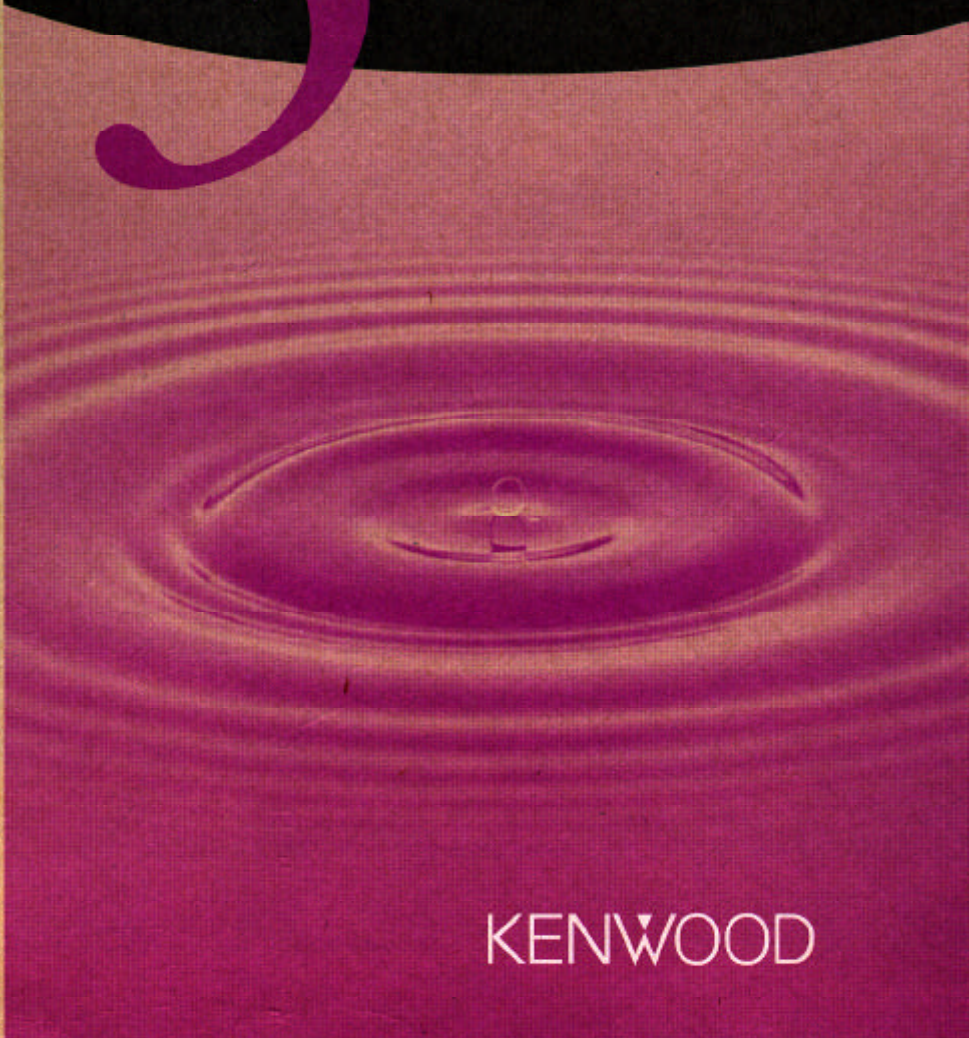
3 stage

Using your KC-Z1 Controller



KENWOOD

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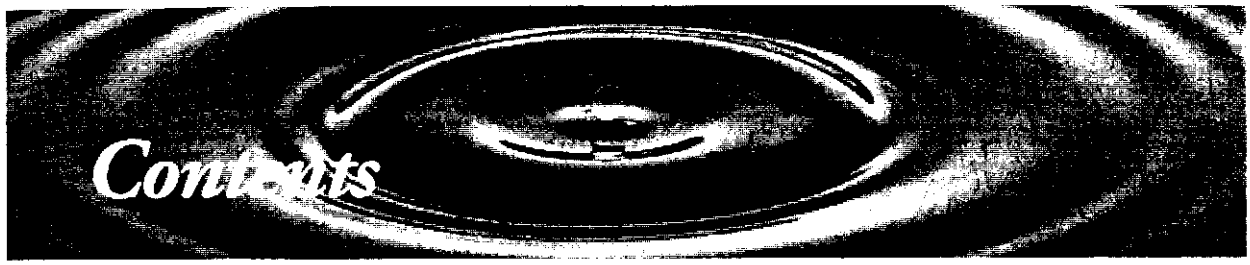

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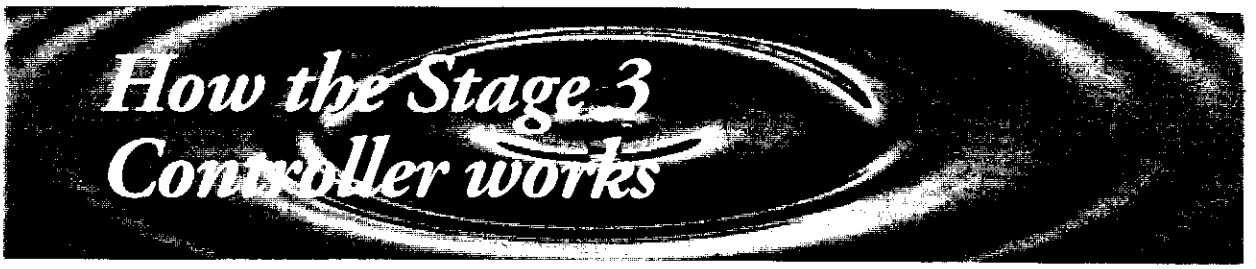
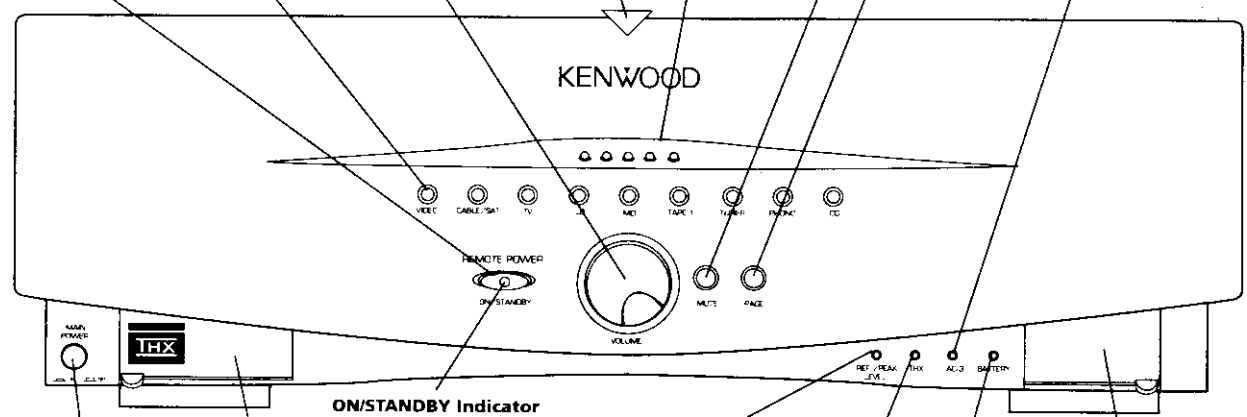


Your new Stage 3 Controller is designed to let you operate all of your entertainment components—your TV, VCR, laserdisc player, CD player, even automatic curtain-closers and light dimmers if you have them—with one simple instrument: the TouchPanel. Remember that before you can use the TouchPanel to operate these components, they must be connected to the Controller and set up (see *Setting up your Stage 3 Controller* for details).

You also use the TouchPanel to operate the functions of the Stage 3 Controller itself:

- FM/AM radio
- Home theater surround sound options, which includes playing movies in Dolby Surround Pro Logic or Dolby Digital (AC-3)
- Sound processing options, which includes speaker balance and delay, treble and bass adjustments, THX Cinema, and DSP Logic
- System presets and alarms, which allow you to program the Controller to carry out commands at the touch of one button or automatically at a later time.

The front panel controls



MUTE Switch
Touch to mute the sound, touch again to restore the sound

TouchPanel Lock
Locks the TouchPanel into its Dock

TouchPanel Dock
Attach the TouchPanel here when it is not being used

PAGE Switch
Touch and the TouchPanel emits a tone to help you locate it

INPUT Selectors
Touch to select an input source. The active input glows BLUE.

VOLUME Control
Turn clockwise to increase the volume, turn counter-clockwise to decrease the volume

DOLBY DIGITAL (AC-3) Indicator
Glows GREEN when a Dolby Digital (AC-3) input signal is detected

REMOTE POWER Switch
Touch to turn the unit ON

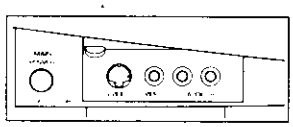
ON/STANDBY Indicator
Glows RED when the unit is in STANDBY mode; glows GREEN when the unit is operational

MAIN POWER Switch
Push to apply power to the unit. places the unit in the STANDBY mode.

INPUT OVERLOAD/REFERENCE LEVEL Indicator
Flashes GREEN when a source's output level attains THX or Dolby reference level; flashes RED frequently or remains RED for 1 second or longer when the source's output level is overloading the Stage 3 Controller's input circuitry.

BATTERY CHARGE Indicator
Glows RED while a battery is charging, glows GREEN when the battery is fully charged

BATTERY CHARGE Compartment



VIDEO 3 Inputs
Connect a video playback source (such as a camcorder).

THX Indicator
Glows GREEN while in THX Cinema mode

About the TouchPanel

How the TouchPanel sends information

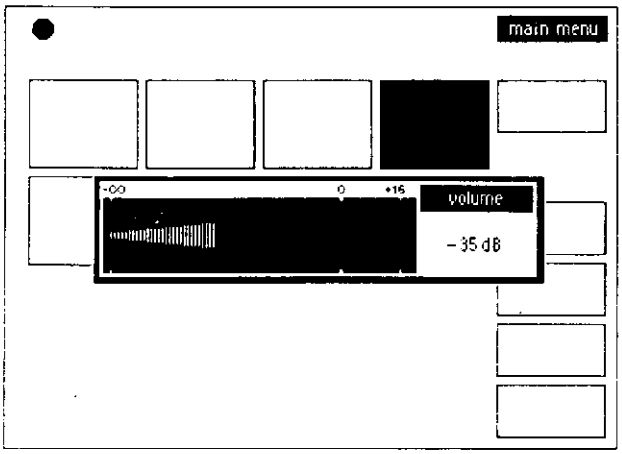
The TouchPanel communicates with the Controller using radio waves, so you can operate the controller from anywhere within approximately 100 feet of it.

Touching a button

When you touch a button, the TouchPanel responds with a chirp sound so you get audible feedback.

Using the volume control

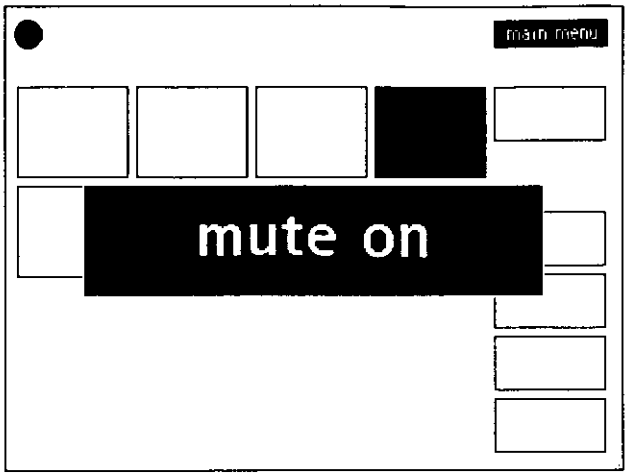
When you use the TouchPanel to change the volume, it displays a volume indicator.



- Each time you push the VOLUME buttons, the volume changes in 1 dB increments. If you hold the button down, the volume changes continually.
- The volume indicator disappears about 2 seconds after you finish adjusting the volume.
- If you change the volume using the knob on the Controller, the volume indicator does not display. However, the next time you change the volume using the TouchPanel, the new volume level will be displayed.
- When you turn the Controller on after it has been powered-down, the volume automatically resets to a low level, no matter what the volume setting was when the Controller was powered-down. This prevents accidental damage to the system and avoids a sudden burst of loud music.

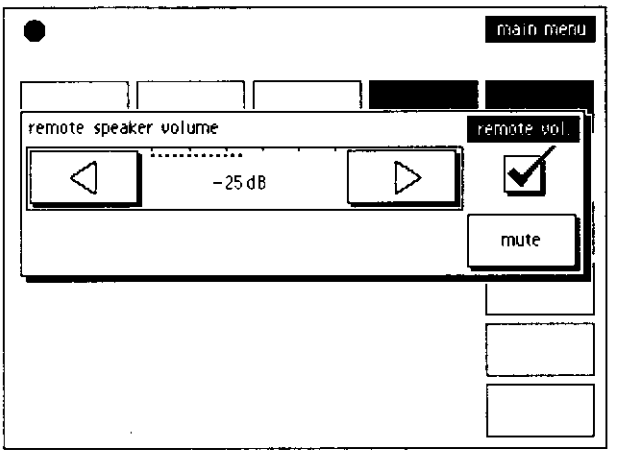
Using the mute control

You can instantly set the volume to zero (mute) by pressing the MUTE button. Pressing it again restores the volume. When the Mute function is activated, the TouchPanel displays this screen:



Using a second set of speakers

If you've set up your system to do so, you can use the TouchPanel to control a second set of speakers independently of the main speakers in your system. Touch the REMOTE SPEAKER VOLUME button on the Main Menu. The TouchPanel displays the remote volume indicator.

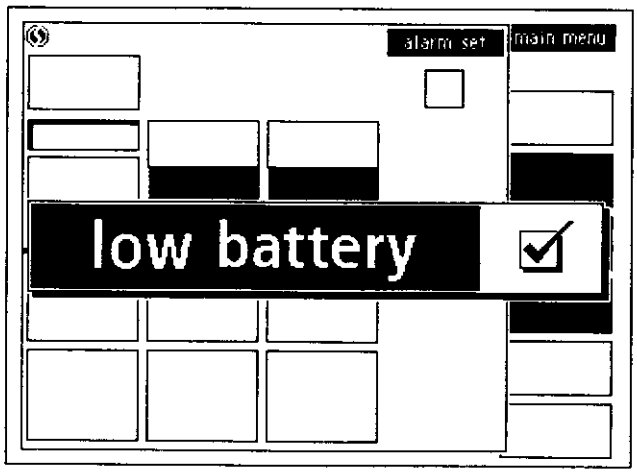


- Each time you push the volume arrow buttons, the volume changes in 1 dB increments. If you hold the button down, the volume changes continually.
- The volume indicator disappears about 2 seconds after you finish adjusting the volume.
- When you turn the Controller on after it has been powered down, the volume automatically resets to a low level, no matter what the volume setting was when the Controller was powered down. This prevents accidental damage to the system and avoids a sudden burst of loud music.

About battery life

Under constant use (with the LCD display constantly lit), a fully-charged battery will last 4 to 5 hours before it needs to be recharged. Under normal use (the LCD display set to shut off a few seconds after it's used), the battery should last much longer. See "Setting the LCD Sleep Time" for instructions on adjusting the TouchPanel to help maximize battery life.

The TouchPanel screen will display the following message when its battery needs recharging:



- Exchange the battery with the fully-charged extra battery in the controller's Battery Compartment.
- The batteries can be recharged and reused approximately 250 times. You will know a battery is nearing the end of its life when its use time shortens.
- Only use DURACELL DR-17 batteries.

About the rechargable batteries

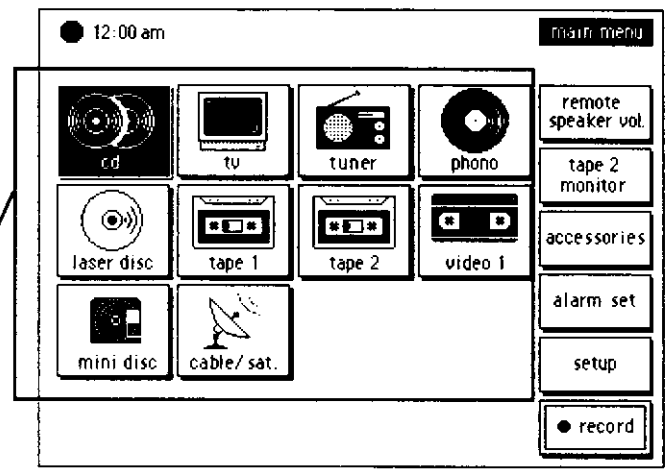
- When batteries need recharging, recharge them as soon as possible. Also, do not expose the batteries to high temperatures. This will help the batteries maintain their charge.
- For more information about batteries, contact Duracell directly at 800-551-2355.

Using the TouchPanel

When you've finished connecting your components and setting them up, the TouchPanel's Main Menu will look something like the screen below.

At any time, to get to the MAIN MENU screen, touch this button:

The main menu



SELECTION BUTTONS
Allow you to activate or adjust different functions

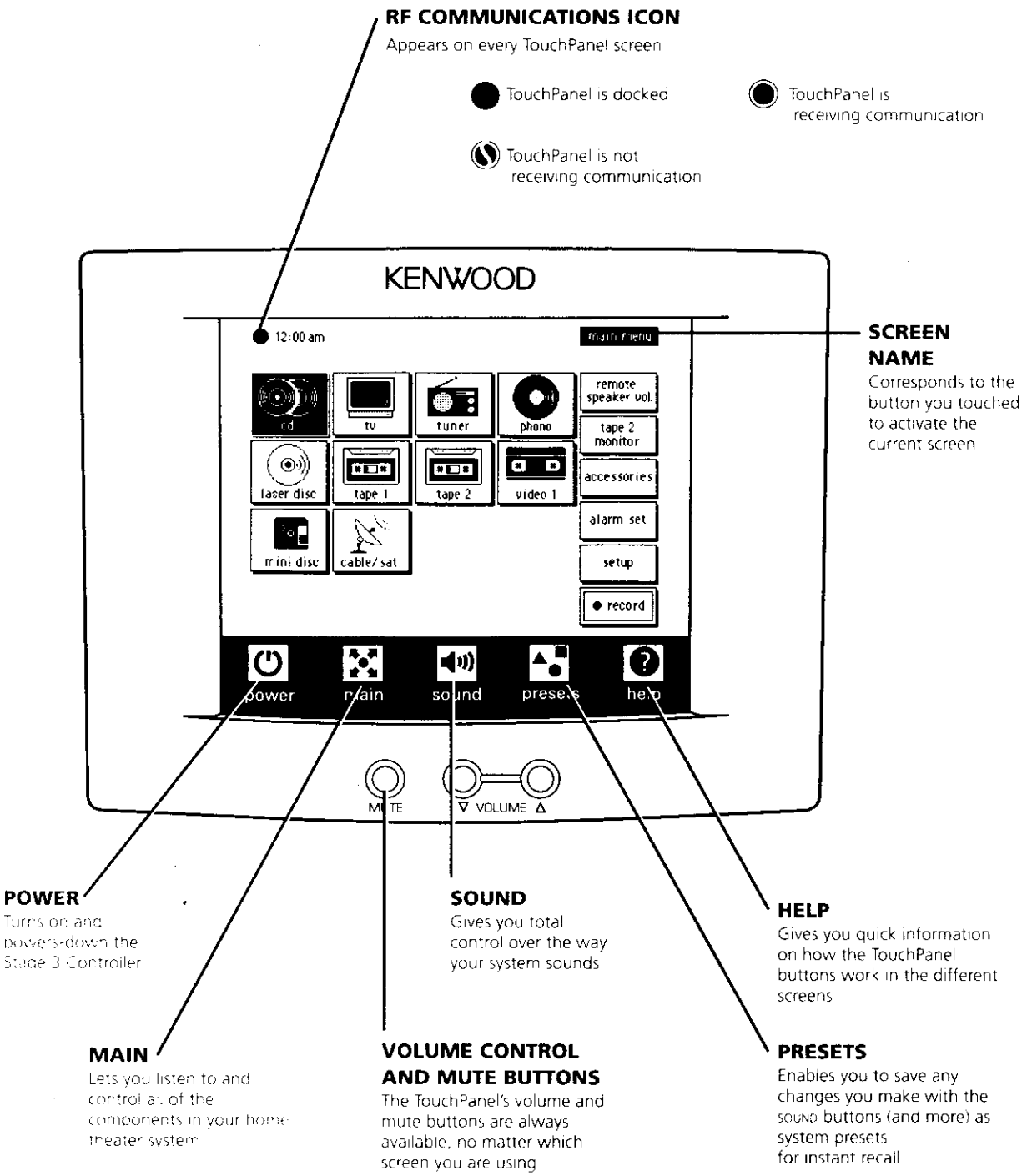
COMPONENT BUTTONS
These buttons show you the components you have connected to the Controller, and will look different than this example depending on the components you've installed. Each of these component buttons takes you to a screen you can use to operate the component shown.

About SL16 components

If a function is not available with your Kenwood SL16 component, an icon still displays on the TouchPanel the first time you use it. It will disappear after the TouchPanel communicates with the component.

Other TouchPanel buttons and indicators

No matter which TouchPanel screen you are on, general controls and indicators are available.



About the auto-off feature

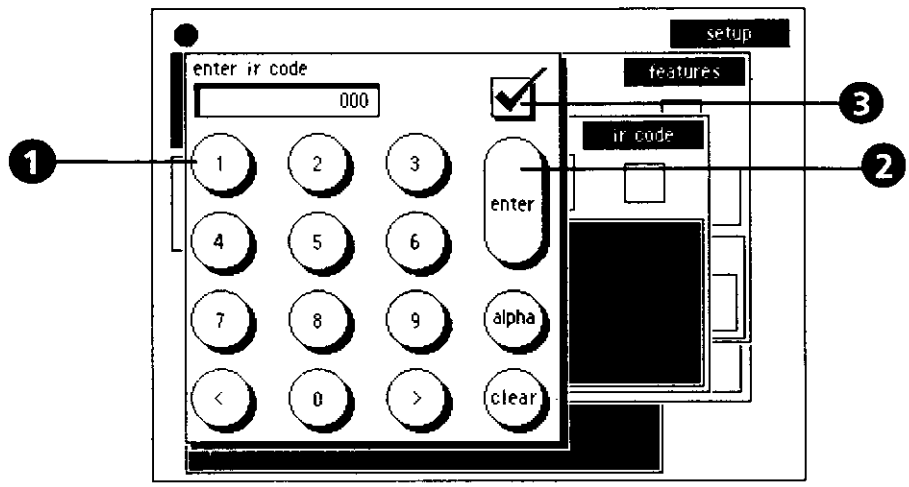
The TouchPanel turns itself off after a period of time if it hasn't been used. This feature saves battery power, and can be adjusted (see *Setting up your KC-Z1 Controller*). To reactivate the TouchPanel, simply touch it again.

Using the calculator pad

Anytime you need to enter a number or create a label, the touch panel displays the calculator pad. Here's how to use it.

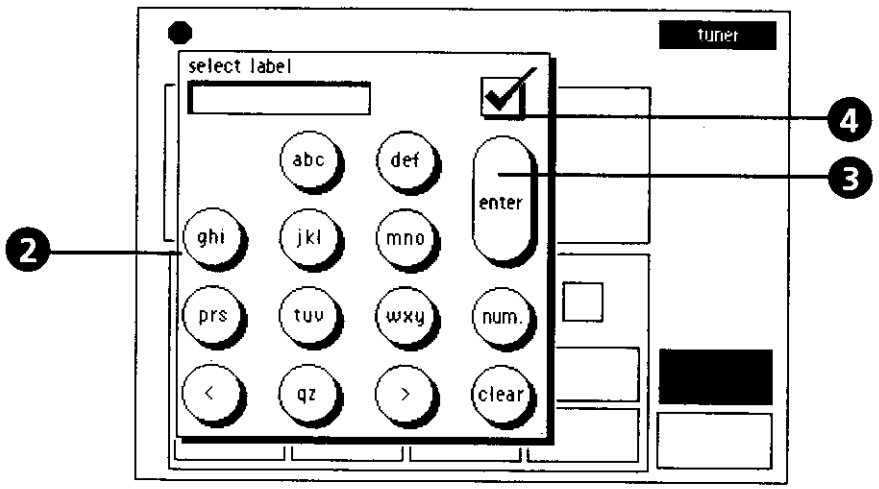
Entering numbers

1. Enter the number using the NUMBER buttons.
2. Touch the ENTER button to accept the number.
3. Touch the CHECK-MARK to save what you entered. No change is made if you use the CHECK-MARK before the ENTER button.



Creating a label

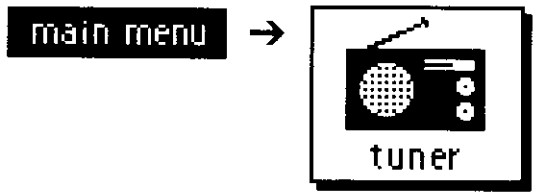
1. Touch the ALPHA button on the Calculator Pad.
2. Touch the LETTER buttons to enter letters. Touch once for the first letter, twice for the second letter, three times for the third letter. Touch the ARROW FORWARD button to enter the next letter.
3. Touch the ENTER button to accept the label.
4. Touch the CHECK-MARK to save the label. No change is made if you use the CHECK-MARK before the ENTER button.



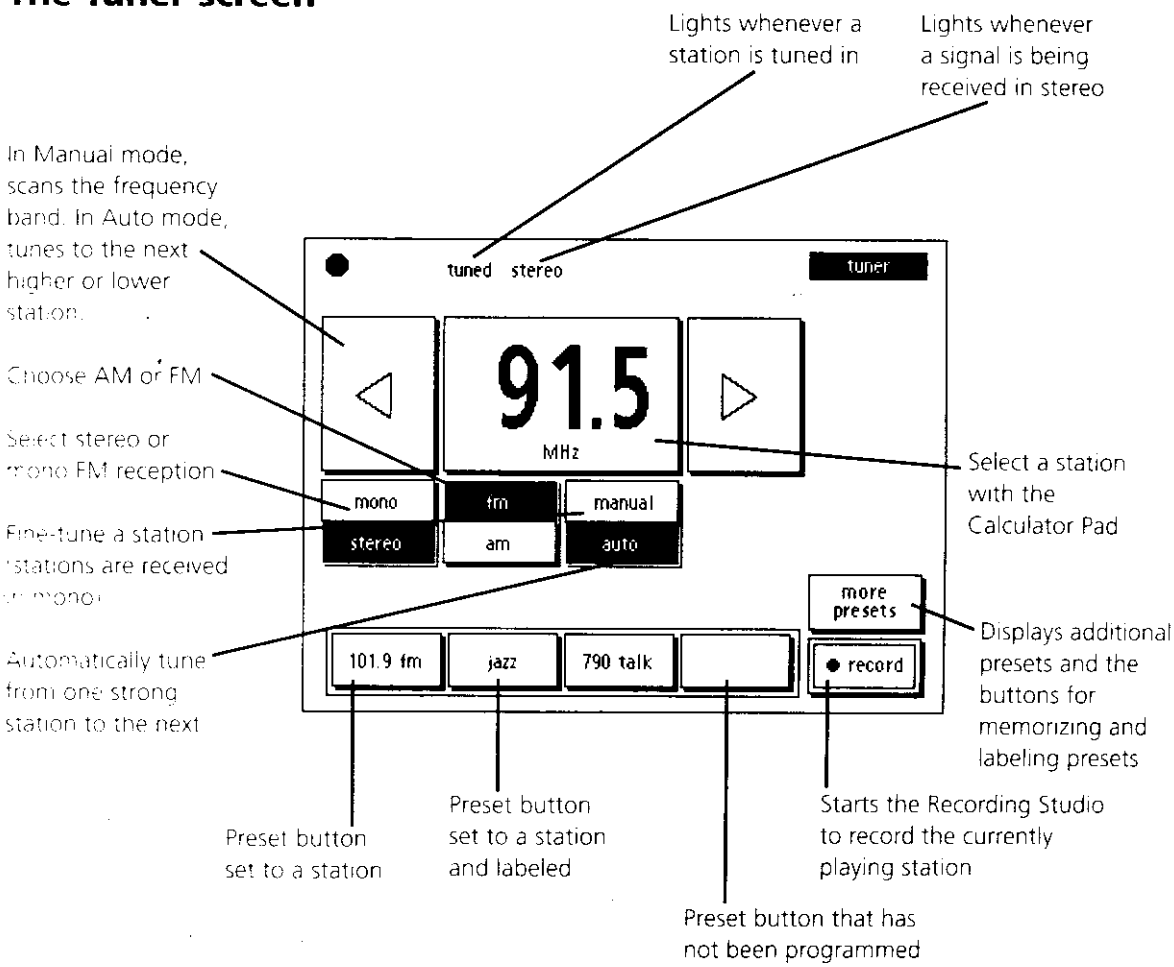
Using the tuner

You can use the Tuner screen to tune and play radio stations, set station presets, and begin recording from a radio station.

To get to the Tuner screen, touch these buttons:

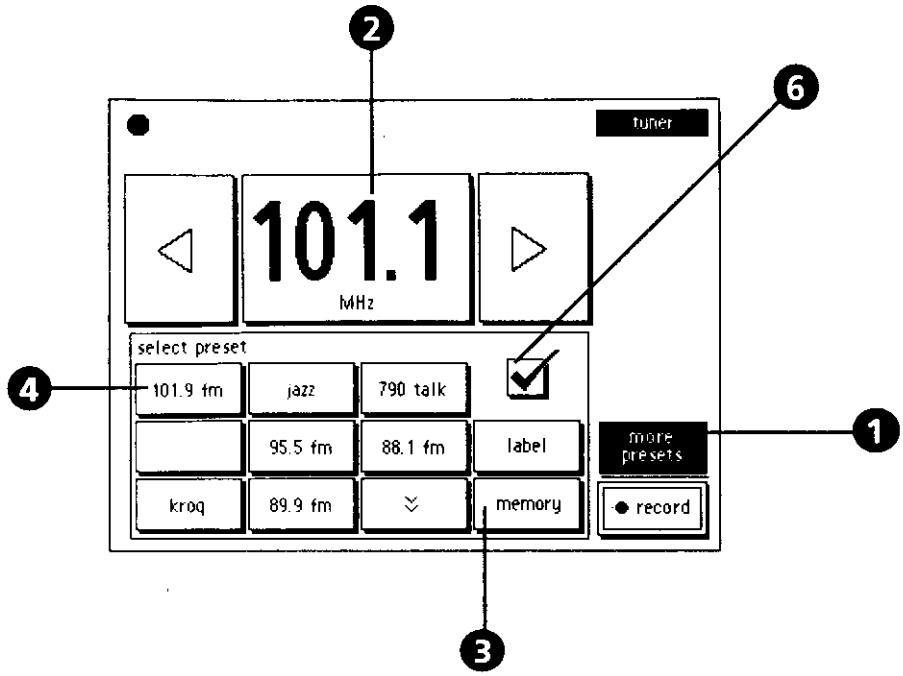


The Tuner screen



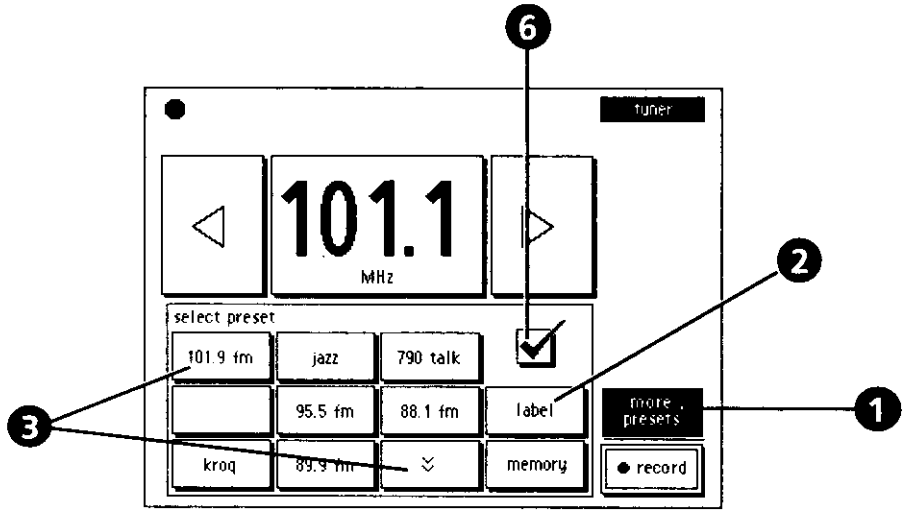
Creating or changing a tuner preset

1. On the Tuner screen, touch the MORE PRESETS button to display the Select Preset pop-up.
2. Tune the frequency you wish to program.
3. Touch the MEMORY button. The Stage 3 Controller temporarily memorizes the frequency.
4. Touch any TUNER PRESET button. The TouchPanel applies the memorized frequency to that button and changes the label to the frequency number. If you would like to change the label, see 'Labeling a tuner preset' next.
5. Repeat steps 2 to 4 for any other stations you want to set.
6. When you are done, thouch the CHECK-MARK to return to the Tuner screen.



Labeling a tuner preset

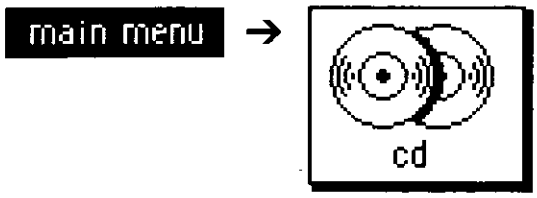
1. On the Tuner screen, touch the MORE PRESETS button to display the Select Preset pop-up.
2. Touch the LABEL button.
3. Touch any TUNER PRESET button you've already preset. (Use the arrow buttons to view more presets). The TouchPanel displays the Calculator Pad.
4. Use the Calculator Pad to create a label.
5. Repeat steps 2 to 4 for any other stations you want to label.
6. When you are done, touch the CHECK-MARK to return to the Tuner screen.



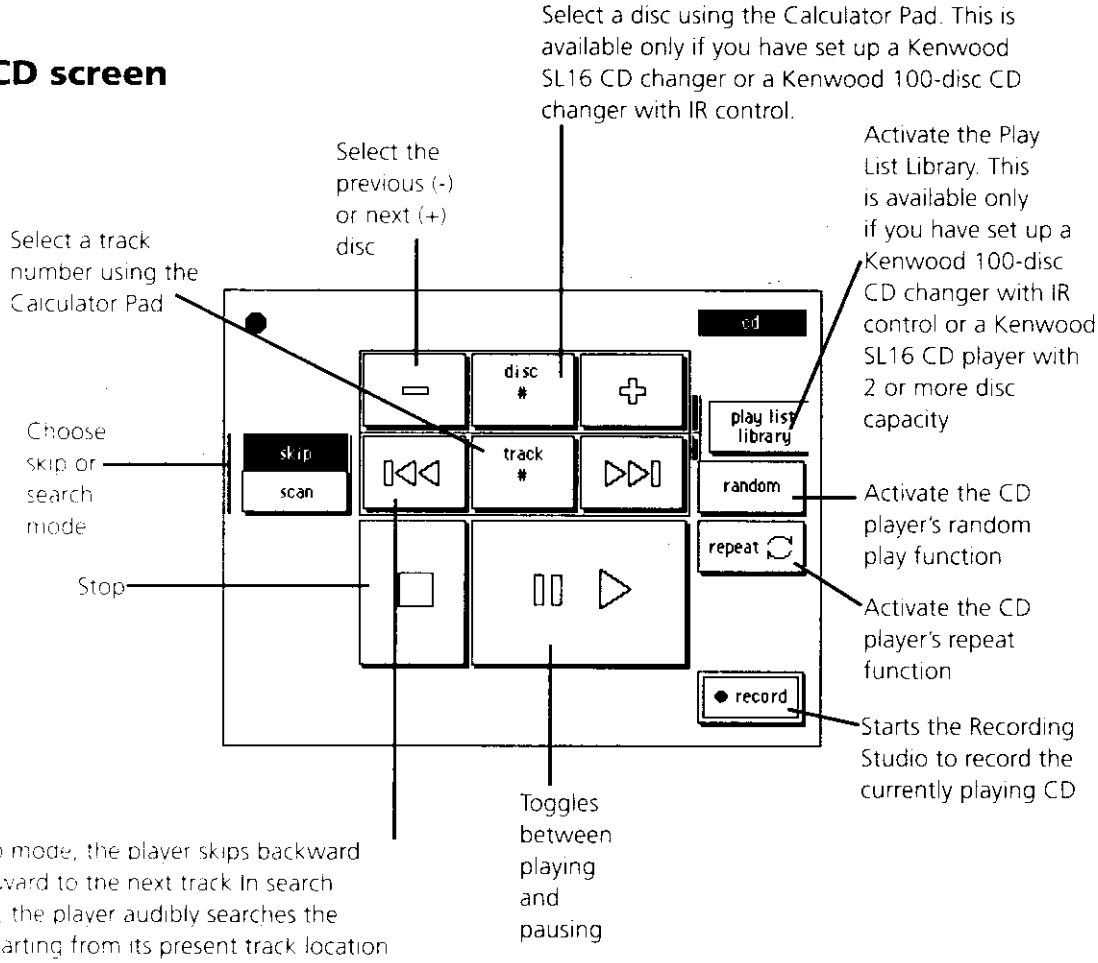
Using a CD player

You can use the CD screen to play CD's, search for specific tracks, and begin recording from a CD.

To get to the CD screen, touch these buttons:



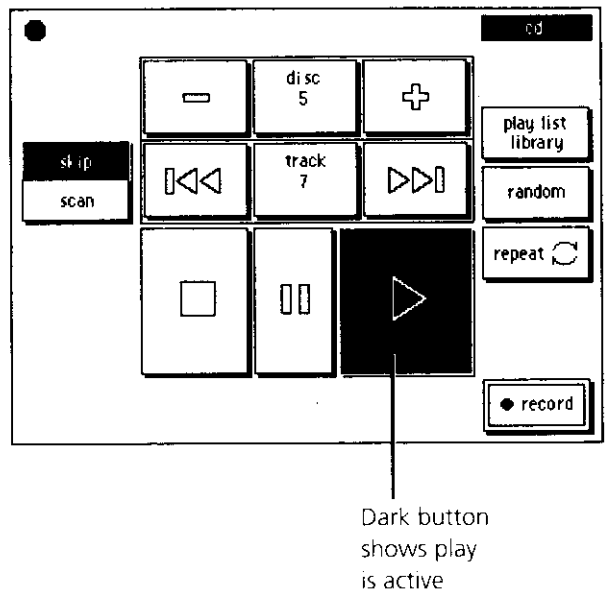
The CD screen



If you have a Kenwood SL16 CD player

Kenwood SL-16 CD players send information back to the TouchPanel. This means you'll see more information displayed if you're using one of these players:

- The TouchPanel's DISC and TRACK buttons will display the currently playing disc and track numbers.
- The TouchPanel will show separate PLAY and PAUSE buttons instead of the combination PLAY/PAUSE button.
- The TouchPanel's STOP, PAUSE, and PLAY buttons will remain dark when they're in use (instead of just momentarily turning dark) to let you know which mode is active.



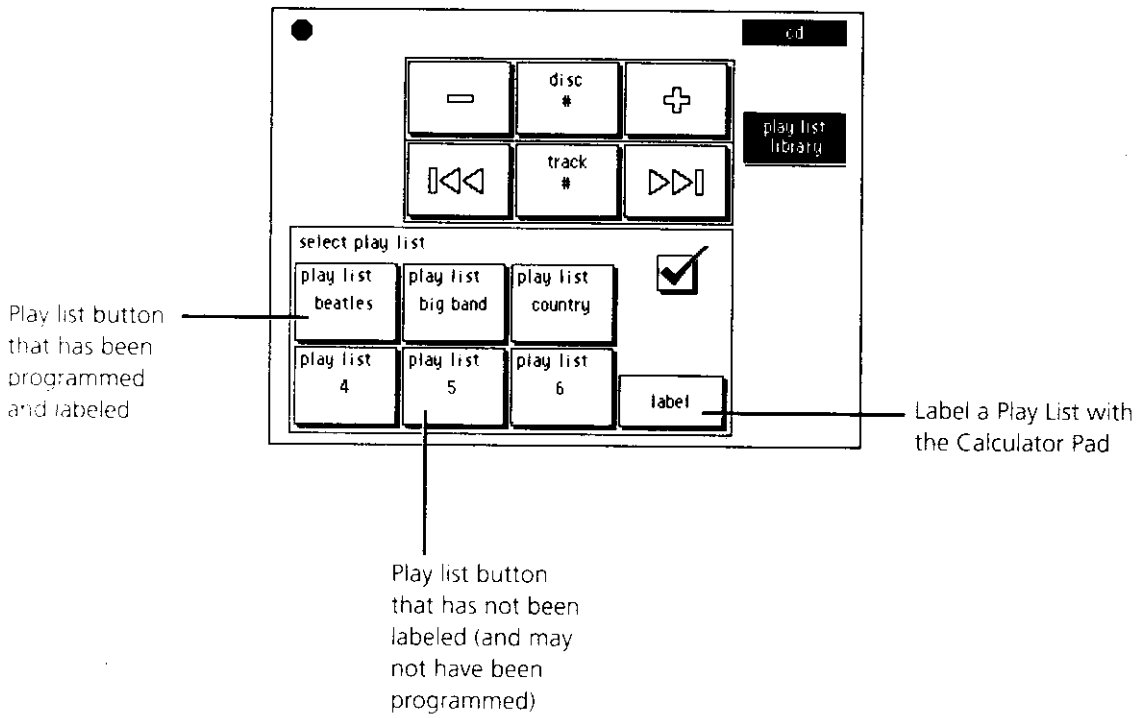
Dark button shows play is active

About CD play lists

If you have a Kenwood SL16 CD player that holds 2 or more discs, or a Kenwood 100-disc CD changer with IR control, you can use the TouchPanel to create and play custom combinations of songs. You can create up to 6 different play lists, each with up to 30 different songs, taken from any combination of CDs. If you have set up one of these CD changers and the PLAY LIST LIBRARY icon does not appear on the Kenwood CD control screen, check to be sure that you properly set up the CD player.

To get to the CD Play List pop-up, touch these buttons:

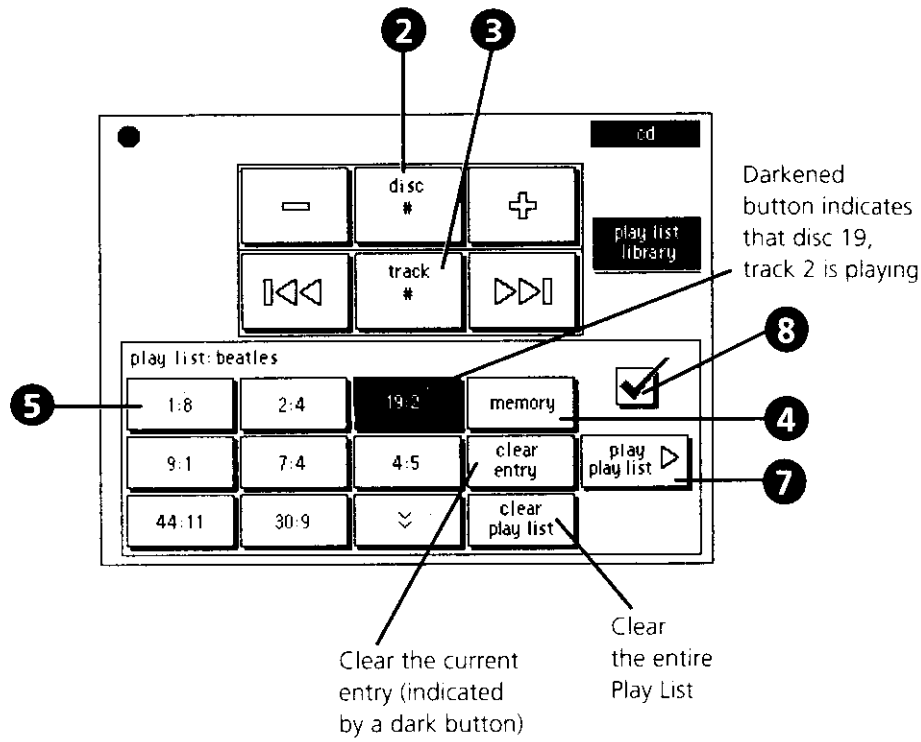
The Play List pop-up



Touch the CHECK-MARK to exit from the Play List pop-up and return to the CD screen.

Creating a CD play list

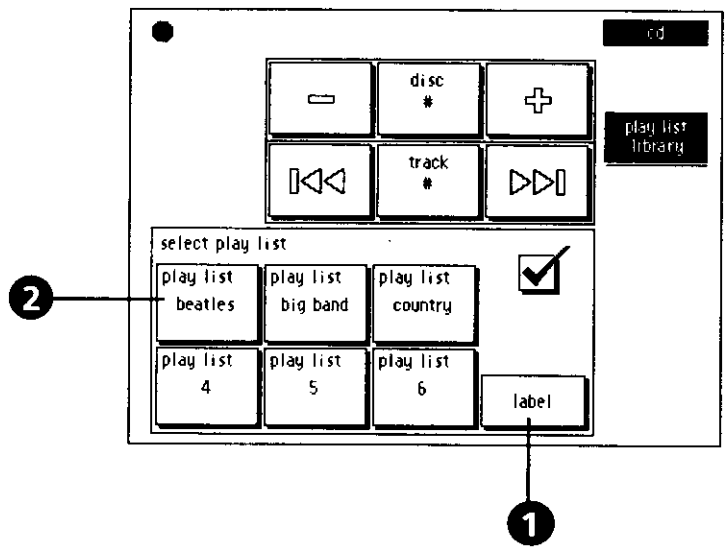
1. On the CD Play List pop-up, touch the button for the Play List you want to create.
2. Touch the DISC # button and enter the disc number using the Calculator Pad that appears.
3. Touch the TRACK # button and enter the track number using the Calculator Pad that appears.
4. Touch the MEMORY button to memorize your disc and track numbers.
5. Touch an ENTRY button. The TouchPanel applies the memorized selections to that button and changes the label to show the disc and track numbers.
6. Repeat steps 2 to 5 for each track you want to add to the Play List.
7. If you want to play the Play List, touch the and PLAY PLAY LIST button.
8. When you're done, touch the CHECK MARK to return to the CD screen.



NOTE: Because your CD Player will play the songs as you program them, you may want to turn it off while you create a Play List.

Labeling a CD play list

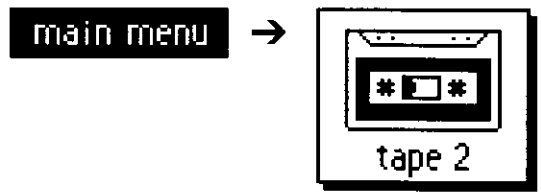
1. On the Select Play List pop-up, touch the LABEL button.
2. Touch the PLAY LIST you would like to label. The TouchPanel displays the Calculator Pad.
3. Enter a number or name for your Play List with the Calculator Pad. Any combination of letters and numbers is fine, up to 8 characters.
4. Touch the ENTER button to accept your label entry.
5. Touch the CHECK-MARK on the Calculator Pad. The label is applied to the PLAY LIST button and you are returned to the CD Play List screen.



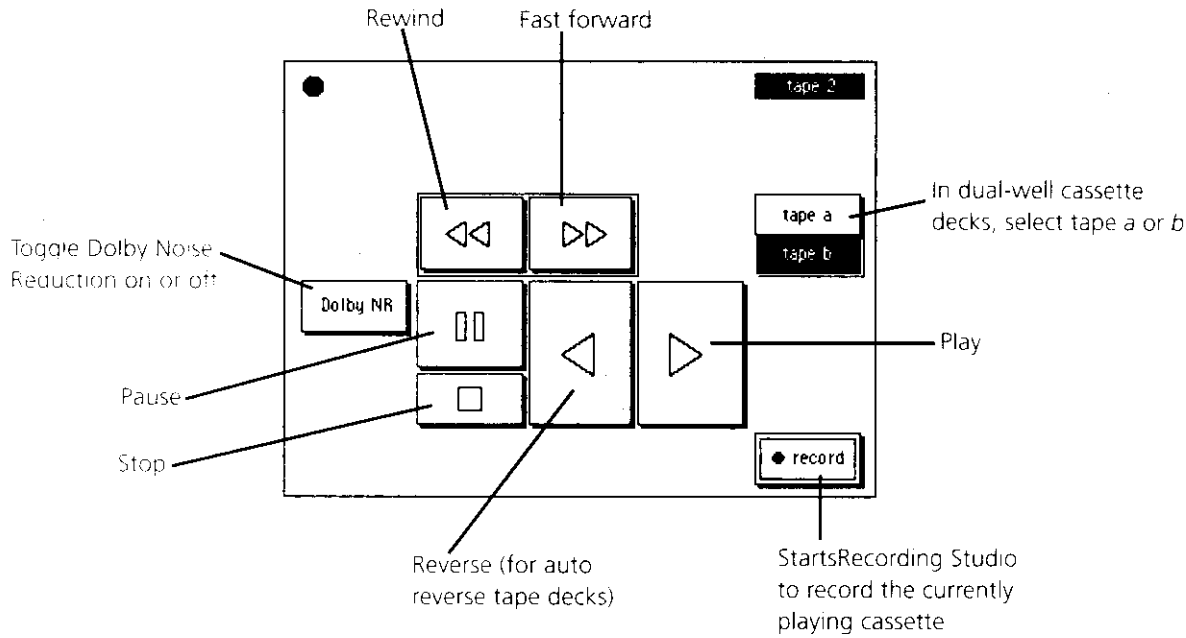
Using a tape deck

You can use the Tape screens (one for each of the up to 2 tape decks you have connected) to play tapes or start recording from a tape.

To get to a Tape screen, touch one of the tape buttons:



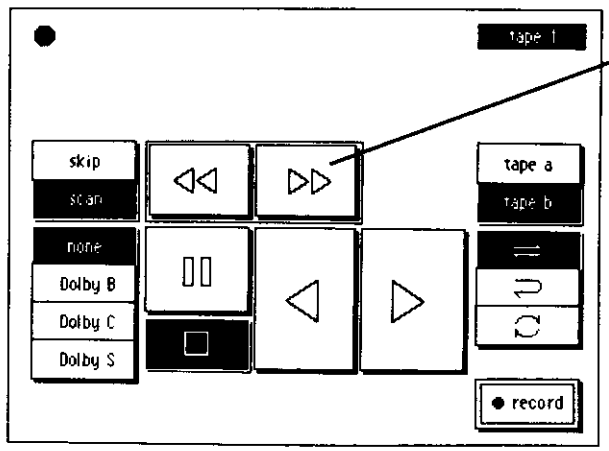
The Tape screen



f you have a Kenwood SL16 cassette deck

Kenwood SL16 cassette decks send information back to the TouchPanel. This means ou'll have additional controls (on Tape-1 only) if you're using one of these decks.

The TouchPanel's STOP, PAUSE, PLAY, FAST FORWARD and REVERSE (SKIP and NORMAL mode) buttons will remain darkened when they're in use (instead of just momentarily turning dark), letting you know which mode is currently active.



hoose skip
r scan mode

In skip mode, forwards the tape to the beginning of the next selection

In scan mode, continues to forward the tape until stop or play are selected

Play side a or side b

Play both sides of tape, one time only

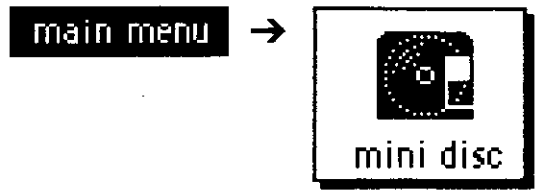
Play both sides of tape, continuously

noose the appropriate ode (or none) (see your ıssette deck user's manual r information on Dolby ɔise Reduction)

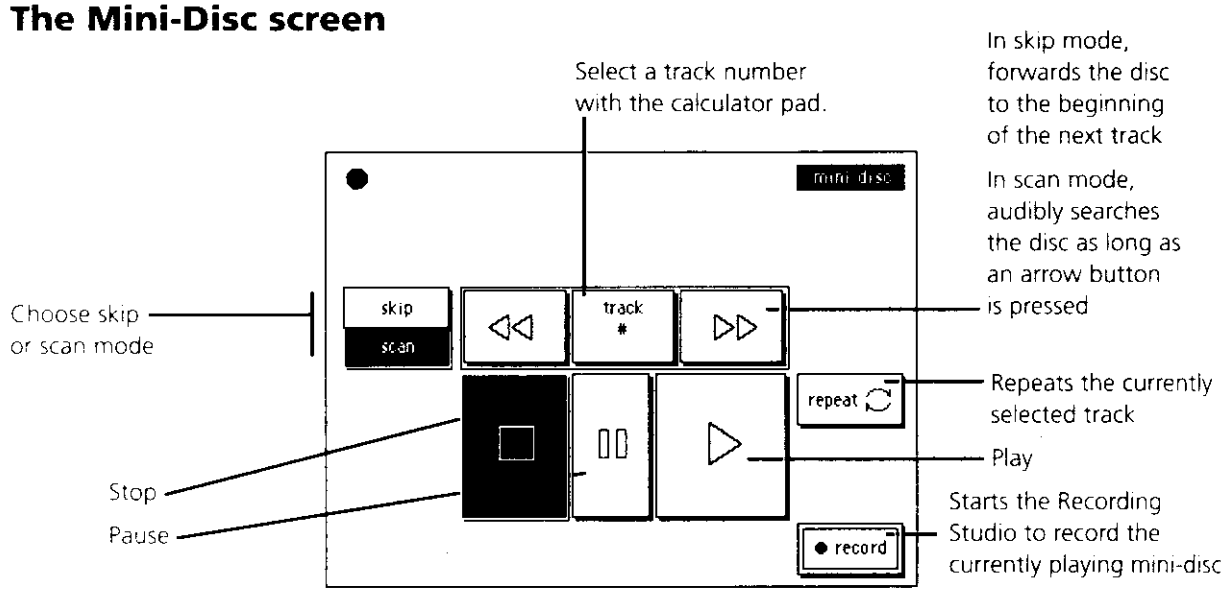
Using a mini-disc player

You can use the Mini-Disc screen to play mini-discs, search for specific tracks, or begin recording from a mini-misc.

To get to the Mini-Disc screen, touch these buttons:



The Mini-Disc screen



If you have a Kenwood SL16 mini-disc player

Kenwood SL16 mini-disc players send information back to the TouchPanel. This means you'll see more information displayed if you're using one of these players.

- The TouchPanel's TRACK button will display the currently playing track number.
- The TouchPanel's STOP, PAUSE, PLAY, FAST FORWARD and REVERSE (SKIP and NORMAL mode) buttons will remain darkened when they're in use (instead of just momentarily turning dark), letting you know which mode is currently active.

You can use a record player, personal stereo, or graphic equalizer with your system, even though they can't be controlled by the TouchPanel. To set up this type of unit, see *Setting up your KC-Z1 Controller.* Here's how to use such a device once you have it set-up:

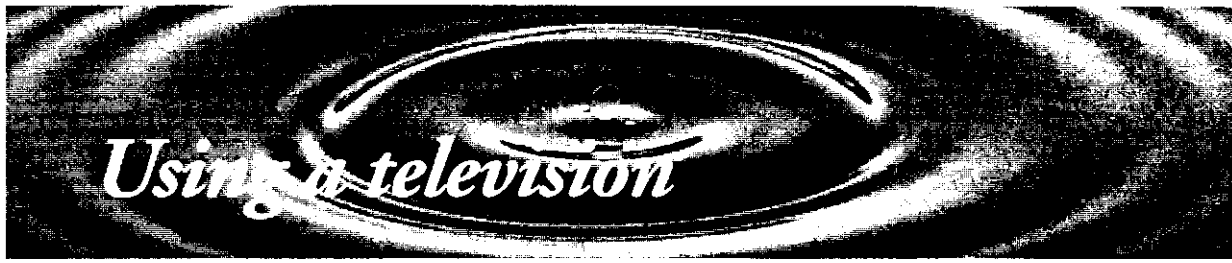
To use a record player or personal stereo

1. Turn the component power on.
2. Touch the COMPONENT icon from the MAIN menu.
3. Begin play using the component's controls.
4. Modify sound settings from the Sound menu if you wish.

To use a graphic equalizer

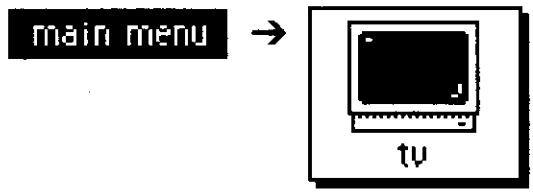
1. Turn the graphic equalizer power on.
2. Use the graphic equalizer's controls according to that component's instructions.

The graphic equalizer will not appear as a component icon on the TouchPanel screen, since it is not a sound-producing component.

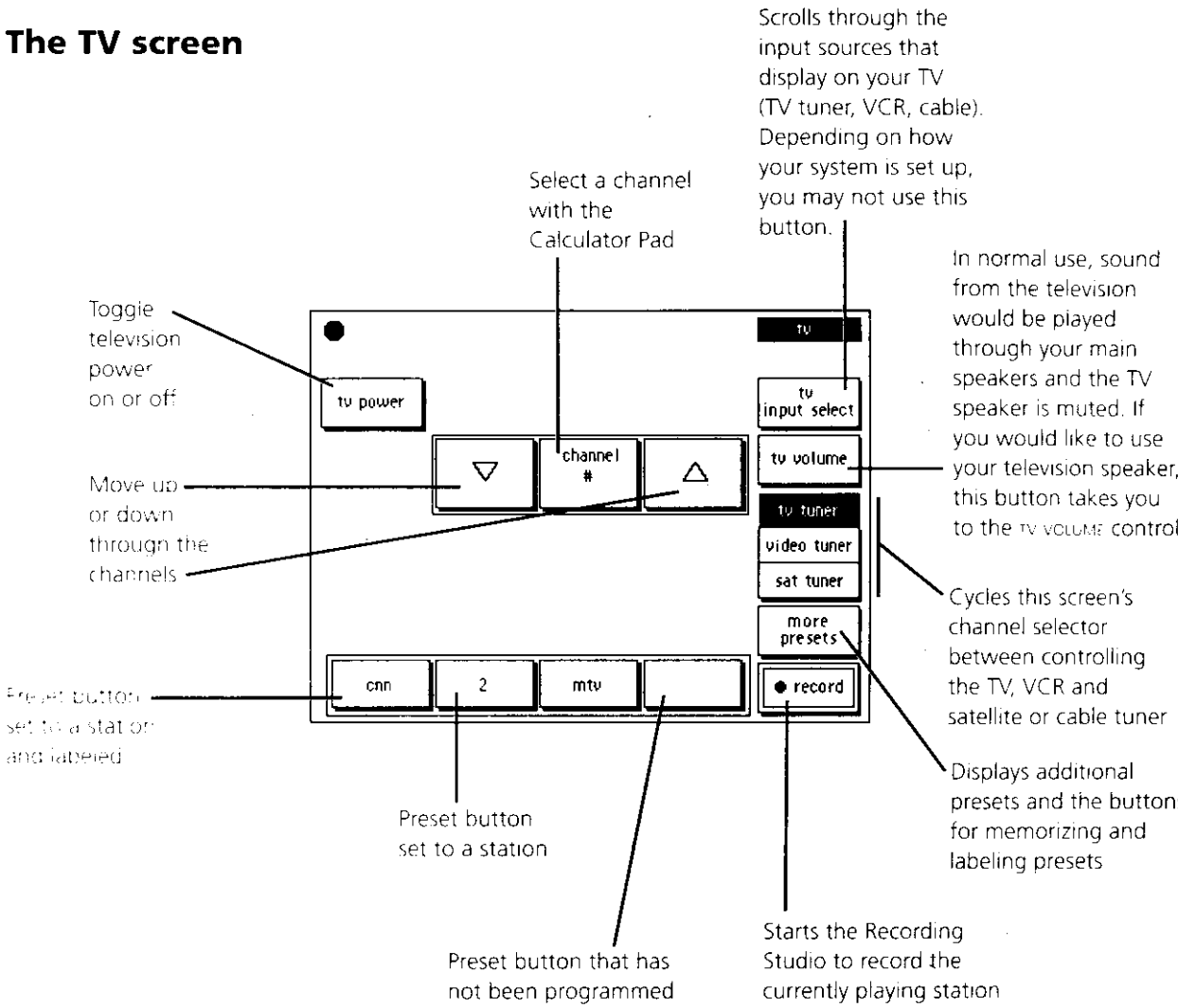


You can use the TV screen to select TV stations, set up channel presets, and begin recording from a TV station.

To get to the TV screen, touch these buttons:

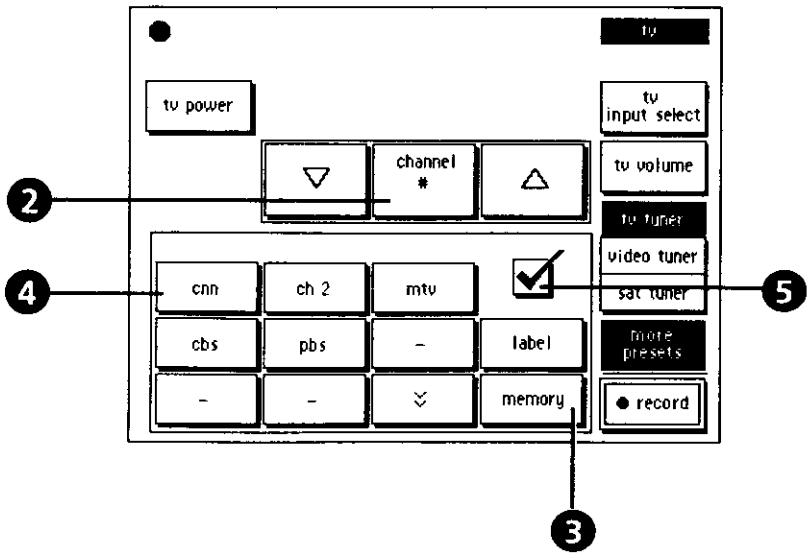


The TV screen



Creating or changing a channel preset

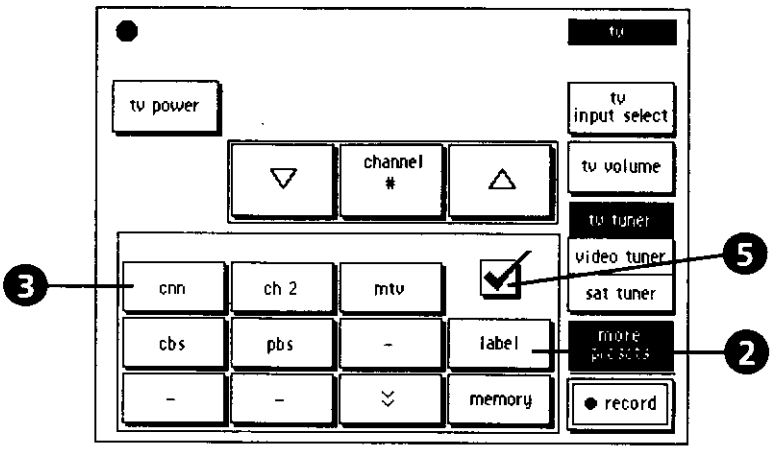
1. On the TV screen (on the TouchPanel), touch the MORE PRESETS button.
2. Tune the channel you wish to program
3. Touch the MEMORY button. The Stage 3 Controller temporarily memorizes the channel.
4. Touch any CHANNEL PRESET button. The TouchPanel applies the memorized frequency to that button and changes the label to the channel number.
5. When you are done, touch the CHECK-MARK to return to the TV screen.

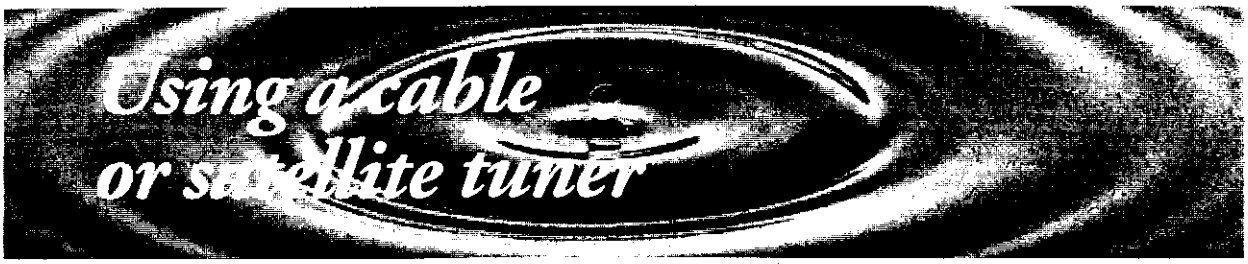


Labeling a channel preset

Instead of the channel number, you can label Preset buttons to display the channel name (such as 'CBS' or 'MTV').

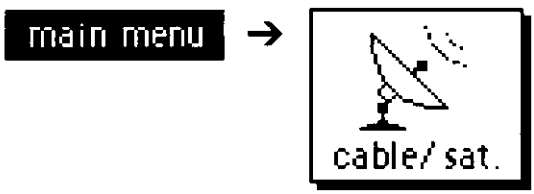
1. On the TV screen (on the TouchPanel), touch the MORE PRESETS button.
2. Touch the LABEL button.
3. Touch any CHANNEL PRESET button. (Use the ARROW buttons to view more Presets). The TouchPanel displays the Calculator Pad.
4. Enter the desired label with the Calculator Pad. (any combination of letters or numbers, up to 8 characters long).
5. When you are done, touch the check-mark to return to the TV screen.





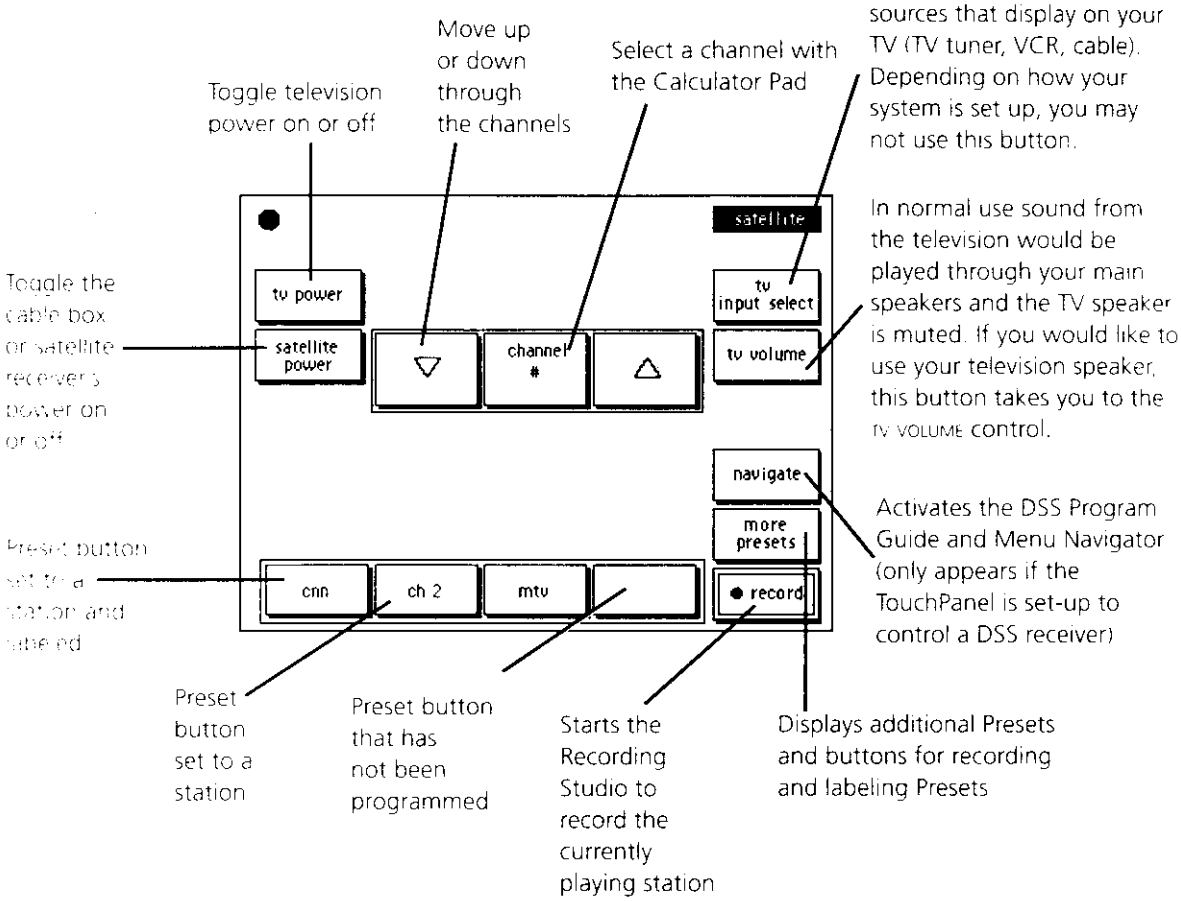
You can use the cable or satellite screens to select a cable or satellite TV station, set up channel Presets, or begin recording from a cable or satellite tuner.

To get to the CABLE/SATELLITE screen, touch these buttons:



The Satellite screen

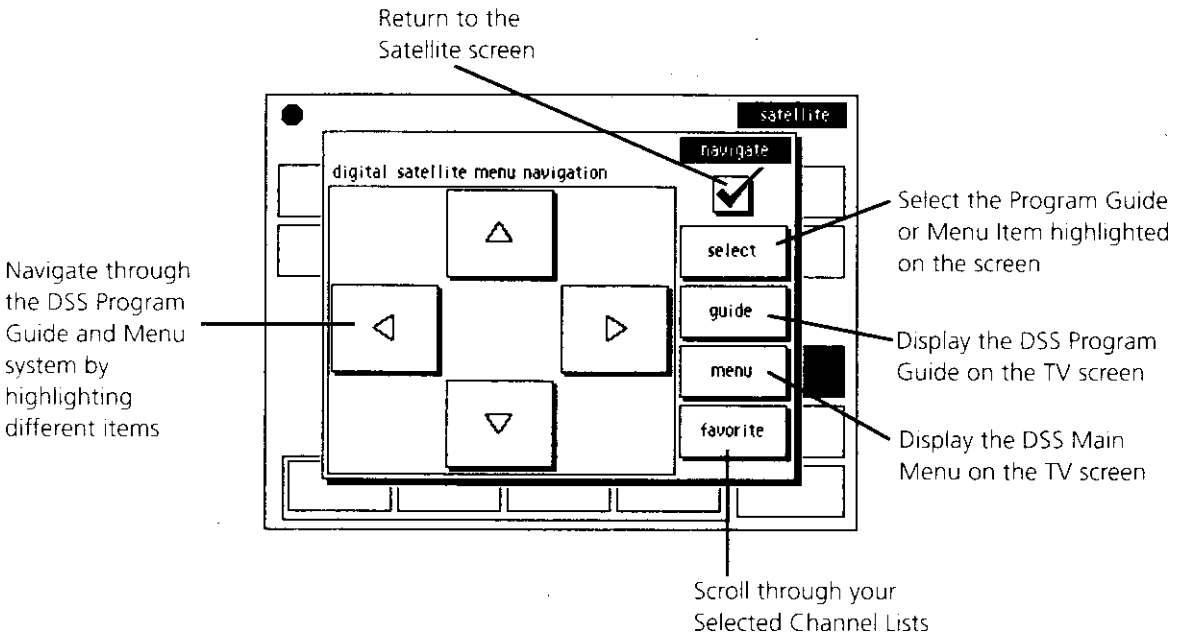
The Cable screen is identical.



About presets

The channel presets that appear on the cable or satellite screens will be the same ones that you have set for your TV and VCR. To preset stations for your satellite system, use your DSS receiver's Favorite Channel List function or your satellite receiver's Preset Station Setting function.

Using the DSS program guide navigator screen



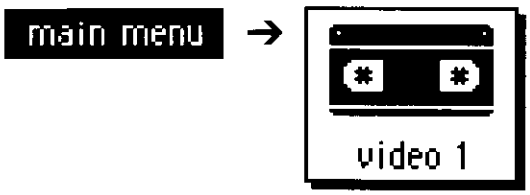
About channels above 255

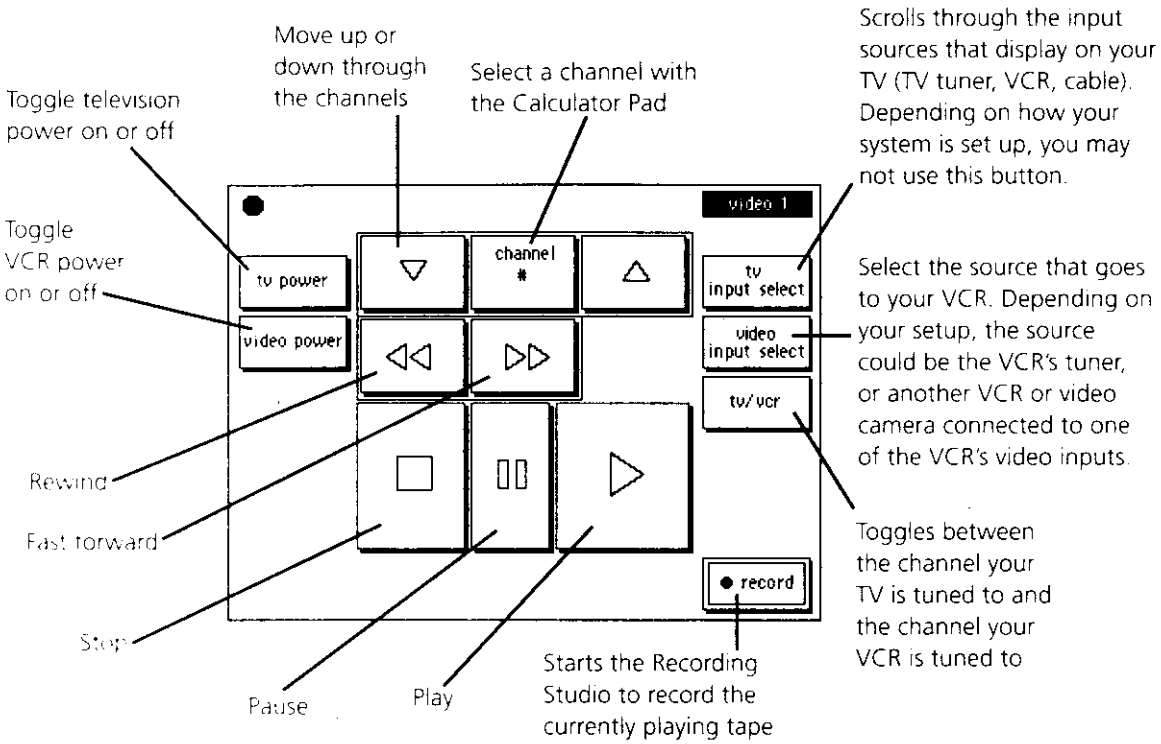
You cannot enter a channel number higher than 255 with the Calculator Pad. To select channels above 255, use your DSS receiver's Program Guide or your satellite receiver's Direct Channel Access function. You can also select channels higher than 255 with the TouchPanel's CHANNEL UP/DOWN arrow buttons.

Using a VCR

You can use the Video screens (one for each of the VCRs you have connected) to play tapes or start recording from a tape.

To get to a Video screen, touch one of the video buttons:





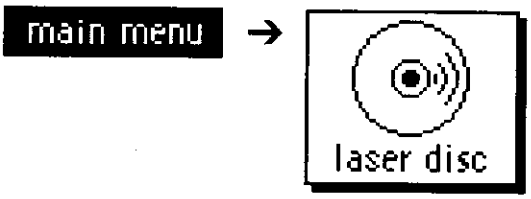
About recording

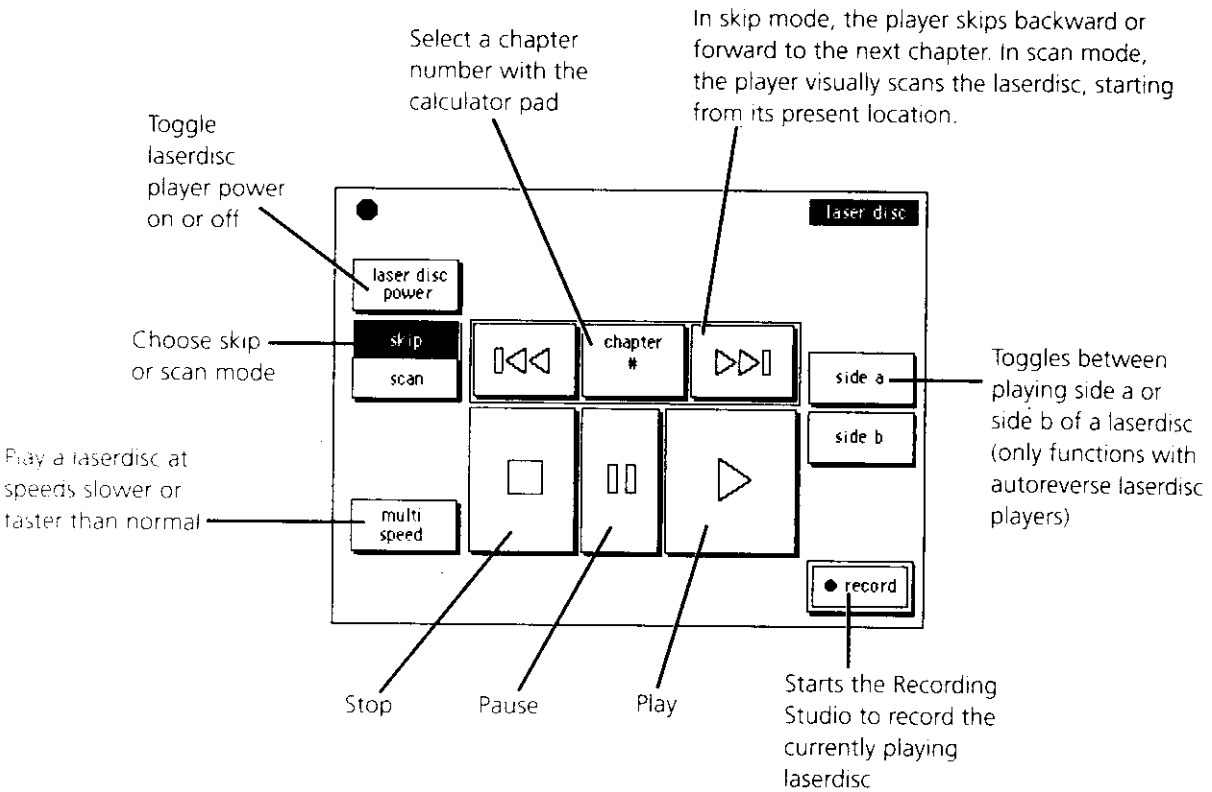
For instructions on recording to a VCR, see 'Recording' on page 46.

Using a laserdisc player

You can use the Laserdisc screen to play laserdiscs or start recording from a laserdisc.

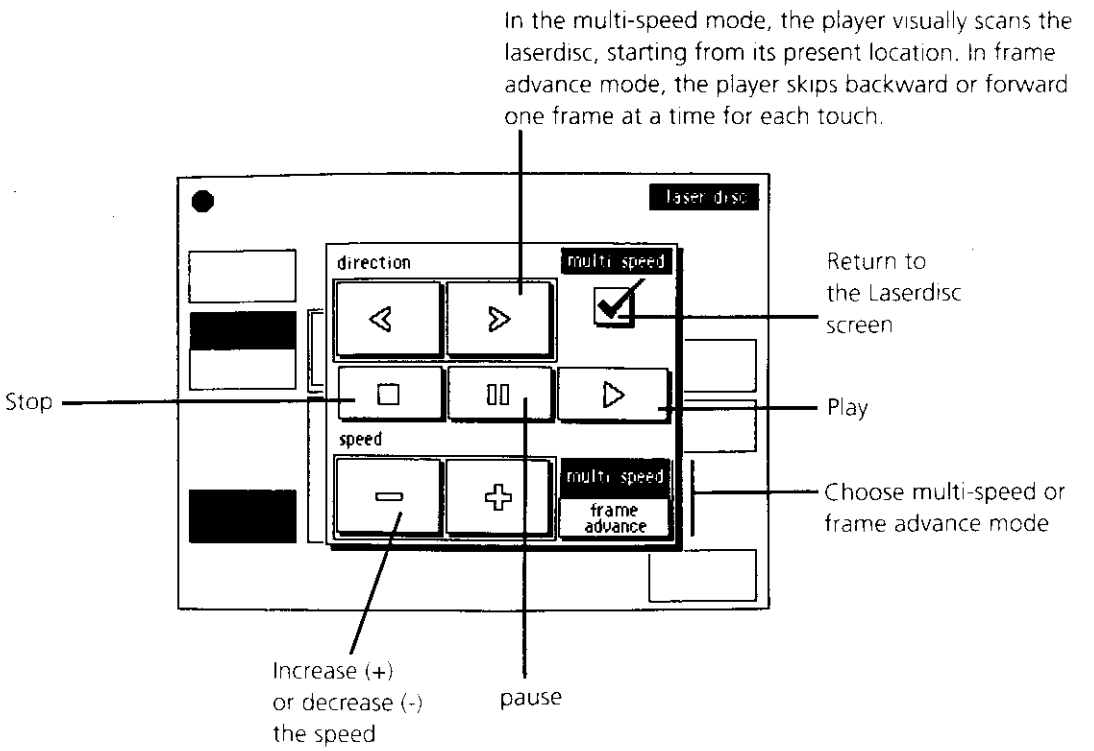
To get to the Laserdisc screen, touch these buttons:

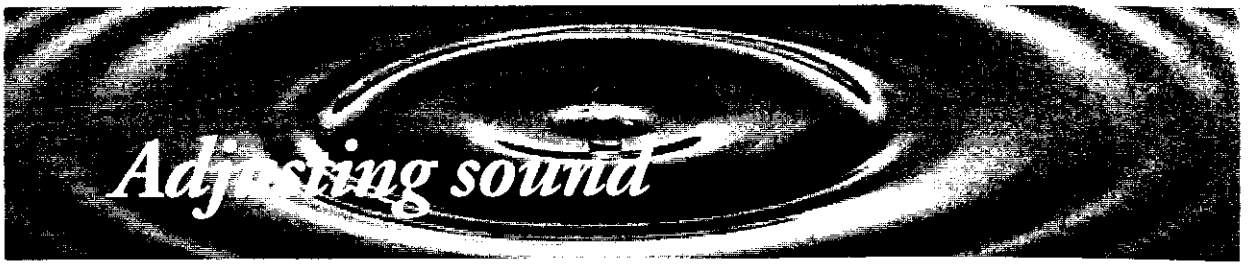




Using the laserdisc multi-speed modes

To use the multi-speed modes, you'll need either a special laser disc (one recorded in the CAV format) or a special laser disc player (one that supports digital special effects).





To view or change the current settings, touch the SOUND button when you're using any component. When you're finished making changes, touching the CHECK-MARK will return you to the controls of the component you were using.

From the Sound menu you can:

- Select an audio mode: Source Direct, Stereo, Mono, Dolby 3 Stereo, Dolby Pro Logic, or Dolby Digital (AC-3).
- Add sound processing: THX Cinema (for more accurate film sound) and DSP Logic (for simulated room sound).
- Adjust Bass and Treble.
- Select Midnight mode for quiet listening.
- Control speaker delay and sound level.
- Reset sound settings to their default value.

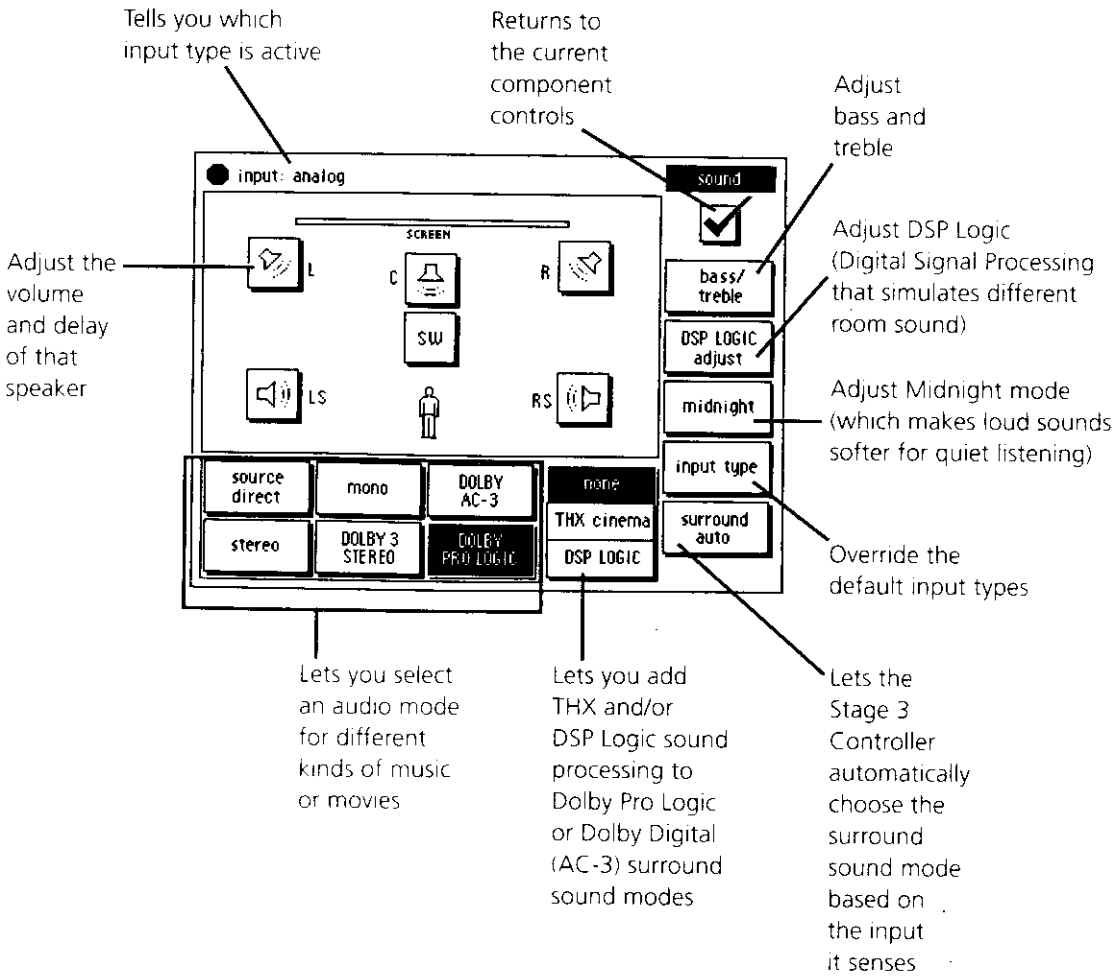
Saving your settings

Any changes you make from the Sound menu, plus the settings for the current component, can be saved as a System Preset. See the chapter 'Using system presets' later in this booklet.

Accessing sound controls

To get to the Sound screen, touch this button:

The following sound controls are available:



About Surround Auto

If SURROUND AUTO is ON, the Stage3 Controller will automatically choose the best input type from among those that are connected to the active source. The priority is: RF, Digital Coaxial, Digital Optical, Analog.

About the audio modes

You can choose from six audio modes, including three music modes (source direct, mono, and stereo) and three surround-sound modes (Dolby 3 Stereo, Dolby Surround Pro Logic, and Dolby Digital [AC-3]).

When you select an Audio Mode, the TouchPanel uses darkened icons to show you which speakers are producing sound in that mode (if your system includes a subwoofer it will remain active in all audio modes). For example, in Stereo mode, the left and right speaker icons will be darkened, and so will the subwoofer icon if you have a subwoofer installed. In Dolby Digital (AC-3) mode, the left, center, right, surround, and subwoofer speaker icons would be darkened.

Source Direct

Plays the audio source in stereo, bypassing all of the Stage 3 Controller's digital, surround, and tone control circuitry. This allows you to listen to a stereo recording in the purest possible way. (Source Direct operates only with components connected using the Stage 3 Controller's analog inputs).

Stereo

Plays the audio source in stereo using only the left and right speakers and applies any adjustments you've made on the Bass and Treble Menu.

Mono

Plays the audio source in monaural using only the center speaker only. If your system does not have a center speaker, the monaural sound will come through the left and right speakers.

Dolby 3 Stereo

Plays the audio source through the left, center and right speakers. For music, this retains a stereo sound, with improved imaging and definition, especially for multiple listeners. For home theater, this mode is only useful if you are not using surround speakers in your system.

Dolby Pro Logic

Plays the audio source through the left, center, right and surround speakers, using Dolby Pro Logic decoding for surround sound. This is the standard setting for Dolby Surround-encoded video tapes, laser discs, and TV broadcasts.

Dolby Digital (AC-3)

Plays the audio source through the left, center, right and surround speakers, using Dolby Digital (AC-3) decoding for surround sound. This is the setting to be used on newer laser discs and other sources that are labeled 'Dolby Digital (AC-3)'.

Surround Auto

If the input is CD, mini disc, tuner, phono or tape, the Controller automatically selects stereo mode. If the input is TV, laser disc, cable/sattelite or video, the Controller selects Dolby Surround Pro Logic mode. If the source is recorded in Dolby Digital (AC-3), the Controller selects Dolby Digital (AC-3) mode. (You can still select any surround mode manually).

What you can change

The audio modes you can select depend on the speakers you have installed in your system.

If your system has	You can select
Left and Right speakers	Source Direct, Stereo, Mono, Dolby AC-3
Left, Center and Right speakers	Source Direct, Stereo, Mono, Dolby 3 Stereo, Dolby AC-3
Left, Right and Surround speakers	Source Direct, Stereo, Mono, Dolby Surround Pro Logic, Dolby AC-3
Left, Center, Right and Surround speakers	Source Direct, Stereo, Mono, Dolby 3 Stereo, Dolby Surround Pro Logic, Dolby AC-3

NOTE: Dolby Digital (AC-3) sources will play with any speaker configuration. If your system lacks surround or center speakers, the Stage 3 Controller will blend the information for those channels into the left and right speakers.

Adding sound processing

The Stage 3 Controller offers 3 choices for sound processing: THX Cinema, DSP Logic, and none:

THX Cinema

Because a film's soundtrack is meant to be heard in a large theater with dozens of speakers, movies can sound much different when played in a typical room at home. THX Cinema sound processing is special circuitry developed by Lucasfilm, LTD, that corrects this problem. THX Cinema adjusts tone, compensates for how our ears hear directional sound, and creates a more spacious, enveloping surround-sound environment. The result is sound that matches as closely as possible the sound created by the movie's director and sound technicians.

Keep in mind these points about THX Cinema processing:

- THX Cinema processing can only adjust sound that has already been decoded by a surround-sound decoder, and so it is only available when the Controller is in Dolby Digital (AC-3) or Dolby Surround Pro Logic mode.
- Use THX Cinema processing for films marked Dolby Digital (AC-3), Dolby Surround, or Dolby Stereo (a term used to denote Dolby Surround that you may find on older laserdiscs and videotapes).
- Activating the THX Cinema mode automatically resets the bass and treble controls to their flat settings. Once you activate THX Cinema mode, you can boost or cut the bass and treble settings as you like. When you exit THX Cinema mode, the bass and treble settings will return to the values they were at before you selected THX Cinema.

DSP Logic

Combines the surround sound of Dolby Digital (Dolby AC-3) and Dolby Surround Pro Logic with proprietary Kenwood Digital Signal Processing. This lets you personalize the listening environment to simulate the way films (or music) would sound in different rooms, from the intimate environment of a jazz club to the spaciousness of a large theater.

- You can use DSP Logic processing for any Dolby Digital (AC-3), Dolby Surround or stereo music programs.
- DSP Logic processing is only available in the Dolby Digital (AC-3) and Dolby Surround Pro Logic modes.

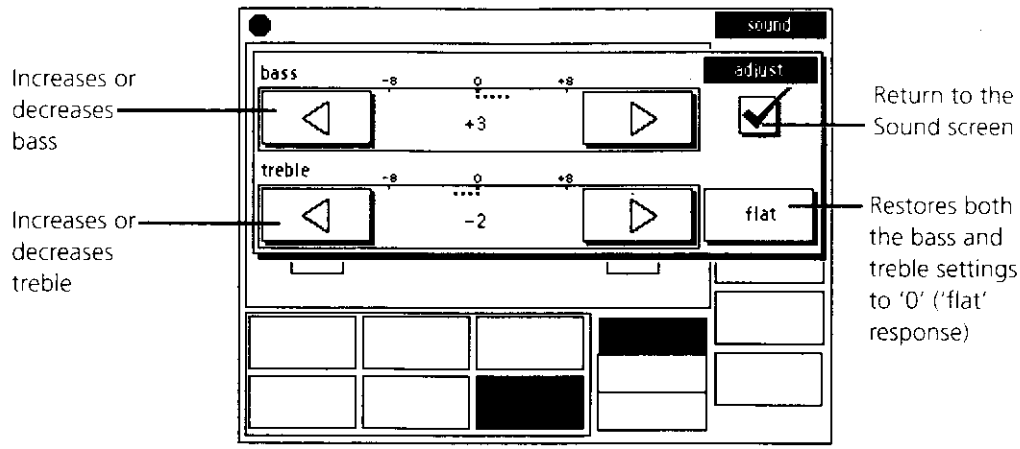
For instructions on how to adjust the DSP Logic settings, see 'Adjusting DSP Logic' on page 42.

None

Turns off both THX Cinema and DSP Logic processing.

Adjusting bass and treble

To get to the Bass/Treble Adjust screen, touch these buttons:



Any changes you make on this screen are erased (and the settings reset to '0') when you:

- Change input sources
- Activate the Surround Auto mode
- Put the Controller in Standby mode (shut-down the system)

You can save changes in bass and treble level as part of a System Preset.

Adjusting DSP Logic

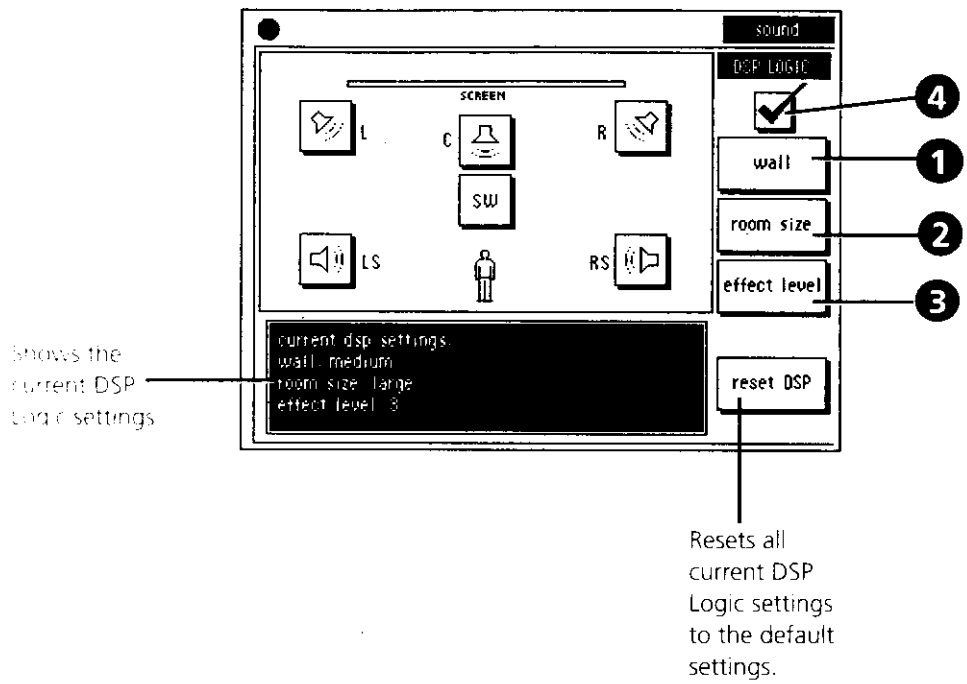
To get to the DSP LOGIC screen, touch these buttons:

1. Touch the WALL button. You can select from 3 different wall textures. SOFT makes the simulated walls absorb more sound (such as in a room full of people), while HARD makes them reflect more sound (like a theater that's nearly empty).

2. Touch the ROOM SIZE button. You can select from 3 different room sizes. The sizes refer to public spaces, so SMALL might be used to simulate a more intimate club, while LARGE could be used to simulate a large theater.

3. Touch the EFFECT LEVEL button. You can change the effect level from 1 (very little effect) to 5 (maximum effect).

4. When you are done, touch the CHECK-MARK to return to the Setup screen.

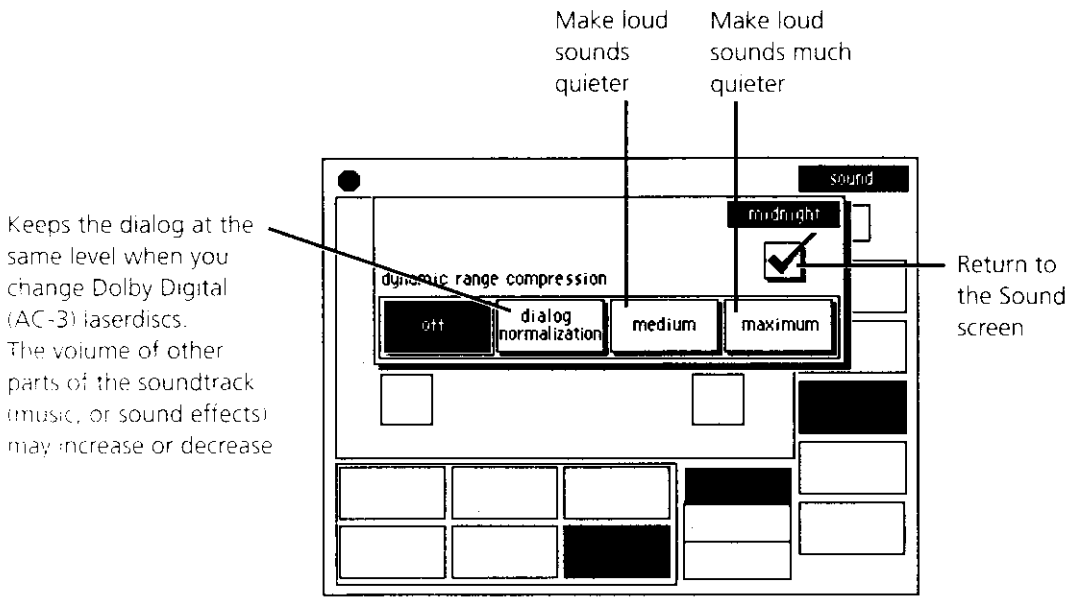


Adjusting for quiet listening

Midnight mode dynamic range compression makes the quiet and loud parts of a movie or music closer to the same level. This lets you turn up the sound so you can hear the quiet parts without being surprised by a loud part.

NOTE: Midnight mode only works with Dolby Digital (AC-3) programs that have been specially encoded.

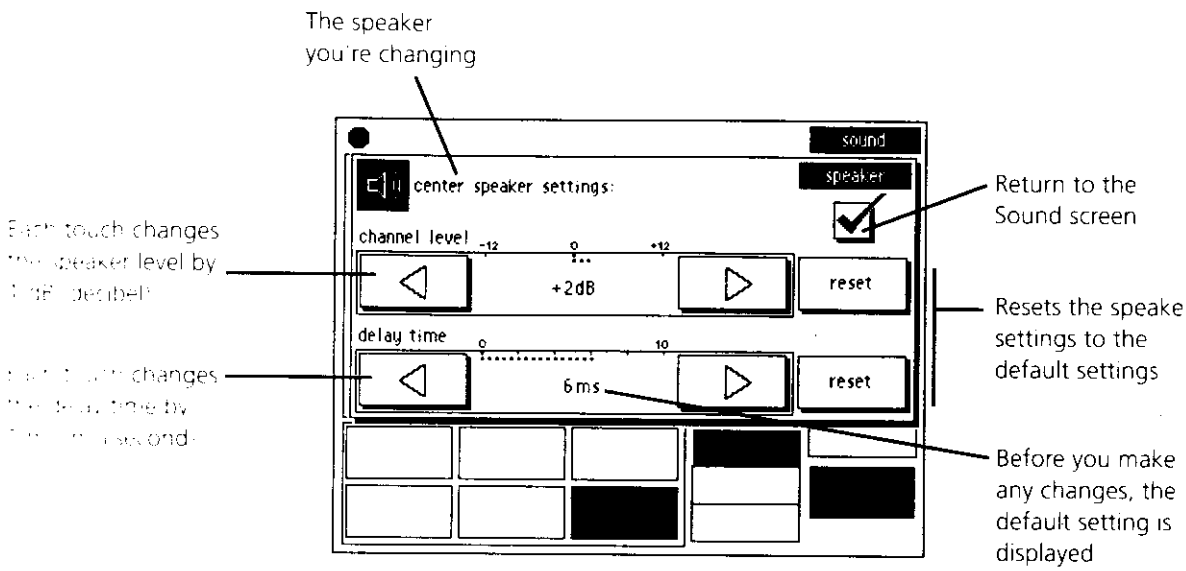
To get to the Midnight screen, touch these butons:



Adjusting speaker delay and level

When you set up your system, you set the default settings for Delay Time by setting the distance between all of your speakers. You can, if you want, change the delay time and level.

To get to the Speaker screen, touch these buttons:



Any changes you make on this screen are erased (and the settings reset to their default settings) when you:

- Change input sources
- Activate the Surround Auto mode
- Put the Controller in Standby Mode (shut-down the system)

You can save changes in speaker level and delay time as part of a System Preset.

For normal use we suggest that you allow the Stage 3 Controller to select the optimum input type for you using the system's default settings.

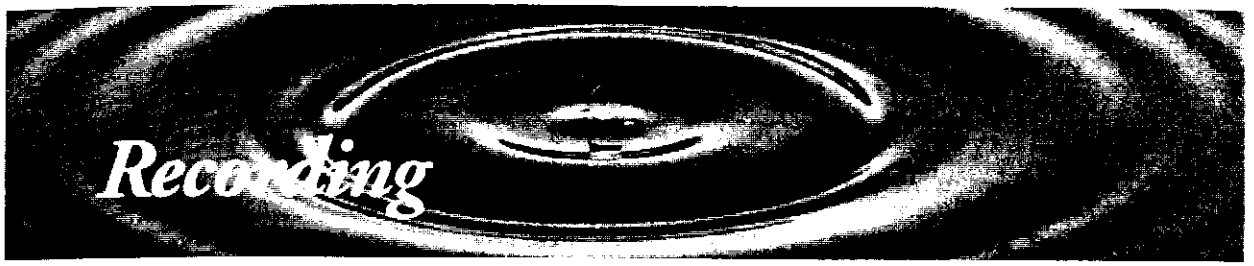
If you are an expert user and would like to make input type changes the following input types are available, depending on the connections made to your source components:

1. Make sure you have turned off Surround Auto (see page 44).
2. If you are not on the Input Type screen, touch these buttons:

3. Depending on how you have connected your components, select from the following input types:
   - RF (for laserdisc players with Dolby Digital [AC-3] RF outputs)
   - Digital Coaxial (for CD players, laserdisc players, mini disc players and satellite receivers with coaxial digital outputs)
   - Digital Optical (for CD players, laserdisc players, mini disc players and satellite receivers with TOS-link optical digital outputs)
   - Analog (for all components that have standard RCA-type analog outputs).
4. Touch the CHECK-MARK to return to the Sound screen.

About Digital Recording

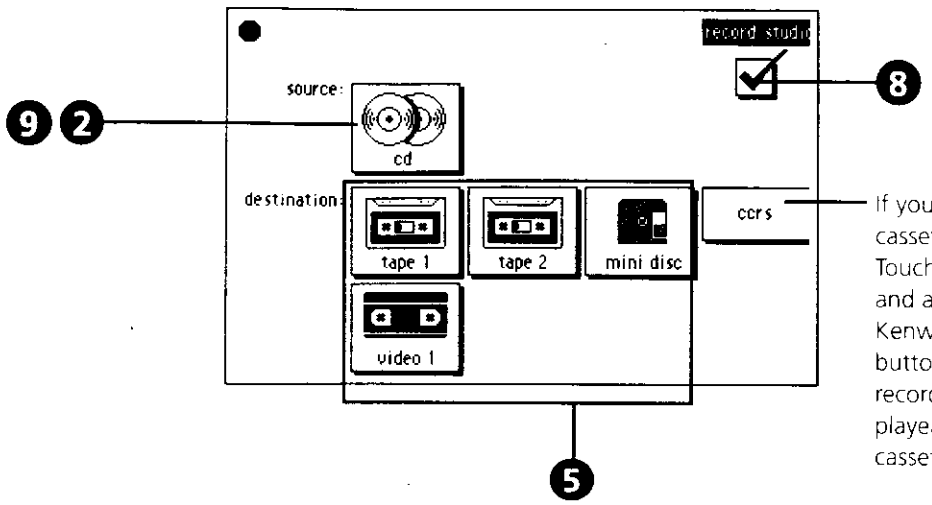
If you have activated the Digital Coaxial or Optical Input for a component, it cannot be used as a source for recording (except to make a digital recording onto a mini disc).



The Recording Studio function allows you to select a source component to record from, and a destination component to record onto, and lets you control them both from the TouchPanel.

General instructions for the Recording Studio

1. To activate the Record Studio, press the RECORD button in the lower right corner of almost any TouchPanel screen. The component you're listening to becomes the source component for the recording. The TouchPanel then displays the Record Studio screen.



If you have a Kenwood cassette deck with One-Touch Recording (CCRS) and a compatible SL16 Kenwood CD player, this button will begin automatic recording from the CD player to the tape 1 cassette deck

2. Touch the SOURCE COMPONENT icon on the Record Studio screen.

3. Prepare the source for recording by cueing up the selection you wish to record (the procedure for this will depend upon the specific component you have).

4. Touch the RECORD icon in the lower right corner of the source component's screen to return to the Record Studio screen.

5. Select the component you want to record onto by touching its destination icon.

6. Prepare the recorder for recording (set Dolby Noise Reduction, cue-up the tape, and so on)

7. Once the recorder is set up, put it into the RECORD mode (the procedure for this will depend upon the specific component you have).

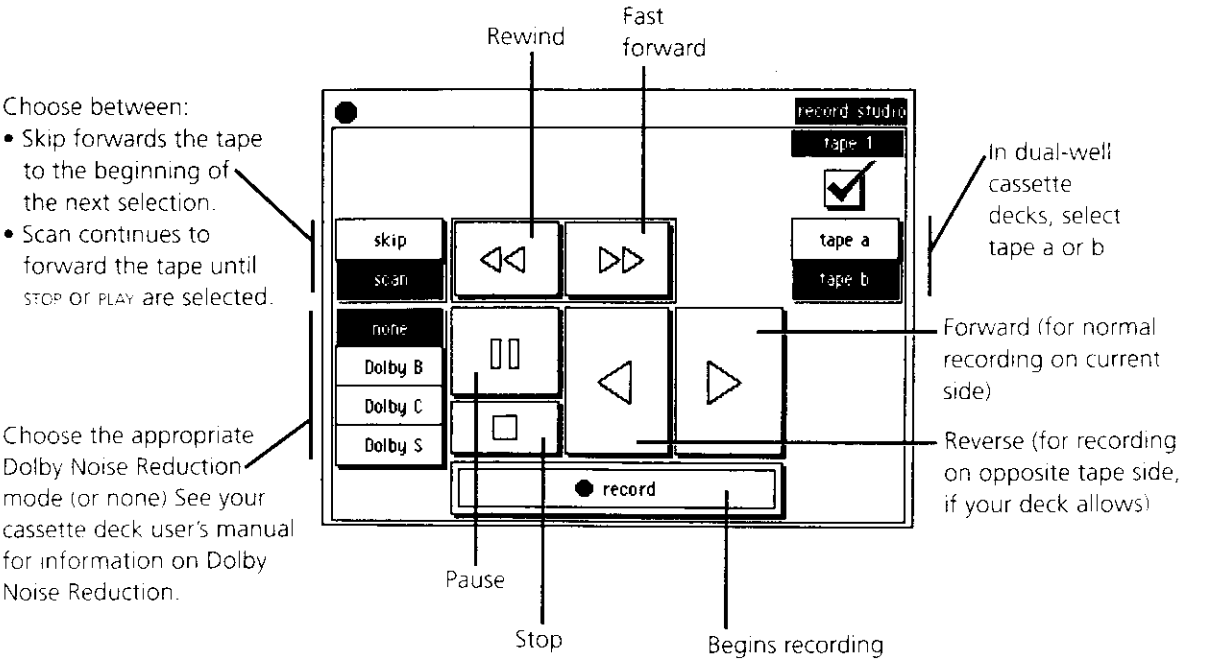
8. Touch the CHECK-MARK key on the component's control screen to return to the Record Studio screen.

9. Touch the SOURCE COMPONENT icon.

10. Put the Source Component into the PLAY mode.

About the cassette deck recording controls

You can only record from a source component that is connected to the Stage 3 Controller's analog inputs. (See 'Selecting the audio input type' on page 45.)



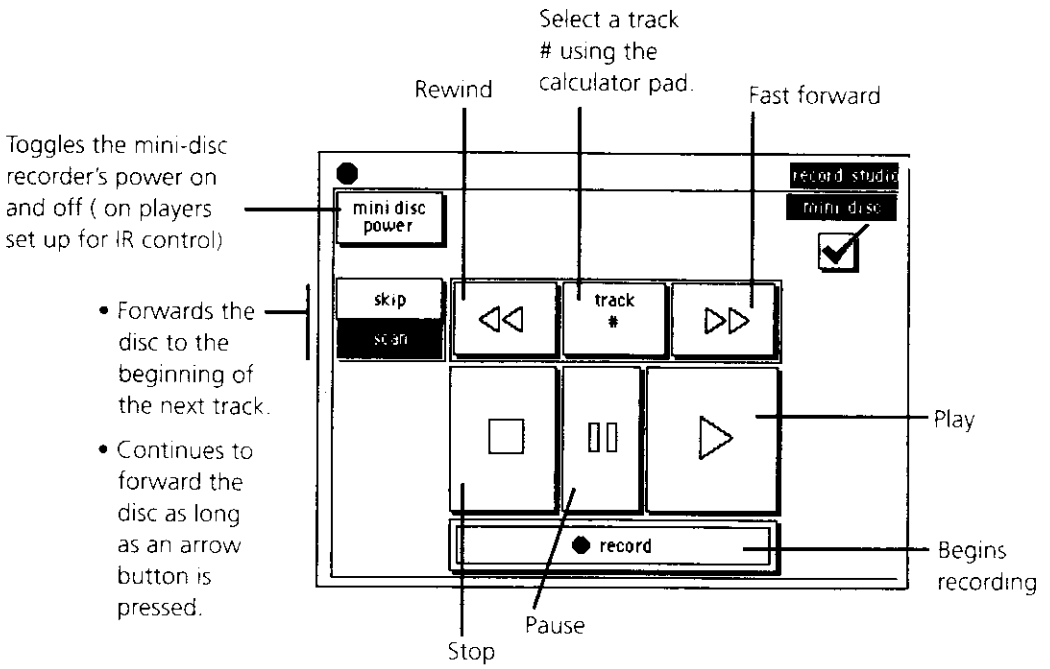
If you have a Kenwood SL16 cassette deck

Kenwood SL16 cassette decks send information back to the TouchPanel. This means you'll see more information displayed if you're using one of these decks:

- The TouchPanel's STOP, PAUSE, PLAY, FAST FORWARD and REVERSE (skip and normal mode) buttons will remain darkened when they're in use (instead of just momentarily turning dark), letting you know which mode is currently active.

About the Mini-Disc recording controls

If the source is connected to the Stage 3 Controller's digital inputs, you can record using the mini-disc recorder's digital inputs. If the source is connected to the Stage 3 Controller's analog inputs, you can record using the mini-disc recorder's analog inputs.



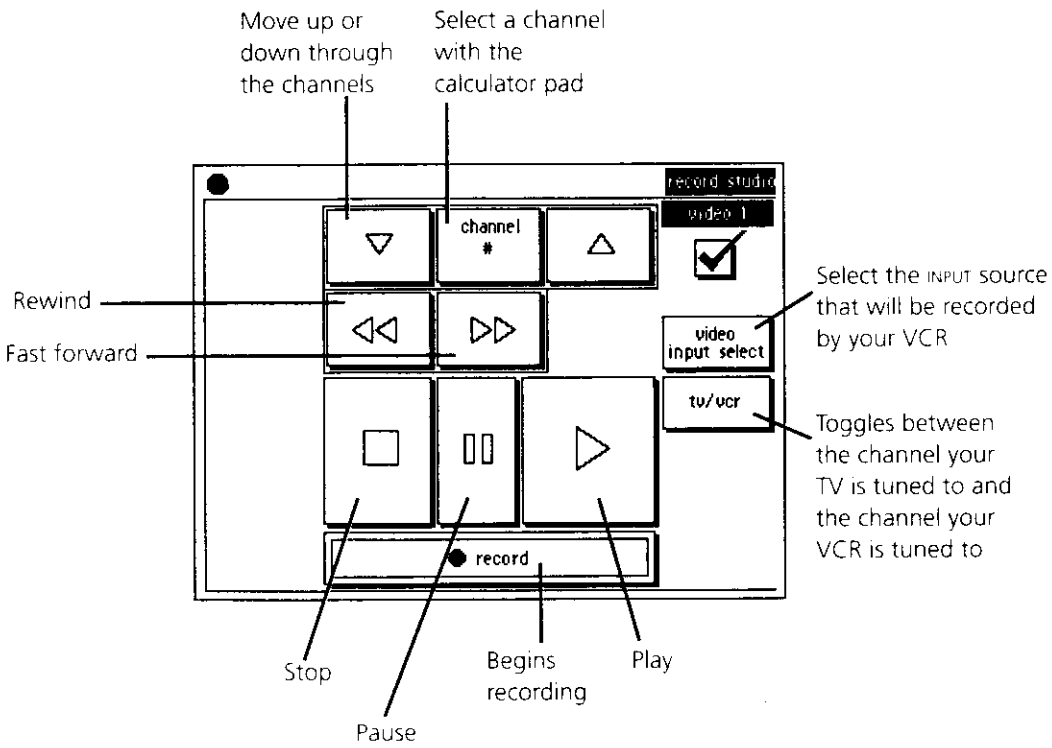
If you have a Kenwood SL16 mini-disc player

Kenwood SL16 mini-disc players send information back to the TouchPanel. This means you'll see more information displayed if you're using one of these players.

- The TouchPanel's TRACK button will display the currently playing track number.
- The TouchPanel's STOP, PAUSE, PLAY, FAST FORWARD and REVERSE (SKIP and NORMAL mode) buttons will remain darkened when they're in use (instead of just momentarily turning dark), letting you know which mode is currently active.

About the VCR recording controls

You can record from any source connected to the Stage 3 Controller's analog inputs, or from the VCR's built-in tuner, or from any video components connected directly to the VCR itself (not through the Stage 3 Controller). Two video inputs with record capability are available on the Stage 3 Controller. If both are set-up, each would have its own button on the Recording Studio menu. (See 'Selecting the audio input type' on page 45)



System presets are a powerful part of the Stage 3 Controller system. Although a System Preset is similar to a radio preset that recalls a single radio station, a System Preset can recall several settings at once, or can even reconfigure your entire system. For example, family members can adjust the system to their taste, save the settings as a preset, and then later restore the settings by touching one button.

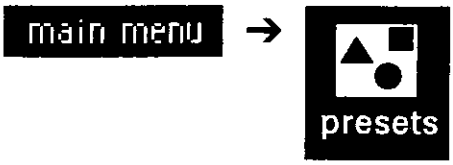
You can create and store up to 6 different System Presets.

You can use a Preset to carry out several commands to prepare for a particular listening or viewing experience. A single System Preset can perform all of the following tasks:

- Turn the Stage 3 Controller's power on
- Change the input type
- Change the volume of each speaker
- Change the delay time of each speaker
- Change all of the DSP Logic settings
- Change the Midnight Mode's dynamic range compression settings
- Activate any of the Surround modes (stereo, Dolby Surround Pro Logic, and so on)
- Activate THX Cinema or DSP Logic processing
- Change the bass and treble settings
- Select the Source Input
- If the source component is a VCR, laserdisc player, CD player, cassette deck or MD recorder, start the Play mode
- If the source is tuner, change the radio station being received.

The Stage 3 Controller stores all of these settings in memory. When you activate that preset, the controller restores all of these settings. You can create another preset with different settings simply by changing the settings and memorizing another preset.

1. To get to the System Presets screen, touch these buttons:



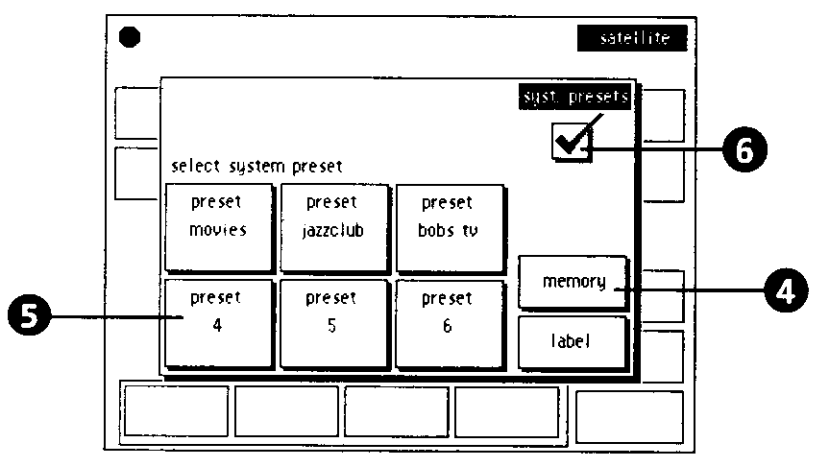
2. Select a source component from the Main Menu. If you select video, laserdisc, CD, tape or MD, it will automatically be put into play when the preset is activated. If you select tuner, the station playing when you memorize the preset will be selected when the preset is activated (even if the station is not a preset).

3. Go to the Sound screen and make any changes you wish to save in the preset (for example, treble and bass adjustments, speaker level adjustments, or selecting a surround sound mode such as Dolby Pro Logic).

4. Touch the MEMORY button, the Stage 3 Controller memorizes the source component and sound settings.

5. Touch a SYSTEM PRESET button to save the preset. If this preset was already programmed, the old preset information will be replaced with your new instructions.

6. Touch the CHECK-MARK to return to the Sound screen.



Playing a system preset

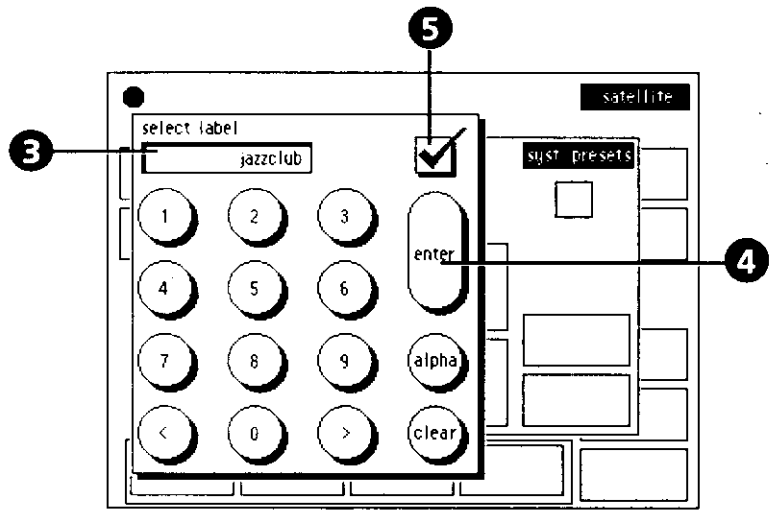
You can play a system preset in two different ways:

- Touch the PRESETS MENU button and then touch a PRESET button from the Preset Screen.
- Play the preset automatically by setting a preset alarm (see the chapter 'Setting the Alarm').

NOTE: If you touch a PRESET button after it has been activated, if the active source component is a VCR, laserdisc, CD, tape or MD, it will be put into the Pause mode.

Labeling a system preset

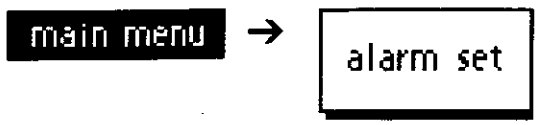
1. On the System Preset screen, touch the LABEL button.
2. Touch the system preset you would like to label. The TouchPanel displays the Calculator Pad.
3. Enter a number or name for your system preset with the Calculator Pad. Any combination of letters and numbers is fine, up to 8 characters
4. Touch the ENTER button to accept your label entry.
5. Touch the CHECK-MARK to apply the label and return to the Preset screen.



Setting a system preset alarm

You can have the TouchPanel automatically activate a system preset at a specific time every day.

1. To get to the the Alarm Set screen, touch these buttons:

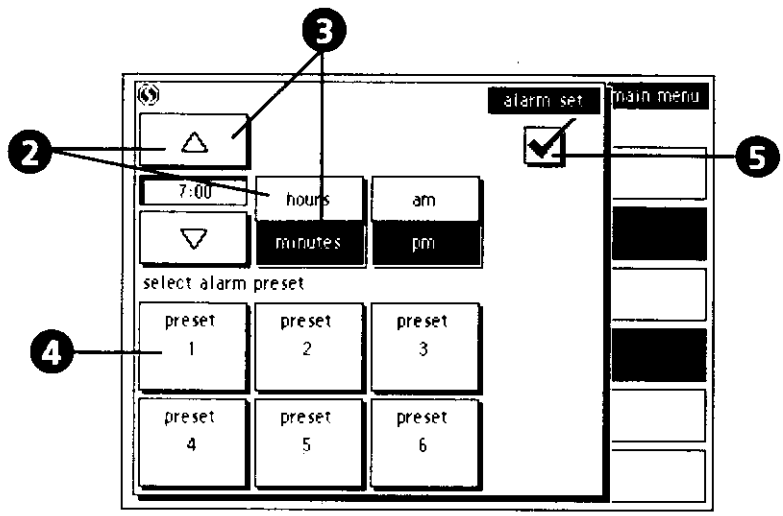


2. To set the hour, touch the HOUR button, then use the ARROW buttons to increase or decrease the time.

3. To set the minutes, touch the MINUTES button, then use the arrow buttons to increase or decrease the time.

4. Select a SYSTEM PRESET button. The System Preset will be activated at the time you set.

5. Touch the CHECK-MARK to exit.



Controlling accessories

The Stage 3 Controller can activate up to 6 non-audio accessories that can be set us using custom installation equipment capable of learning IR codes. The learned IR codes allow the accessory to be activated using the TouchPanel.

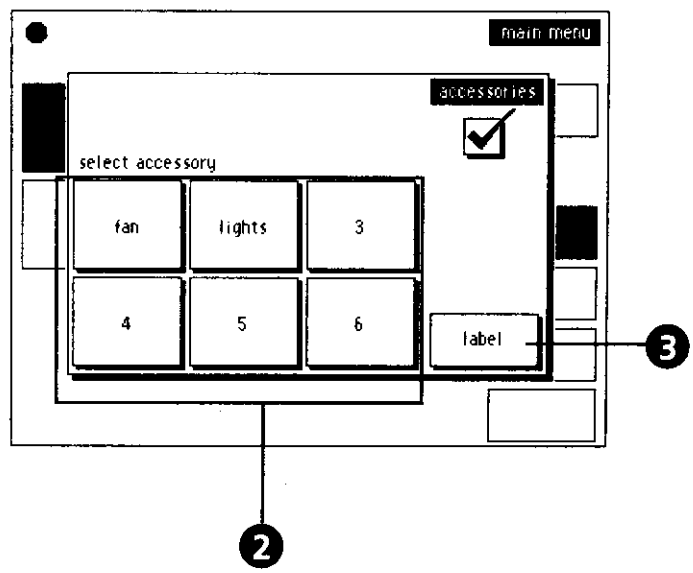
To program the TouchPanel's accessory IR code into the learning accessory device, use the Stage 3 Controller's IR repeater and follow the instructions for the accessory device. (Touching the ACCESSORIES button sends its code out through the IR repeater.)

❶ To get to the Accessories screen, touch these buttons:

main menu → accessories

❷ Touch one of the ACCESSORY buttons to activate an accessory.

❸ Touch the LABEL button to label an accessory using the Calculator Pad.



Setting the analog input level

Setting the proper input level eliminates distortion that occurs if an audio component's output level is too high. When this happens, the Input Overload Indicator on the Controller will flash red continually or remain red for 1 second or longer, letting you know you should decrease the input level for this component. (Occasional brief flashing red of the input overload indicator is OK).

If you're listening to a component and see that the Input Overload Indicator is flashing red too much or remaining lit, takes these steps:

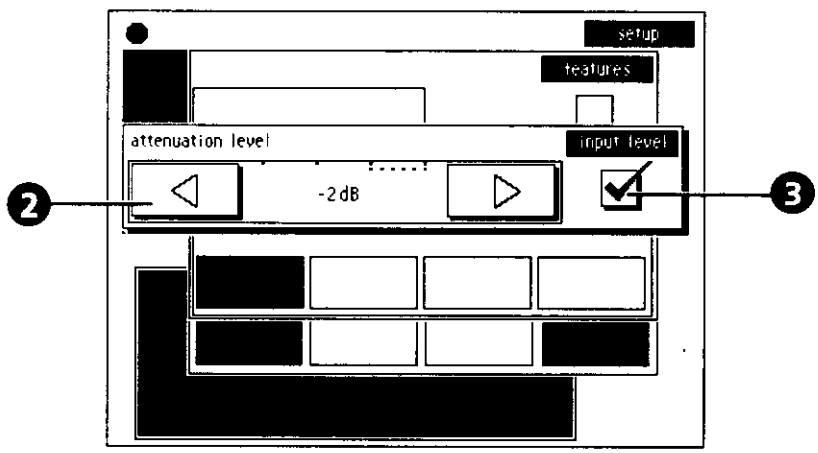
1. To get to the Input Level screen, touch these buttons:

main menu → setup → component → component icon

2. Touch the INCREASE ARROW button. Each touch changes the audio level by 2 dB. Adjust the input to the highest level you can without causing the Input Overload Indicator to flash red frequently or remain red for 1 second or longer.

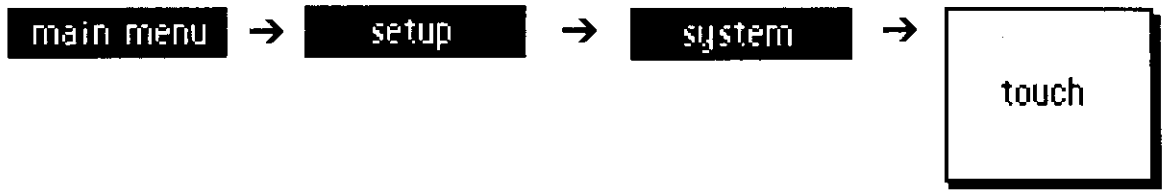
3. Touch the CHECK-MARK to return to the Features screen.

4. Repeat this process for any component with an audio output that is too high.



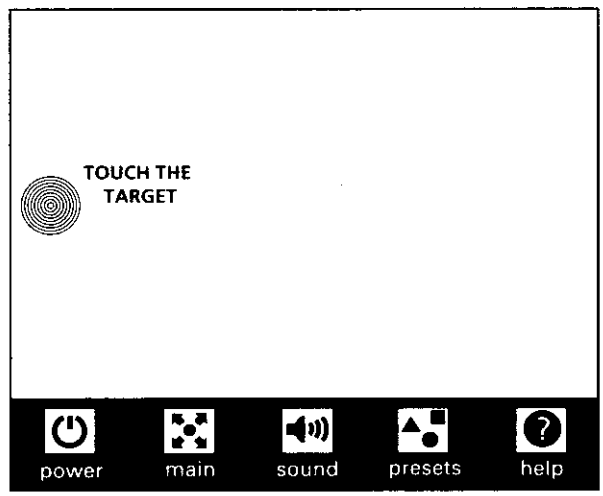
Re-calibrating the TouchPanel

1. If you you need to re-calibrate the TouchPanel screen, touch the following buttons:



2. Touch YES on the Confirm screen. The TouchPanel begins the calibration process.

3. Touch the center of each target as it moves around the screen. You will touch the target 4 times. If you're not satisfied with the result, or you missed one of the targets, you can always start over from the touch screen button.



TouchPanel display fades-out, or doesn't light-up

- Recharge the TouchPanel battery or replace it with a fully charged one.
- Check the TouchPanel *contrast* setting.

TouchPanel doesn't respond to touch commands, response is erratic, or display is erroneous

- Check that the TouchPanel is close enough to the Controller (maximum range is approximately 100 feet).
- Recalibrate the TouchPanel screen (see *Setting up your Stage 3 Controller*).
- Recharge the TouchPanel battery or replace it with a fully charged one.
- Reset the TouchPanel's microprocessor by pressing the RESET button on its rear panel with a pointed object while holding down the MUTE button.

Controller or other components don't respond to TouchPanel commands, or response is erratic

- Check that the TouchPanel is close enough to the Controller (maximum range is approximately 100 feet).
- Check that the setup codes for Kenwood IR-controlled and non-Kenwood components are correct (see *Setting up your Stage 3 Controller*).
- Check that the System Control cables are properly connected to Kenwood SL16-controllable components.
- Check that the IR repeater is properly connected, and is placed in a location that covers all the components in the system.
- Change the RF communications channel (see *Setting up your Stage 3 Controller*).
- Reset the TouchPanel's microprocessor by pressing the RESET button on its rear panel with a pointed object while holding-down the MUTE button.
- Reset the Controller's microprocessor by unplugging the power cord from the AC outlet and plugging it back in with the main power switch depressed and while holding-down the REMOTE POWER button. (**NOTE:** Resetting the Controller's

microprocessor clears all of the stored defaults and setup data, returning the Controller and TouchPanel to their factory-shipped condition. You will again have to perform all of the system, component, speaker and DSP Logic setup procedures as explained in *Setting up your Stage 3 Controller*).

- Because there are so many different manufacturers and IR-controlled products on the market, the TouchPanel's control buttons may not exactly match or be able to control the functions of all components.

Kenwood 100 disc CD changer won't respond to TouchPanel commands

- Check that the CD changer's power cord is plugged onto one of the controller's switched accessory outlets. Then turn the controller OFF and ON again.

A broken line shows through the RF Communications Icon

- Check that the Controller's MAIN POWER switch is turned ON.
- Check that the TouchPanel is close enough to the Controller (maximum range is approximately 100 feet).
- Change the RF communications channel (see *Setting up your Stage 3 Controller*).

A component's icon doesn't appear on the Main Menu, even though you've connected it to your system

- Set up the component in the Setup (Component) Menu (see *Setting up your Stage 3 Controller*).

The controls for a component do not appear on the TouchPanel when you select that component's icon

- Set up the component in the Setup (Component) menu, making sure to select the proper system control mode for that component (see *Setting up your Stage 3 Controller*).

No sound

- Check that the volume is set at a proper level.
- Check that the mute is OFF.
- Check that the proper input has been selected.
- Check that the input cable(s) from the source component is connected properly.
- Check that the proper Input Type has been selected in the Sound Menu.
- Check that all of the speakers in the system have been activated in the Setup (Sound) Menu. (The Setup Sound screen will show a darkened icon for each speaker that has been properly set up.)

- Check that the individual speaker levels are set properly in the Sound Menu.
- Check that the Tape 2 Monitor has not been activated. (The Tape 2 Monitor icon on the Main Menu will be darkened if the circuit has been activated.)

No sound from one or more of the speakers, or the sound is abnormally low

- Check that all cables are connected properly.
- Check that all of the speakers in the system have been set up properly in the Setup (Sound) Menu (the Setup Sound screen will show a darkened icon for each speaker that has been activated).
- Check that the individual speaker levels are set properly in the Sound Menu.

No sound from the surround speakers and/or center speaker

- Check that either Dolby 3 Stereo, Dolby Pro Logic or Dolby Digital (AC-3) has been selected in the Sound Menu.

Sound only from center speaker when Dolby Pro Logic is selected

- Check that the program is in stereo (mono programs will play only through the center speaker in the Dolby Pro Logic mode).

No sound from the secondary speakers

- Check that the Remote Speaker Volume is properly set.
- Check that the source is connected via the analog inputs.
- Check that the analog input is selected on the Input Type selector.

No sound from certain laserdiscs

- Check that the disc contains a digital soundtrack (the disc's cover will bear a 'digital sound' logo). Some older laserdiscs contain only analog soundtracks. If the disc does not have a digital soundtrack, use the Input Type selector to change the input type to Analog.

No sound output to a video or audio tape deck during recording

- Check that the audio cables have been properly connected.
- Check that the source's Analog Input has been selected in the Sound Menu (digital inputs cannot be recorded from).

No video signal from the source component to the TV or recording VCR

- Check that the video source and TV are connected via the same type of connectors. (S-Video input signals are not sent out via the composite video output connections, and composite video input signals are not sent out via the S-Video output connections).

A hum when you select the PHONO input

- Check that the audio cables are plugged securely into the Phono jacks.
- Check that the turntable is grounded on the rear panel. The ground wire should be connected to the screw labeled 'Signal Gnd'.

With a Dolby Digital (AC-3) program, the loud sounds aren't very loud, and the quiet sounds aren't very quiet

- Check that the Midnight Dynamic Range Compression mode hasn't been activated.

Distortion in subwoofer

- Set Subwoofer Bass Limiter (see *Setting up your KC-Z1 Controller*).

The Bass Limiter is set at -24 and there is still audible distress from the subwoofer when listening at your usual volume levels

- If you're using a powered subwoofer, lower the volume on the subwoofer (or on the subwoofer power amplifier) until the distress disappears.
- Use the TouchPanel's Setup Sound menu and reduce the subwoofer's default channel level until the distress disappears.
- Reduce the TouchPanel Volume Control setting until the distress disappears (this will limit how loud you can listen to your system).
- Purchase a higher-quality subwoofer.

The ON/STANDBY indicator flashes red

- Turn the MAIN POWER switch OFF and ON again.
- Reset the Controller's microprocessor by unplugging the power cord from the AC outlet and plugging it back in with the MAIN POWER switch depressed and while holding-down the REMOTE POWER button. (NOTE: Resetting the Controller's microprocessor clears all of the stored defaults and setup data, returning the Controller and TouchPanel to their factory-shipped condition. You will have to reset the system, component, speaker and DSP Logic settings. See *Setting up your KC-Z1 Controller.*

The Ref/Peak Level indicator flashes red continually, or stays red for more than 1 second

- Lower the analog input level for the source component you're listening to. (see 'Setting the analog input level' on page 54)

The Ref/Peak Level indicator flashes green continually, or stays green for more than 1 second

- Do nothing. If the Ref/Peak Level flashes green, the source component output levels are normal, and there is no problem.

You can't receive radio stations

- Check that the station is tuned in properly.
- Check that the antenna is connected properly.

You can't receive a preset station by pressing the corresponding preset button

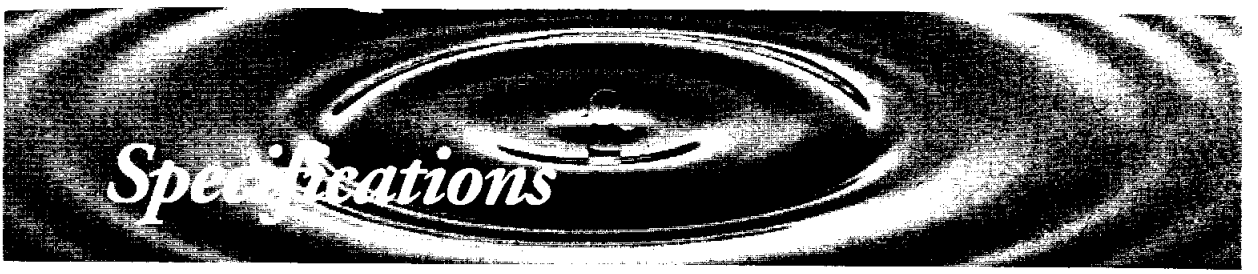
- Check that the preset station is a receivable frequency.
- Check that the preset memory hasn't been cleared because the power cord was unplugged a long time. If so, preset the station again.

Interference with reception

- Check for interference from electrical appliances by turning them OFF. If the interference goes away, leave the appliances OFF.
- Check for interference from the TV set by turning it OFF. If the interference goes away, leave the TV OFF, or move the antenna away from the TV.
- Check for interference from automobiles by moving the antenna as far away from roads as possible. If the interference goes away, permanently install the antenna away from roads.
- Check if the TouchPanel is set on top of the Controller or close to the antennas, and move it away (the fluorescent screen in the TouchPanel can interfere with AM reception).

You've forgotten your 4-digit security code

- Reset the TouchPanel's microprocessor by pressing the RESET button on its rear panel with a pointed object while holding-down the MUTE button.



Preamp section

Total harmonic distortion:

All channels except for Subwoofer channel

	0.003%	(1 kHz, 1.0 volt)
	0.003%	(20 Hz to 20 kHz, 1.0 volt)
Subwoofer Channel	0.05%	(31.5 Hz, 1.0 volt)

Frequency response	
All inputs except for phono input	6 Hz to 100 kHz, +0 dB, -3 dB
Phono RIAA response	20 Hz to 20 kHz, ±0.5 dB
Signal-to-noise ratio (IHF 1978):	
All inputs except for phono input	101 dB
Phono input (MM)	87 dB
Input Sensitivity/impedance	
All inputs except for phono input	200 mV/47 k-ohms
Phono input (MM)	2.5 mV/47 k-ohms
Tone Control	
Bass	±10 dB (100 Hz)
Treble	±10 dB (10 kHz)

Output level/impedance

Surround: All channels except for Subwoofer channel

1.0 volt / 180 ohms (1 kHz, 0.003% THD)

Surround: Subwoofer channel — 1.0 volt / 180 ohms (31.5 Hz, 0.003% THD)

Video section

Input level/impedance	
Composite Signal:	1.0 volt peak-to-peak / 75 Ω
S-video: Luminance signal	1.0 volt peak-to-peak / 75 Ω
S-video: Chrominance signal	0.286 volt peak-to-peak /75 Ω
Output level/impedance	
Composite Signal:	1.0 volt peak-to-peak / 75 Ω
S-video: Luminance signal	1.0 volt peak-to-peak / 75 Ω
S-video: Chrominance signal	0.286 volt peak-to-peak /75 Ω

Digital section

Sampling frequency	
32 kHz, 44.1 kHz, 48 kHz	
Input level/impedance	
All inputs: Optical	-15 dBm to -21 dBm, 660 nm ± 30 nm
All inputs: Coaxial	0.5 volt peak-to-peak / 75 Ω
Output level/impedance	
All inputs: Optical	-15 dBm to -21 dBm, 660 nm ± 30 nm
All inputs: Coaxial	0.5 volt peak-to-peak / 75 Ω

FM tuner section

Tuning frequency range	87.5 to 108 MHz
Useable sensitivity (Mono)	1.2 µV (75 Ω) / 13.2 dBf (75 kHz deviation, s/n 30 dB)
50 dB quieting sensitivity (Stereo)	32 µV (75 Ω) / 41.2 dBf (75 kHz deviation)
Total harmonic distortion (1 kHz)	
Mono	0.6% (65.2 dBf input)
Stereo	0.7% (65.2 dBf input)
Signal-to-noise ratio (1 kHz, 75 kHz DEV.)	
Mono	75 dB (65.2 dBf input)
Stereo	68 dB (65.2 dBf input)
Selectivity (± 400 kHz)	50 dB
Stereo Separation (1 kHz)	40 dB
Frequency response	30 Hz to 15 kHz, +0.5 dB, -3.0 dB

AM tuner section

Tuning frequency range	530 Hz to 1700 kHz
Useable sensitivity (30% modulation, s/n 20 dB)	16 µV / (500 µV/m)
Total harmonic distortion	0.7%
Signal-to-noise ratio (30% modulation, 1 mV input)	45 dB
Selectivity	30 dB

General

Power consumption	90 W
AC outlet (switched)	3 (total 200 W max.)
Dimensions:	
Width	17-5/16" (440 mm)
Height	6-1/4" (159 mm)
Depth	17-5/16" (440 mm) without TouchPanel
Weight (net)	26.9 lb (12.2 kg)

Kenwood continually tries to improve its products, so specifications may change without notice.