

OVERVIEW

Thank you for your purchase of the Krell® S-1000. The S-1000 delivers a seamless home theater experience, integrating fully with the latest video displays and audio/video source components. HDMI™ video switching rounds out a full complement of advanced Krell technologies including discrete Class A, direct-coupled circuitry with balanced outputs. A new, easy to access on-screen menu system makes customization a snap.

The S-1000 features Dolby Digital 5.1, Dolby Digital EX, DTS-ES 6.1, DTS NEO:6, and Dolby Pro Logic II processing, in addition to nine proprietary Krell Music Surround modes. An RS-232 port insure compatibility with third party controllers and allows upgrades to software via Flash memory for future surround sound formats and design enhancements.

WARNINGS



This product complies with the EMC directive (89/336/EEC) and the low-voltage directive (73/23/EEC).



The S-1000 must be placed on a firm, level surface where it is not exposed to dripping or splashing.

The ventilation grids on the top and bottom of the S-1000 must be unobstructed at all times during operation. Do not place flammable material on top of or beneath the preamplifier.

Before making connections to the S-1000, ensure that the power is off and other components are in mute or stand-by mode. Make sure all cable terminations are of the highest quality, free from frayed ends, short circuits, or cold solder joints.

THERE ARE NO USER-SERVICEABLE PARTS INSIDE AN S-1000.

GETTING STARTED

The S-1000 Surround Preamp/processor offers a high degree of flexibility via an on-screen menu system. To setup your S-1000 quickly:

1. Connect your S-1000 to the rest of the components in your system, using **Table 1** on page 4 as a guide. Please note:

On Screen Display (OSD). The S-1000 has three OSD outputs: component, S-video, and composite. There is no OSD available from the HDMI™ output.

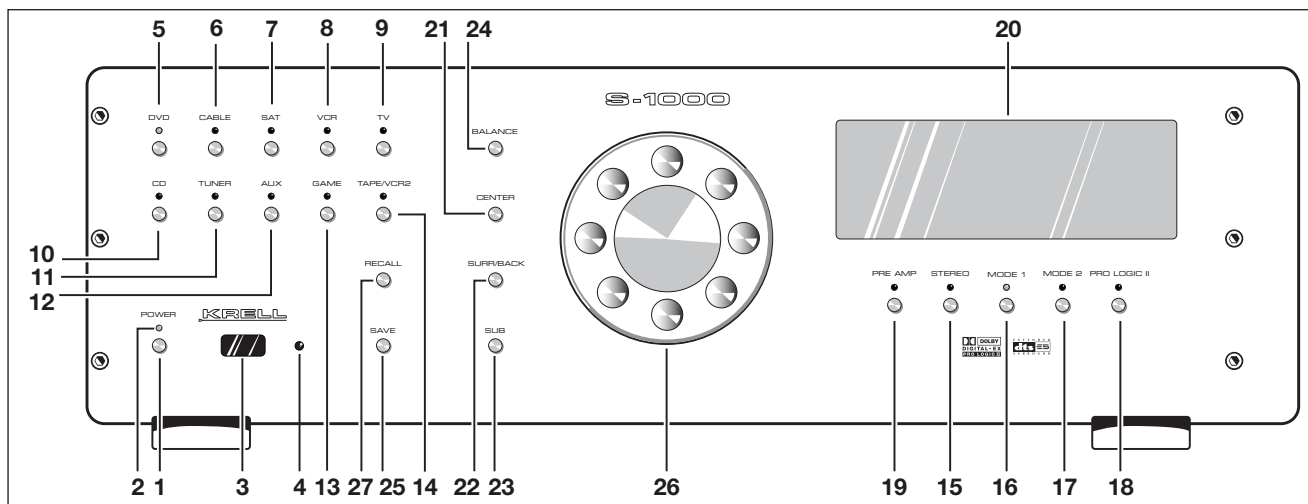
To View the Setup Menu. Connect any of the OSD outputs on the S-1000 to the appropriate input on your video display. Press the remote control menu key. The front panel display reads MENU MODE and all OSD outputs activate simultaneously. Tune the video display input to match the selected OSD video connection.

2. Enter the setup menu. The MAIN MENU screen appears on the video display.
3. Using the video display (OSD) and the remote, select LISTENING ROOM SETUP. The LISTENING ROOM SETUP screen appears.
4. Select SPEAKER SETUP. The SPEAKER SETUP screen appears. Scroll through the available options and select your loudspeaker setup.
5. Select SPEAKER DISTANCE and enter information about the placement of your loudspeakers relative to your listening position.
6. Select SPEAKER LEVEL and calibrate the volume of your loudspeakers.

Please contact your authorized dealer, distributor, or Krell if you have any questions not addressed in this quick setup guide.

IMPORTANT: ACCESSING THE ON SCREEN DISPLAY

Figure 1 The S-1000 Front Panel



FRONT PANEL AND REMOTE FUNCTIONS

BASIC OPERATION

- 1 Power Button/Pre Key**
Switches the S-1000 from stand-by to operational mode, and to switch the 12 VDC output (12 V trigger) on and off.
- 2 Power/Stand-by LED Stand-by Mode.** When the AC power cord is plugged into the wall, the LED illuminates in red: the S-1000 is in stand-by mode.
Operational Mode. When the power/stand-by button is pressed, the LED illuminates in blue: the S-1000 is in the operational mode.
- 3 Infrared Sensor**
Receives commands from the S-1000 remote control.
- 4 Infrared Emitter**
Sends the S-1000 remote operation code to a learning remote.

INPUT DEVICE SELECTION

The S-1000 is equipped with ten input device selection buttons on the front panel and corresponding keys on the remote control. If properly configured, the S-1000 automatically engages the correct video and audio inputs when you press the device selection button.

- 5 DVD Button/LED/Key**
- 6 Cable Button/LED/Key**
- 7 SAT Button/LED/Key**
- 8 VCR Button/LED/Key**
- 9 TV Button/LED/Key**
- 10 CD Button/LED/Key**
- 11 Tuner Button/LED/Key**
- 12 Aux Button/LED and Aux 1 Key**
Selects an auxiliary device: phono, tape, or an additional DVD, LD, CD, or VCR.
- 13 Game Button/LED and Aux 2 Key**
- 14 Tape/VCR2 Button/LED/Key**
Plays back pre-recorded tapes, and compares the output signal of an analog tape recorder to an audio source.

PROCESSING MODE

- 15 Stereo Button/LED/Key**
Selects stereo decoding. The red LED illuminates when this function is engaged.

16 Mode 1 Button/LED/Key 17 Mode 2 Button/LED/Key

Selects available processing modes (such as Dolby Digital, DTS, PLII Movie, etc.) for incoming signals from an audio source.

The default mode for a signal is always stored in Mode 1. Use the Mode 1 button or key to select the default mode. All modes that can be used for the same signal are automatically stored in Mode 2. Use the Mode 2 button or key to scroll through these other modes. The last mode displayed in Mode 2 is the selected mode. Based on the source signal, the S-1000 automatically selects the assigned mode for the available signal.

- 18 Pro Logic II Button/LED/Key**
Selects Dolby Pro Logic II modes for Dolby Surround encoded material, including laser discs, videotapes, television broadcasts, and compact discs. The red LED illuminates when Dolby Pro Logic II decoding is selected.

Note: These modes are selected automatically if Dolby Digital source material is encoded for Pro Logic. To turn off these modes, press the Pro Logic II button.

19 Preamp Button/LED/Key

Sends the signal from an analog input directly to the volume control, with no digital processing, using the analog stage of the preamplifier.

This avoids possible digital signal degradation. Used for components with a high quality signal, such as the Krell Evolution 505 CD Player.

Note: This feature is available with a signal from an analog input. If you attempt to use it with a signal from a digital input, the OSD reads NOT ALLOWED

DISPLAY WINDOW

20 Front Panel Display

Provides status messages for S-1000 operations, including volume and balance level, decoding mode, and zone information. When a new device is selected, the physical inputs are displayed. The display turns off after 60 seconds of inactivity.

S-1000 Front Panel and Remote Functions *continued*

INDIVIDUALIZED CHANNEL TRIM

The center, surr/back, and sub buttons or keys make temporary loudspeaker output adjustments of +/- 10 dB. These temporary adjustments revert to 0 dB when a new device is selected or when the system is powered down.

21 Center Button/Key

Adjusts the center loudspeaker volume. Press the center button or key, then use the volume knob or the up and down directional keys to make the adjustments.

Phantom Center. Press the center button or key twice activate. Press the center button twice again to deactivate.

22 Surr/Back Button/Rear Key

Adjusts the volume of the surround and back loudspeakers. Press the surr/back button, then use the volume knob or up and down direction keys to adjust the surround loudspeakers. To adjust the back loudspeakers, press the surr/back button. SURROUND TRIM

appears on the front panel display. Press the surr/back button again. BACK appears on the front panel display. Then use the volume knob or the up and down directional keys to adjust the volume of the back loudspeakers.

23 Sub Button/Key

Adjusts the subwoofer volume. Press the sub button or key, then use the volume knob or the up and down directional keys to adjust the subwoofer volume.

24 Balance Button/Key

Adjusts the main left/right loudspeaker balance. Press the balance button or key, then use the volume knob or the up and down directional keys to adjust the balance. Balance levels show numerically on the front panel display. Balance may be adjusted in .5 dB increments, up to 6 dB. The center position is displayed as BAL 0.

Balance level keys revert to their original function as volume level controls after 3 seconds of inactivity.

PROCESSOR FUNCTIONS

25 Save Button/Key

Saves system configuration settings. Press and hold this button or key to activate. This function is also used to program a learning remote.

26 Volume Knob/Keys

Scrolls through menu selections, adjust output for the entire system, and adjusts volume and balance levels for the center loudspeaker, surround/back loudspeakers, and subwoofer. Volume and balance levels appear in the front panel display.

27 Recall Button

Recalls previously stored system configuration settings.

Returns configuration settings to factory default: With the S-1000 in the operational mode, hold the recall button and press the power button.

REMOTE ONLY FUNCTIONS

28 Amp Key (Power Amp Key)

Operates IR controllable power amplifiers, such as all Krell Evolution amplifiers.

29 Menu Key

Accesses the setup menu and on-screen menu display.

30 Prev Key

Return to the previously displayed setup menu screen.

31 Mute Key

Mutes the S-1000 output. When this function is active, VOLUME MUTE appears in the front panel display.

32 Enter Key

Accepts setup menu selections, accept an input device selection, or displays current system conditions.

33 Directional Keys

Up and Down Directional Keys. Adjust volume, and adjust balance if the balance function is activated. In the operational mode, the up and down directional keys select EQ memory.

Right Directional Key. In the operational mode, the right arrow key engages Digital Room EQ.

All Directional Keys. In the setup menu, all four directional keys navigate the on-screen menus.

Figure 2 The S-1000 Remote

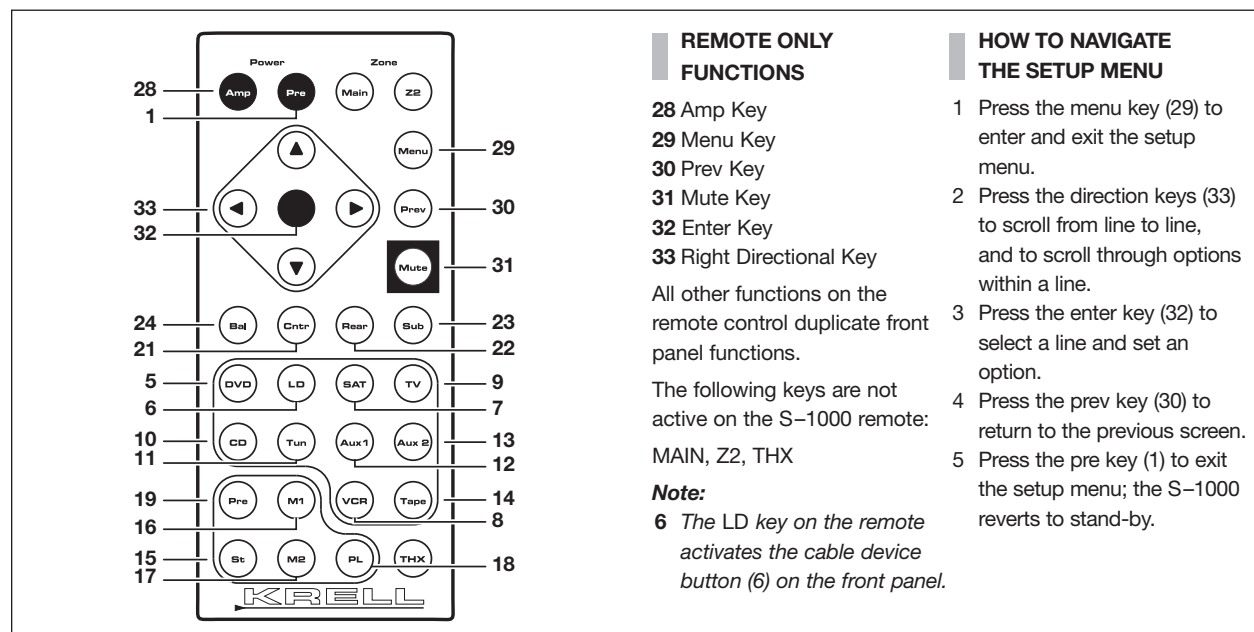
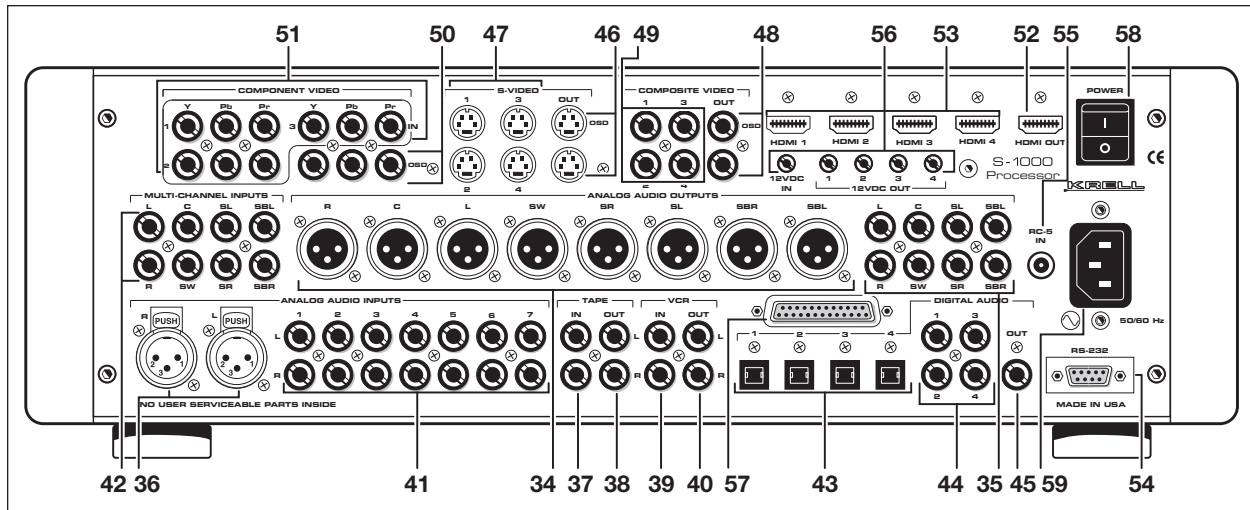


Figure 3 The S-1000 Back Panel



ANALOG AUDIO INPUTS AND OUTPUTS

- 34 Balanced Analog Audio Outputs
- 35 Single-ended Analog Audio Outputs
- 36 Balanced Analog Audio Inputs
- 37 Tape In Left and Right
- 38 Tape Out Left and Right

- 39 VCR In Left and Right
- 40 VCR Out Left and Right
- 41 Single-ended Analog Audio Inputs
- 42 7.1 Audio Inputs

DIGITAL AUDIO INPUTS AND OUTPUTS

- 43 Optical Digital Audio Inputs
- 44 Coaxial Digital Audio Inputs
- 45 Digital Audio Outputs

VIDEO INPUTS AND OUTPUTS

- 46 S-video Outputs
- 47 S-video Inputs
- 48 Composite Video Outputs
- 49 Composite Video Inputs
- 50 Component Video Outputs
- 51 Component Video Inputs
- 52 HDMI™ Output
- 53 HDMI™ Inputs

BACK PANEL REMOTE CONTROL CONNECTIONS

- 54 Comm Port RS-232 Remote Connector
- 55 RC-5 In
- 56 12 VDC In and Out
- 57 DB 25 Out

POWER CONNECTIONS

- 58 Back Panel Power Switch
- 59 IEC Connector

Table 1 S-1000 Connections and Corresponding Factory Default Decoding Modes, by Device

Connect the S-1000 to the rest of the components in your system, using this table as a guide.

DEVICE	S-1000 CONNECTIONS			FACTORY DEFAULT DECODING MODES				
	Video	Digital Audio	Analog Audio	Dolby 2.0	Dolby 5.1	DTS 5.1	PCM	Analog
DVD	Component 1	COAX 1	S1	Dolby D+ Dolby PLII Movie	Dolby D 5.1	DTS 5.1 Movie	Dolby PLII Movie	Dolby PLII Movie
CABLE	HDMI™ 2	COAX 3	S4	Dolby D+ Dolby PLII Movie	Dolby D 5.1	DTS 5.1 Movie	Dolby PLII Movie	Dolby PLII Movie
SAT	HDMI™ 1	OPT 1	S3	Dolby D+ Dolby PLII Movie	Dolby D 5.1	DTS 5.1 Movie	Dolby PLII Movie	Dolby PLII Movie
VCR	S-Video 2	Disabled	VCR	N/A	N/A	N/A	N/A	Dolby PLII Movie
TV	Composite 1	COAX 2	S2	Dolby D+ Dolby PLII Movie	N/A	N/A	N/A	Dolby PLII Movie
CD	Disabled	Disabled	B1	N/A	N/A	N/A	N/A	Preamp
TUNER	Disabled	Disabled	S5	N/A	N/A	N/A	N/A	Preamp
AUX	Disabled	Disabled	7.1	N/A	N/A	N/A	N/A	N/A
GAME	Component 2	OPT 2	S6	N/A	Dolby D 5.1	DTS 5.1	Dolby PLII	Preamp
TAPE	Composite 3	Disabled	Tape	N/A	N/A	N/A	N/A	Preamp

BACK PANEL CONNECTIONS

ANALOG AUDIO OUTPUTS AND INPUTS

34 Balanced Analog

Audio Outputs

Eight balanced analog audio channel outputs, with XLR connectors, for the left, center, subwoofer, surround left, surround right, back left, and back right.

35 Single-ended Audio Outputs

Eight single-ended analog audio channel outputs, with RCA connectors, for the left, center, right, subwoofer, surround left, surround right, back left, and back right.

36 Balanced Analog

Audio Inputs

One set of balanced inputs with XLR connectors.

37 Tape In Left and Right

One set of single-ended tape inputs with RCA connectors.

38 Tape Out Left and Right

One set of single-ended tape outputs with RCA connectors.

39 VCR In Left and Right

One set of single-ended inputs with RCA connectors, for a VCR audio source.

40 VCR Out Left and Right

One set of single-ended outputs with RCA connectors, for a VCR audio source.

41 Single-ended Analog

Audio Inputs

Seven sets of single-ended inputs with RCA connectors.

42 7.1 Audio Inputs

Eight single-ended 7.1 inputs for multi-channel SACD and DVD audio devices. These inputs are analog pass-through inputs.

DIGITAL AUDIO INPUTS AND OUTPUTS

43 Optical Digital Audio Inputs

Four optical digital EIAJ inputs with TosLink connectors.

44 Coaxial Digital Audio Inputs

Four coaxial digital audio inputs with RCA connectors.

45 Digital Audio Outputs

Two digital audio outputs and one coaxial with an RCA connector.

VIDEO INPUTS AND OUTPUTS

46 S-video Outputs

Two S-video outputs with DIN connectors. The main S-video output (labeled OSD on back panel) includes on-screen display. When dubbing, the second S-video output does not include on-screen display.

47 S-video Inputs

Four S-video inputs with DIN connectors.

48 Composite Video Outputs

Two composite video outputs with RCA connectors. The main composite video output (labeled OSD on back panel) includes on-screen display. For dubbing purposes, the second composite video output does not include on-screen display.

49 Composite Video Inputs

Four RCA composite video inputs with RCA connectors.

50 Component Video Outputs

One set of component video outputs with RCA connectors. Component video uses three wires, labeled Y, Pr, and Pb on the back panel, to convey the video signal. These inputs are compatible with all wideband video sources.

51 Component Video Inputs

Three sets of component video inputs.

52 HDMI™ Outputs

One HDMI™ video output.

53 HDMI™ Inputs

Four HDMI™ video inputs.

Note: The S-1000 switches HDMI™ video only. No audio signal is available via the HDMI™ inputs. There is no on screen display (OSD) available from the HDMI™ output. When an HDMI™ input is assigned to a device, and the menu key on the remote is pressed, the on screen menu is available simultaneously from the Composite, S-Video and Component OSD outputs.

BACK PANEL REMOTE CONTROL

54 Comm Port RS-232

Connector

Sends operational instructions directly to the S-1000 using an external computer control system.

55 RC-5 In

Makes custom installation easy and secure by accepting baseband RC-5 input commands from hardwired remote controllers.

56 12 VDC In and Out

Four programmable 12 V outputs and one input. Sends a 12 V power on/off signal via a 12 V trigger cable to other Krell components and to other devices that incorporate 12 V power on/off trigger input.

When the S-1000 is in the operational mode and a trigger is enabled, the 12 VDC Out provides 12 V of DC output. When the S-1000 is in the stand-by mode or off, or if a trigger is not enabled, the DC output is 0 V.

Note: Trigger 1 is enabled for all 10 devices.

57 DB 25 Out

One multi-channel audio output via a DB-25 connector. The DB-25 contains the output connections for all the output channels (left, center, right, subwoofer, surround left, surround right, back left, and back right). This connection also mates with an optional CAST Output Module that enables all 8 channels of the S-1000 to be connected in CAST.

POWER CONNECTIONS

58 Back Panel Power Switch

Switches the S-1000 from off to stand-by.

59 IEC Connector

A standard female IEC power connector, for use with the AC power cord.

SYSTEM CONFIGURATION QUICK SETUP

IMPORTANT:
ACCESSING THE
ON SCREEN DISPLAY

STEP 1

Connect the S-1000 to your system, using **Table 1** on page 4 as a guide. You are ready to configure the S-1000 through the interactive on-screen menus in the setup menu. For best performance, configure the loudspeakers before playing music.

Please note:

On Screen Display (OSD). The S-1000 has three OSD outputs: component, S-video, and composite. There is no OSD available from the HDMI™ output.

To View the Setup Menu. Connect any of the OSD outputs on the S-1000 to the appropriate input on your video display. Press the remote control menu key. The front panel display reads MENU MODE and all OSD outputs activate simultaneously. Tune the video display input to match the selected OSD video connection.

STEP 2

Enter the setup menu. The MAIN MENU screen appears on the video display.

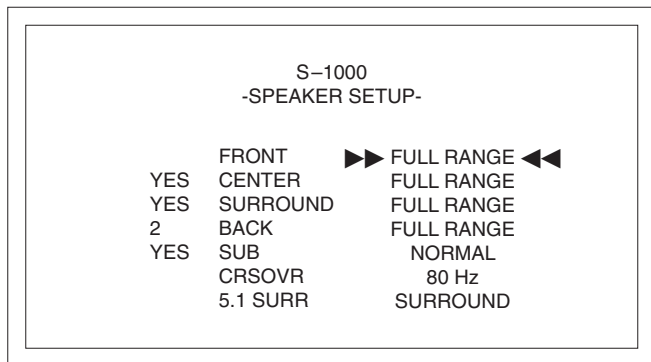
STEP 3

Select LISTENING ROOM SETUP from the MAIN MENU screen. The LISTENING ROOM SETUP screen appears.

STEP 4

Select SPEAKER SETUP from the LISTENING ROOM SETUP screen. The SPEAKER SETUP screen appears.

Speaker Setup Screen



Using this screen, you can activate loudspeakers that are in your system in the left column and select loudspeaker characteristics in the far right column.

Scroll through the available options and select your loudspeaker setup.

For a 5.1 system, select NO back speakers.

For a 6.1 system, select 1 back speaker.

For a 7.1 system, select 2 back speakers.

Note

When 1 back speaker is selected, the signal is present at the left back output.

FULL RANGE

Full Range sends 20Hz to 20KHz signals to the loudspeaker. Limited sends information from the crossover frequency (see below) to 20KHz to the loudspeaker. The frequencies below the crossover frequency are sent to the subwoofer if present; otherwise, these low frequencies are sent to the full range loudspeakers in the system.

SUB

Select NORMAL or ENHANCED to choose the amount of bass information sent to the subwoofer.

- NORMAL sends the low frequencies from the limited speakers and the .1 (or LFE) signal to the subwoofer.
- ENHANCED sends additional bass information from the left and right loud speakers to the subwoofer in addition to the low frequencies from the limited loudspeakers and the .1 (or LFE) signal.

System Configuration Quick Setup, continued

STEP 4 continued

CRSOVR

Crossover selections are 120, 100, 80, 60, and 40 Hz. The standard crossover setting is 80 Hz. Choose the crossover frequency appropriate for your loudspeakers. The frequencies below the crossover frequency are sent to the subwoofer if a subwoofer is present; otherwise, these low frequencies are sent to the full range loudspeakers in the system.

5.1 SURR

Select SURROUND, BACK, or BOTH to choose which loudspeakers in a 6.1 or 7.1 system receive surround information when playing a Dolby Digital 5.1 or DTS 5.1 encoded software.

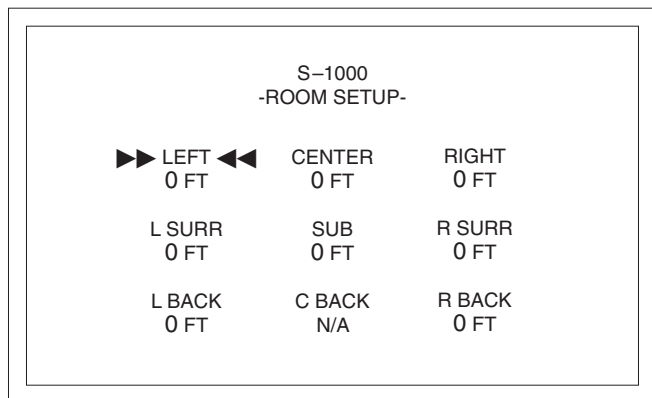
- SURROUND sends surround channel information to your surround loud speakers only.
- BACK sends surround channel information to your back loudspeakers only.
- BOTH sends surround channel information to your surround and back loud speakers simultaneously.

After completing the speaker setup screen, press the previous key (74) twice. The main menu appears.

STEP 5

Select SPEAKER DISTANCE from the main menu. The SPEAKER DISTANCE screen appears.

Speaker Distance Screen



This screen enables you to tell the S-1000 the exact location of each loudspeaker in your system.

When you access the SPEAKER DISTANCE screen, the cursor is blinking at the LEFT loudspeaker. Use the direction and enter keys to navigate the screen, select loudspeakers, and enter the correct distance (0 to 30 feet) from your main listening position to the loudspeaker.

Note

Any speaker not configured in the SPEAKER SETUP menu displays N/A (not available) on the speaker distance screen.

After setting all the speaker distances, press the previous key (74) twice. The main menu appears.

Save and Recall Customized Settings / Restore Factory Default System Settings

SAVE CUSTOMIZED SETTINGS

Press and hold the save button on the front panel for approximately four seconds. The front panel displays SAVING SETUP while the settings are stored in nonvolatile memory.

RECALL CUSTOMIZED SETTINGS

Press and hold the recall button for approximately four seconds. The front panel displays RECALL SETUP while the settings are being retrieved from nonvolatile memory. Any settings that are saved are available using this recall procedure.

RESTORE FACTORY DEFAULT SETTINGS

STEP 1
Press the front panel power button (1) to put your system into the operational mode.

STEP 2
Simultaneously press the recall button (29) and the power button (1).

The following phrases appear in the front panel display:

PLEASE WAIT
INITIALIZING

Your customized settings revert to the factory default settings.

Note

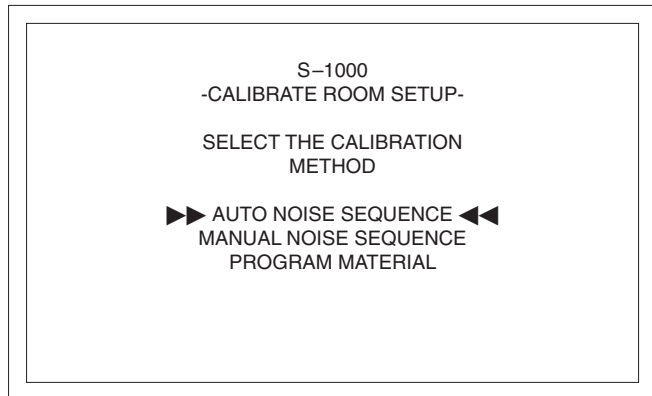
Follow the recall procedure to retrieve settings that you have saved.

System Configuration
Quick Setup, continued

STEP 6

Select **SPEAKER LEVEL** from the main menu. The **CALIBRATE ROOM SETUP** screen appears.

Calibrate Room Setup Screen

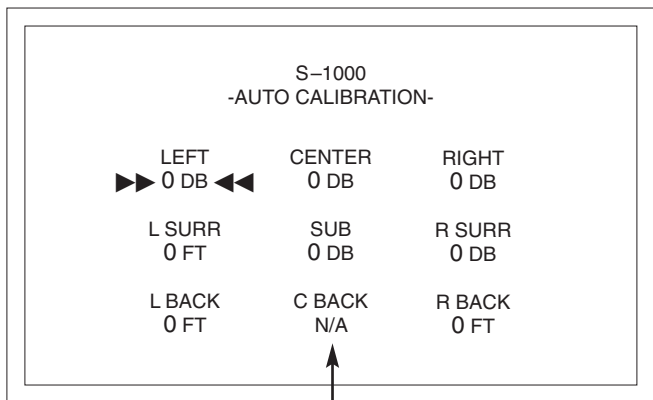


This screen enables you to select the calibration method you want to use for your loudspeakers.

A sound pressure level (SPL) meter is required for the auto or manual noise sequence calibration procedure.

Select **AUTO NOISE SEQUENCE** from the calibrate room setup menu. The **AUTO CALIBRATION** screen appears.

Auto Calibration Screen



This screen enables you to calibrate each channel using the internal noise generator of the S-1000. Set the SPL meter to C weighting and slow response. After initializing, the **LEFT** channel dB setting on the screen blinks, and you hear band limited white noise through the left loudspeaker. This noise continues for two seconds and then moves clockwise to the next loudspeaker in the system.

While the individual channel on screen is blinking, use the direction keys to adjust each loudspeaker's setting until the SPL meter reads 75 dB. Adjustments must be made while the channel on screen is blinking.

*Any speaker not configured in the **SPEAKER SETUP** menu displays **N/A** (not available) for the dB specification.*

Repeat this process for the remaining loudspeakers. When all the loudspeakers are calibrated, press the previous key twice to return to the main menu screen.

MANUAL NOISE SEQUENCE

This option allows you to manually move from loudspeaker to loudspeaker during the calibration process. When the **AUTO CALIBRATION** screen appears, follow the SPL instructions under auto calibration, above. Noise will not migrate automatically. Press enter to set each selection and move to the next loudspeaker using the directional keys on the remote. Repeat this process until all loudspeakers are calibrated.

PROGRAM MATERIAL

This option allows you to adjust loudspeaker levels based on your listening preferences rather than on SPL meter readings. The program material option uses the same screen as the automatic or manual noise sequence. The source plays, simultaneously, from all configured loudspeakers. Use the enter and direction keys to individually adjust loudspeaker levels. If any channels are not present in the source material, they will not be heard during this process.

External program material, such as a test disc is required for this calibration procedure.

MODEL

SERIAL NUMBER