing tends to identify or localize sounds that we hear first when being subjected to a number of similar sounds coming from all around us.) You can set the **Delay** time in 5 millisecond intervals from 15 to 30 milliseconds. Although the recommended delay time for Dolby Pro Logic is 20 milliseconds, you can use the remote control to adjust the delay time to best suit your listening room. The front panel and on-screen display both indicate the amount of surround delay time. Use the chart below to best select the surround delay time for your system.

Distance from listening area to front speakers (feet)
Useable speaker placement range with [XX ms] delay time

Calibrating Your Home Theater System

Calibration involves independently adjusting the output level for each of the six channels of your P/SP-1500 to accommodate different types of speakers and their placement variations. System calibration is critical for optimum performance of your home theater. The P/SP-1500's front panel and on-screen display make system calibration very easy to perform. Since the only way to adjust individual channel levels properly is from your listening/viewing position, the calibration controls are only accessible from the remote control.

The most objective way to calibrate your system is with a sound pressure level (SPL) meter such as the Realistic Sound Level Meter (catalog # 33-2050) available from Radio Shack stores in the USA for around $30.00. If you use an SPL meter for calibration, hold it upright directly in front of your head while you are seated in your listening area as you make adjustments. If an SPL meter is unavailable, you can still adjust levels by ear with excellent results.

You can only perform system calibration from the remote control after selecting the **Dolby Pro Logic** mode. Begin calibration by holding down the **Cal** button on the remote control while watching either the front panel and/or on-screen display. Upon entering the **Cal** mode, the entire on-screen display flashes CALIBRATE CH LEVELS and will also show individual channels and their decibel levels. The master level will also automatically change to 0 dB to represent the THX reference level.

After four seconds, the blue background of the on-screen display will change to red, and you will hear the "pink noise" test tone in the left channel to signal the beginning of the calibration cycle. The letter L will also flash on-screen and on the front panel. As you continue to press the **Cal** button, the test signal and displays will advance in the order of L, C, R, LS, RS, AND SUB. Advance through the individual channels by sequentially pressing the **Cal** button.

Adjust each channel level with the volume buttons on the remote control until each speaker plays at the same apparent loudness. (This is where the SPL meter comes in very handy.) As you press the volume up or down button, the decibel levels in the on-screen and the front panel displays will change in 1 dB increments for the channel that is flashing.

You complete the calibration sequence after adjusting the subwoofer by pressing **Cal** once again. You will automatically exit from the calibration mode and the screen will return to normal. When you press the **Cal** button any time after calibration, the P/SP-1500 displays your six original calibrated levels along with acknowledgment of calibration with the word MEMORIZED. This calibration recall feature allows you to return to your calibrated levels if you suspect that individual channels have been changed.
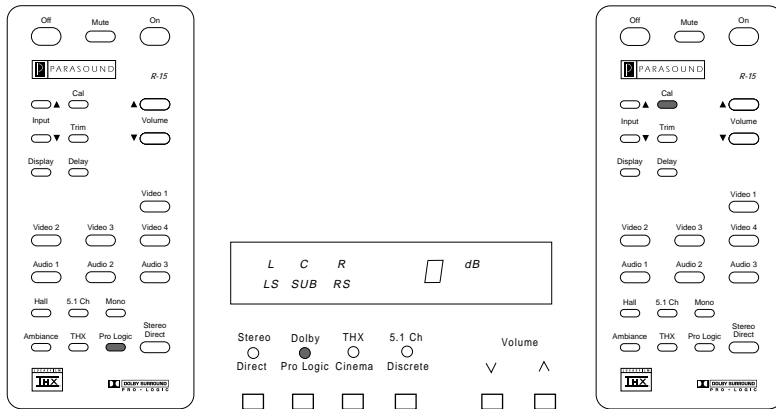
Once you have completed the calibration procedure, record your individual calibrated channel levels here for future reference in case your P/SP-1500 loses AC power for over 24 hours.

CALIBRATE CH LEVELS		
L	C	R
___dB	___dB	___dB
LS	SUB	RS
___dB	___dB	___dB

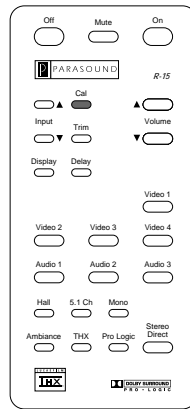| CALIBRATE CH LEVELS		
L	C	R
___dB	___dB	___dB
LS	SUB	RS
___dB	___dB	___dB

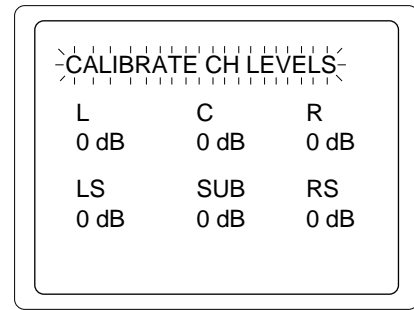Date _____   Date _____

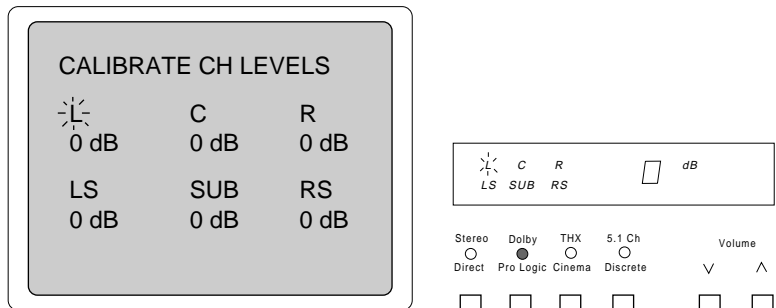Select **Dolby Pro Logic** on remote or front panel

1

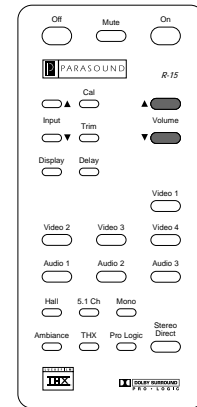Hold **Cal** button for 3 seconds

2

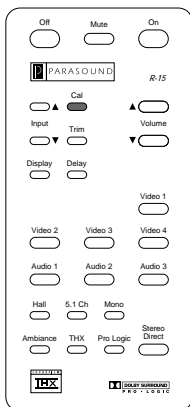**CALIBRATE CH LEVELS** Flashes

3

Screen turns red and **L** Flashes on-screen and front panel
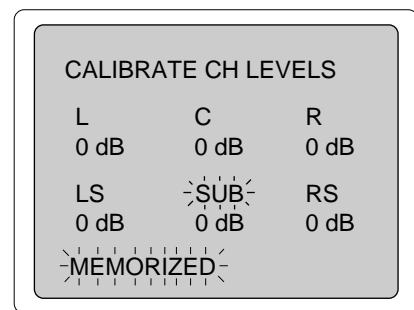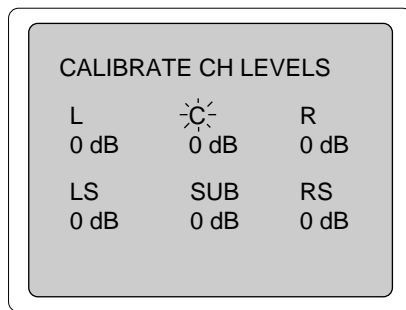
4

Set channel levels with **Volume** buttons

5

Press **Cal** to advance to next channel

6

After adjusting last channel **(SUB)** screen shows **MEMORIZED** and returns to normal

7

Using the Trim Function for Temporary Level Adjustment

If you want to temporarily adjust the individual levels of any channel for a particular soundtrack or recording, use the **Trim** button on the remote control. For example, you may want to boost your subwoofer or surround levels for a particular soundtrack without having to change the levels back when you play your next selection.

The **Trim** function works in much the same way as the calibration function. Since the **Trim** function is designed to let you make adjustments "on-the-fly", the on-screen display is superimposed on the picture you are viewing instead of turning the screen blue or red. Begin adjusting levels by holding down the **Trim** button on the remote control while watching either the front panel and/or on-screen display.

Upon entering this mode, the on-screen display flashes TRIM LEVELS. It also displays the individual channels and their decibel levels. At the same time, the master level changes to **0 dB** to represent THX reference level and the letter L will flash on-screen and on the front panel. As you continue to press the **Trim** button, the displays will advance in the order of **L, C, R, LS, RS, AND SUB**. Advance through the individual channels by sequentially pressing the **Trim** button. Adjust the channel level with the volume buttons on the remote control to suit your tastes. As you press the volume up or down button, the decibel levels in the on-screen and the front panel displays will change in 1 dB increments for the channel that is flashing.

Once you have finished the **Trim** sequence after adjusting the subwoofer (if desired), press **Trim** again. You will automatically exit from the **Trim** mode and the screen will return to normal. Since the trim function is temporary, if you change inputs, modes, or turn the P/SP-1500 off, the individual channel levels will automatically return to the settings memorized during calibration.
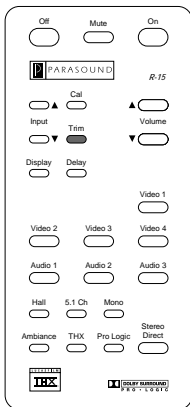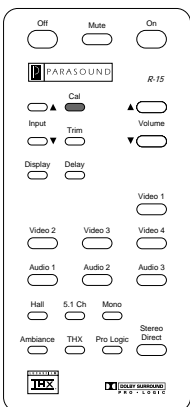

Hold Trim button until **TRIM LEVELS** and **L** flashes
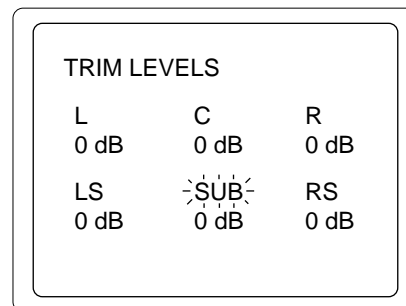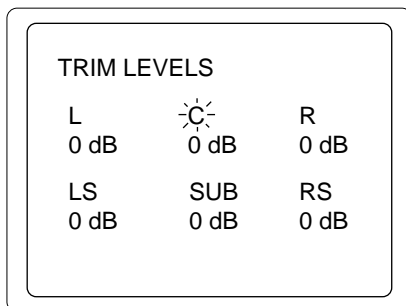
❶
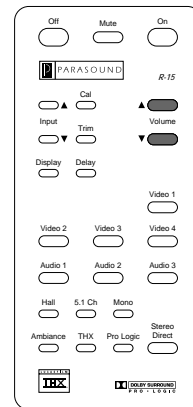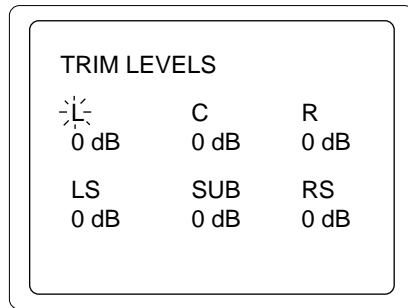
Adjust level with
Volume buttons

❷

Press **Trim** to advance to next channel

❸

After adjusting last channel (SUB)
screen returns to normal

❹

Maintaining Your P/SP-1500

Your P/SP-1500 requires no periodic maintenance and has no user serviceable parts inside. To avoid the risk of electric shock do not remove the top cover. Clean the chassis with a soft cloth moistened only with Windex or clear water. Never use solvents or abrasives.

Remove the two AA batteries from the remote control if you do not plan to use it for an extended period. Remove the battery cover annually to inspect and remove leaking batteries.

P/SP-1500 Troubleshooting Guide

No Power

Make sure the AC cord is properly seated in the IEC AC receptacle on rear panel.

No Output to One or All Channels

Make sure that P/SP-1500 indicators are on.
Check interconnects to power amplifier(s).
Check power amplifier(s).
Check channel levels with **Trim** or **Cal** buttons on remote control.

Hum in Speakers

Check for a grounding problem with the cable TV system; call your cable operator.
Consider installing a cable isolation device such as the Video Link #634 or the Mondial Magic

No Output to Surround Channels

Make sure that source playing is in stereo; processor cannot derive surround channels from mono signals.

No Center Channel Output

Make sure the **Center Speaker** switch on the rear panel is not set to the **None** position.

No Sub Channel Output

Make sure the **Sub Control** switch on the rear panel is not in the **Off** position.

Lights on Front Panel are Working, but No Response Via Remote or Front Panel.

The microprocessor "brain" within P/SP-1500 may have "locked up" due to an AC voltage spike.
Remove power cord from outlet for 30 seconds and plug back in.

Audio Present, but No Video Output

Make sure that composite or S-video output connections are consistent with inputs. See Page 6
Check video source
Try another video source.

No On-screen Display

Check monitor or projector connections.

Loses Memorized Settings

Check to make sure that AC outlet is always live and not switched off.

Remote Control Won't Work

Check batteries
Check for front panel operation to verify problem is not with P/SP-1500

DC Trigger Won't Activate Other Components

Check voltage at connector with DC voltmeter
Make sure other components do not require voltage exceeding +12 Vdc or current exceeding 350 mA

If All Else Fails

If you cannot get your P/SP-1500 to operate properly after referring the troubleshooting guide, call your Parasound dealer or Parasound Technical Service. We can suggest other diagnostic tests you can easily perform. If we determine that your P/SP-1500 should be returned to Parasound or an Authorized Parasound Warranty Center for inspection and possible servicing, call for the location of a warranty center near you. If you choose to send it to Parasound, contact us to obtain a Return Authorization (RA) number. You will be asked to re-pack the unit in its original packaging *plus* an additional outer box for protection during transit. The Return Authorization number must be clearly marked on the outer carton only. You should ship the unit by UPS with adequate insurance. You must also include a copy of your purchase receipt to validate your ownership.

Units that arrive without your specific Return Authorization number, without a suitable shipping carton or evidence of improper internal packing must be refused. We do not accept collect shipments. After repair under warranty, the unit will be returned to you via prepaid UPS. In the case of an out of warranty repair, contact us and we will advise you of the repair charges before you ship the unit to us. The same packing and Return Authorization requirements apply.

Notes:

P/SP-1500 Specifications

	Dolby Pro Logic/THX Cinema	Preamp Direct
Audio Section		
Frequency Response		
Front	12 Hz-60 kHz	10 Hz-100 kHz
Rear	500 Hz-6.5 kHz	
Center (Small)	200 Hz-60 kHz	
Center (Large or THX)	12 Hz-60 kHz	
Subwoofer	10 Hz-80 Hz	10 Hz-80 Hz
Harmonic Distortion		
Front	< 0.06 %	< 0.01 %
Center	< 0.06 %	
Rear	< 0.6 %	
Subwoofer	< 0.15 %	< 0.15 %
Input Sensitivity		
All Channel Inputs	200 mV	200 mV
Input Impedance		
All Inputs	47 kΩ	47 kΩ
IM Distortion		
(1 kHz 1V Output)		
All Channels	< 0.06 %	< 0.01 %
Signal/Noise Ratio		
(Flat/A-Weighted)		
Front	78 dB / 92 dB	85 dB / 100 dB
Center	78 dB / 92 dB	
Rear	78 dB / 85 dB	
Subwoofer	78 dB / 92 dB	85 dB / 100 dB
Video Section		
(Output 1 V / 75 Ω Load)		
Sensitivity	1 V +/- 1 dB	
Frequency Response	0.3 MHz -10 MHz +/- 1 dB	
Overload	1.4 V	

Dimensions
19" wide x 3 1/2" high x 13" deep 4 1/8" high with feet

Weight
16 lb

Power Requirements
110 V - 120 V 60 Hz AC, 19 W; may be rewired for 220 V - 240 V, 50 Hz

Special Features

- Four Audio/Video Inputs
- Seven Processing Modes
- On-Screen Display
- Lucasfilm THX Certified
- 5.1 Discrete Upgradeability
- Built-in Asymmetrical Crossover
- Calibrated Level Memory
- Relay Switched S-Video Capability
- High Current Audio Section
- External Infrared Input
- Independent Regulated Power Supplies
- Selectable Center Channel Operation
- Analog Pro Logic Processing

- Audiophile IEC AC Cord
- Rear Panel Infrared Input
- Automatic Bypass Direct Output
- Adjustable Surround Delay Times
- 32,000 µF Main Power Supply
- Precision Resistors and Capacitors
- Silver Plated Internal Wiring
- Preamp Direct Circuitry
- Gold Clad Precision Bypass Relays
- Center Speaker Selector (Phantom)
- Heavy Duty Two Rack Space Chassis

*Specifications and features subject to change without notice*

Parasound Limited Warranty (USA only)

Your Parasound P/SP-1500 is covered by a limited warranty against defects in materials and workmanship for a period of two years from date of purchase. This warranty is provided by the Parasound dealer where the unit was purchased. Warranty repair will be performed only when a copy of your purchase receipt is presented to validate your ownership, date of purchase and authorized status of the selling dealer. Defective parts will be repaired or replaced without charge by your authorized dealer's store or the location designated by your dealer that is authorized to service Parasound equipment. Additional information is available by calling or writing to the Service Manager, Parasound Products, Inc. at the address below. Charges for unauthorized service and transportation costs are not reimbursable under this warranty.

This warranty becomes void if the product has been damaged by alteration, misuse, accident or neglect. Alteration includes any removal or defacement of its serial number. This warranty becomes void if unit has been connected or operated contrary to printed instructions. The warrantor assumes no liability for property damage or any other incidental or consequential damage whatsoever which may result from the failure of this product. Any and all warranties of merchantability and fitness implied by law are limited to the duration of this expressed warranty.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

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

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 THX
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PRO · LOGIC
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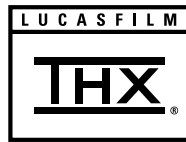
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