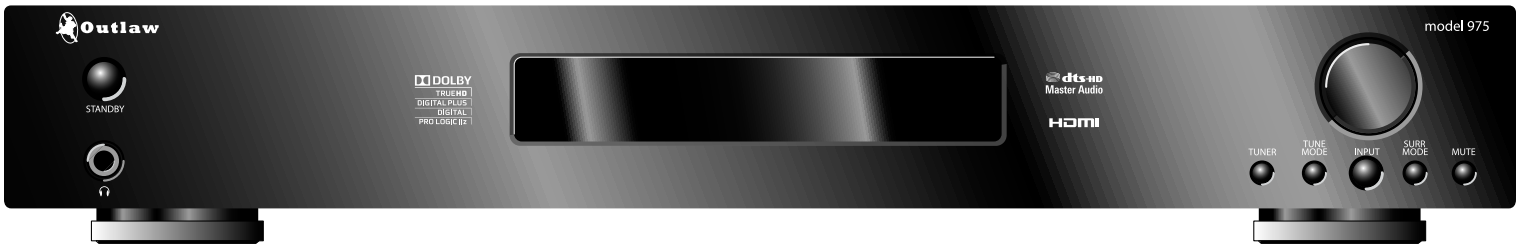
Version 2.0

Model 975
7.1 Channel
Preamp/Processor

Owner's Manual



Outlaw®

Please Read First

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: *To reduce the risk of electric shock, do not remove the cover. No user serviceable parts inside. Refer to qualified personnel.*

WARNING: *To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.*

The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: Important Safeguards

- **Read Instructions** All the safety and operating instructions should be read before the unit is operated.
- **Retain Instructions** The safety and operating instructions should be retained for future reference.
- **Heed Warnings** All warnings on the unit and in the operating instructions should be adhered to.
- **Follow Instructions** All operating and use instructions should be followed.
- **Cleaning** Unplug the unit from the wall outlet before cleaning. The unit should be cleaned only as recommended by the manufacturer.
- **Attachments** Do not use attachments not recommended by the unit manufacturer as they may cause hazards.
- **Water and Moisture** Do not use the unit near water–for example, near a bath tub, wash bowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool.
- **Accessories** Do not place the unit on an unstable cart, stand, tripod, bracket, or table. The unit may fall, causing serious injury to a child or adult, and serious damage to the unit. Any mounting of the unit should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.
- **Ventilation** Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the unit and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the unit on a bed, sofa, rug, or other similar surface. The unit should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided. There should be free space of at least 16 cm (6 in.) and an opening behind the unit.
- **Power Sources** The unit should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your unit dealer or local power company.
- **Grounding or Polarization** The unit may be equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact a licensed electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
- **Power-Cord Protection** Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords where they enter a plug, or a convenience receptacle, and the point where they exit from the unit.
- **Outdoor Antenna Grounding** If an outside antenna or cable system is connected to the unit, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna-discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.
- **Lightning** For added protection for the unit during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the unit due to lightning and power-line surges.
- **Power Lines** An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.
- **Overloading** Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.
- **Object and Liquid Entry** Never push objects of any kind into the unit through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the unit.
- **Servicing** Do not attempt to service the unit yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to Outlaw Audio.
- **Damage Requiring Service** Unplug the unit from the wall outlet and refer servicing to qualified service personnel under the following conditions:
  - When the power-supply cord or plug is damaged,
  - If liquid has been spilled, or objects have fallen into the unit,
  - If the unit has been exposed to rain or water,
  - If the unit does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the unit to its normal operation,
  - If the Model 975 has been dropped or damaged in any way, the unit should be examined by qualified service personnel.
  - When the unit exhibits a distinct change in performance–this indicates a need for service.
- **Wall or Ceiling Mounting** The unit should be mounted to a wall or ceiling only as recommended by the manufacturer.
- **Heat** The unit should be situated away from heat sources such as radiators, heat registers, stoves, or other units (including amplifiers) that produce heat.

IMPORTANT SAFETY NOTE *Before connecting a new component such as the Model 975 to your audio or home theater system it is always good practice to make certain that all components are turned off, and preferably unplugged from their AC power source. Many modern electronics products feature automatic turn-on circuits that may be activated during an installation, causing the potential for damage to electronic components and/or speakers. Such damage is not covered by product warranties and Outlaw Audio specifically disclaims responsibility for any such damage.*

Precautions

Verify The Line Voltage

Your new Model 975 has been factory configured for 120 (+/- 3%) volt AC lines. Connecting the unit to a line voltage other than that for which it is intended can create a safety and fire hazard, and may damage the Model 975. If you have any questions about the voltage requirements for your specific model, or about the line voltage in your area, contact Outlaw Audio before plugging the unit into a wall outlet.

It is always a good idea to avoid using any audio or video equipment on the same AC circuit as equipment with motors, such as air conditioners or refrigerators. This will lessen the possibility of power variation and electrical start-up noise affecting your sound system.

Power Cord

The removable power cord that is shipped with the Model 975 is specifically designed to be used with this product. DO NOT use any other power cord, as that may reduce the unit's performance and possibly create a safety hazard. In particular, DO NOT use standard IEC type power cords designed for computers and other business equipment products, as they have a three prong plug that is not meant for use with the 975. Should the power cord require replacement, use an identical type, or contact Outlaw Audio for service.

Handle the AC Power Cord Gently

When disconnecting the power cord from an AC outlet, always pull the plug, never pull the cord. If you do not intend to use the Model 975 for any considerable length of time, disconnect the plug from the AC outlet. If the power cord is replaced, make certain that it is of similar gauge. As with all electrical devices, do not run power cords under rugs or carpets or place heavy objects on them. Damaged power cords should be replaced immediately with cords meeting factory specifications.

Wiring

Cables that are run inside of walls should have the appropriate markings to indicate compliance with, and listing by the UL , CSA or other standards required by the UL, CSA, NEC or your local building code. Questions about cables inside of walls should be referred to a qualified custom installer, or a licensed electrician or low-voltage contractor.

Installation Location

To assure proper operation and to avoid the potential for safety hazards, place the unit on a firm and level surface capable of supporting it's weight. When placing the unit on a shelf, be certain that the shelf and any mounting hardware can support the weight of the unit and any additional items in the equipment rack, or on the shelf.

When positioning the Model 975 in its final location, make certain that it has adequate ventilation on all sides, as well as on the top and bottom. In particular, it is a good idea to provide at least two or three inches of room above the unit for air circulation. DO NOT place CDs, DVDs, videotapes, owner's manuals, or other paper on top of, or beneath, the unit, or in-between multiple amplifiers in a stack. This will block airflow, causing heat build-up, degraded performance, and may create a possible fire hazard.

If the unit is to be enclosed in a cabinet or rack, make certain there is adequate air circulation. Sufficient ventilation should be provided so that hot air may exit, and cool air may enter the cabinet. In some instances, a small cooling fan may be required to insure adequate airflow through the cabinet. If you are in doubt as to the ventilation requirements for your specific installation, please contact us. Also, do not place the Model 975 directly on a carpeted surface, as this will inhibit airflow underneath as well as create a potential fire hazard.

Avoid installation in humid locations, in extremely hot or cold locations, or in areas that are exposed to direct sunlight or space heating equipment.

Do Not Open The Cabinet

There are no user serviceable components inside this product. Opening the cabinet may present a shock hazard, and any modification to the product will void your guarantee. If water or any metal object, such as a paper clip, coin or a staple, accidentally falls inside the unit, disconnect it from the AC power source immediately, and contact Outlaw Audio for further instructions.

Recording Copyright

Recording of copyrighted material for other than personal use is illegal without permission of the copyright holder.

Note to CATV system installer

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC, ANSI/NFPA 70, which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

FCC Information for User

CAUTION: *ANY changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.*

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

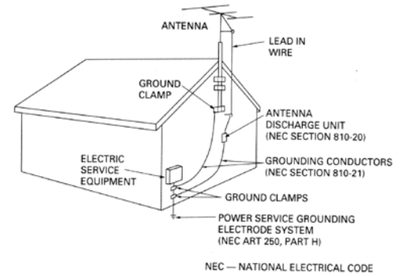
This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Outdoor Antenna Installation

Safe Antenna and Cable Connection



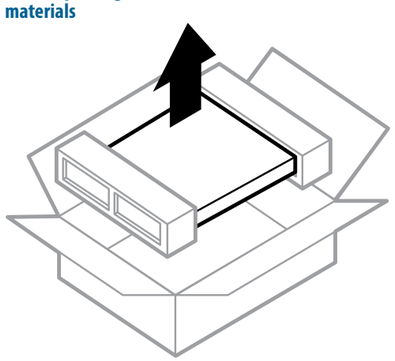
If an outside antenna or cable system is connected to the equipment, be sure the antenna or cable system is grounded so as to provide some protection against built up static charges and voltage surges. Section 810 of the national Electrical Code, ANSI/NFPA 70 (in Canada, part 1 of the Canadian Electrical Code) provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes and requirements for the grounding electrode.

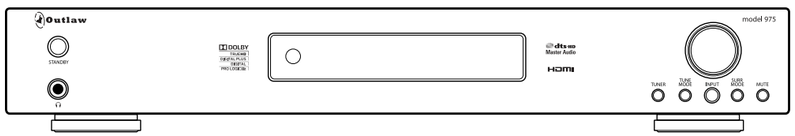
Keep Antenna Clear of High Voltage Power Lines or Circuits

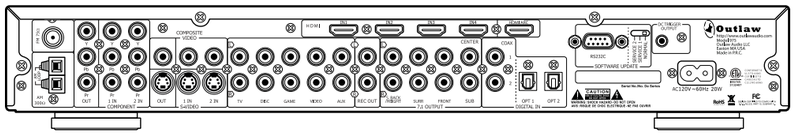
An outside antenna system should be located well away from power lines, electric light or power circuits and where it will never come into contact with these power sources if it should happen to fall. When installing an outside antenna, extreme care should be taken to avoid touching power lines, circuits or other power sources as this could be fatal. Because of the hazards involved, antenna installation should be left to a professional.

Unpacking

Save all packing materials







Your Model 975 comes in a carton and packing materials designed specifically to cushion it from shocks and vibration commonly encountered in shipping. We strongly suggest that you save the carton and packing materials, and use them again if you move or if the unit ever needs to be shipped back to us for any reason.

To minimize the size of the carton in storage, you may wish to flatten it by carefully opening the top and bottom flaps and folding the carton flat. Other cardboard inserts may be stored in the same manner. Packing materials that cannot be collapsed should be saved along with the carton in a plastic bag.

Be careful when lifting and handling the Model 975. The unit itself is not heavy, but the connectors on the rear panel and the controls on the front panel can be damaged by minor impacts.

Record your Model 975's serial number and date of purchase here. The serial number is found on the back panel.

Serial Number

Date of Purchase

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Table of Contents

Model 975 7.1 Channel Preamp/Processor

Thank you for purchasing the Outlaw Audio Model 975. This 7.1 channel preamp/processor is our response to enthusiasts who requested a simpler pre/pro, one with only the functions they really need, such as industry-standard DTS and Dolby surround technologies, HDMI switching, high-quality digital-to-analog conversion, and multiple crossover point settings. This simplicity not only makes the Model 975 compact and affordable, it also makes it easier to use.

Chapter 1 **Contents**

In order to get maximum performance from your Model 975, please take a few minutes to read this manual. It tells you everything you need to know to connect, configure, and use this product. By following the steps we list and explain here, you will get the best possible performance from your speakers, amplifier(s), and subwoofer, as well as the best possible picture and sound from your source components.

If you have any questions about this product, its installation or operation, please contact us via e-mail at **customerservice@outlawaudio.com** or via telephone at **866-OUTLAWS** (688-5297).

IMPORTANT: *The Model 975 is shipped from the factory with the following default settings.*

Output Configuration	7.1
Loudspeaker Size	Small
All Crossovers	80 Hz
Video Output Resolution	720p
Volume	-25dB

After reading the rest of this manual, please refer to pages 26-36 to adjust these settings.

Model 975 Features

Model 975 Front Panel

HDMI connectivity

HDMI™
HIGH-DEFINITION MULTIMEDIA INTERFACE

Analog 2-channel to 5.1 and 7.1 surround sound

DOLBY PRO LOGIC IIz
dts Neo:6
DOLBY PRO LOGIC IIx
DOLBY PRO LOGIC II

Latest 5.1 and 7.1 digital surround formats

DOLBY TRUEHD
dts-HD Master Audio
DOLBY DIGITAL PLUS
dts-HD High Resolution Audio
DOLBY DIGITAL
dts

Your new Outlaw Audio preamp/processor is a high-performance audio device, designed to work with practically any of the wide variety of amplifiers and source devices on the market today. Whether your source is a Blu-ray Disc with a 7.1-channel DTS-HD Master Audio lossless soundtrack or an audiophile CD player or even an old cassette deck, the Model 975's audio processing technology can handle it correctly. The Model 975 features:

A. 4 3D HDMI Inputs
Each input is assignable, providing comprehensive system connectivity.

B. HDMI Output with ARC
Audio Return Channel receives audio signals from a connected TV.

C. 4 Digital Inputs (2 coaxial, 2 optical)
Each input is assignable, providing comprehensive system connectivity.

D. 2 Component Video Inputs
High-bandwidth switching circuitry for maximum picture quality.

E. 2 Composite and 2 S-Video Inputs
High-quality video circuitry for connection to legacy video sources.

F. 5 Analog Audio Inputs
For easy connection to audio devices that do not offer digital output, such as iPod docks and phono preamps.

G. High-Definition Video Upscaling
Video coming in through HDMI inputs can be upscaled from 480p to 720p, 1080i or 1080p, or passed through at its native resolution.

H. High-performance AM/FM/FM Stereo tuner
Includes memories for 15 FM and 15 AM presets.

I. Dolby TrueHD, Dolby Digital Plus, and Dolby Digital decoding*; DTS-HD Master Audio, DTS-HD High-Resolution Audio and DTS decoding**
Decodes all current 5.1 and 7.1 surround-sound formats.

J. Dolby Pro Logic IIz, Dolby Pro Logic IIx, and Dolby Pro Logic II* and DTS NEO:6 processing**
Converts two-channel audio from music and movies into realistic 5.1 or 7.1 surround sound

K. 192 kHz 24-bit DAC's for all channels
For high performance audio quality.

L. On Screen Display (via HDMI only)
Provides access to all setup and adjustment menus.

M. Front height-channel outputs
Add new realism to movie soundtracks with Dolby Pro Logic IIz processing.

N. Separately adjustable subwoofer crossover points
For the best possible bass reproduction, different crossover points can be set for front left/right, center, surround, and surround back channels.

O. Programmable universal remote control
Controls the Model 975 as well as a TV and as many as six other components

P. Low-voltage trigger output
Provides automatic turn on/off of compatible power amplifiers or relay-controlled products such as projection screens, blinds and lighting systems.

Accessories

Model 975 accessories

After you unpack the Model 975, please check to make sure the following accessories are in the box:

- Owner's Manual
- Universal Remote Control with Batteries
- Compact Remote Control with Batteries
- AC Power Cord
- FM Antenna adapter
- FM Antenna
- AM Loop Antenna

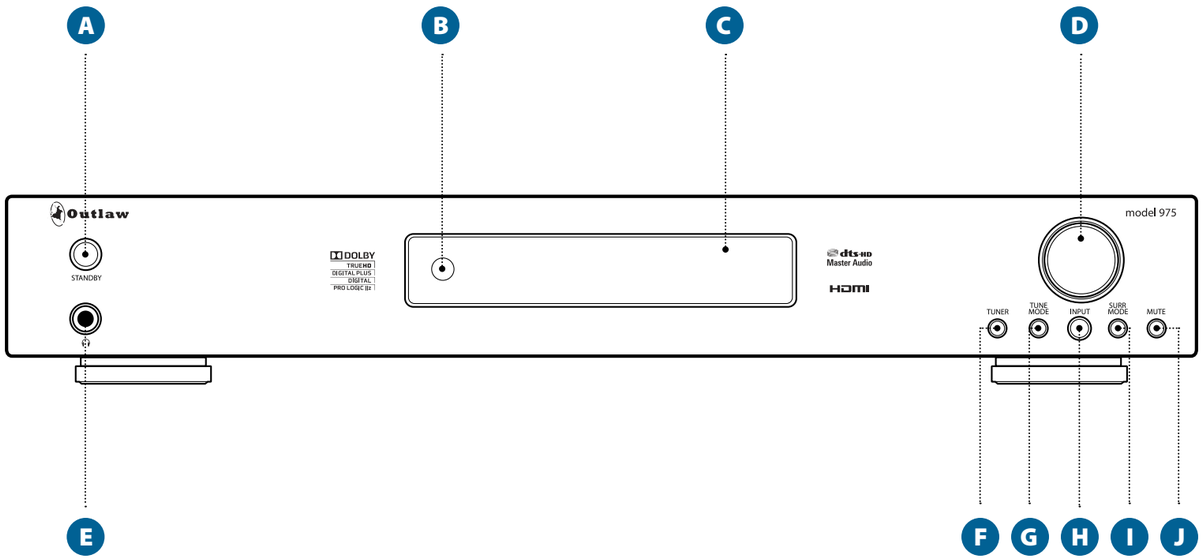
If any of the above is missing from your shipment, please contact Outlaw Audio immediately.

** Manufactured under license from Dolby Laboratories.*

***Manufactured under license from Digital Theater Systems, Inc. US Patent No. 5,451,942 and other worldwide patents issued and pending.*

Model 975 Front Panel

Model 975
Front Panel controls



Before you connect any audio or video components to the Model 975, it's important to understand how the different buttons, switches, and connections work. Most A/V source devices now offer several connection options, and unless you choose the proper ones, you won't get the best possible audio and video quality. The following two sections offer a brief explanation of the front and rear panel components of the Model 975.

A. STANDBY power button (see page 37)
Pressing this button turns the unit on and off. When the unit is on, the blue ring around the button glows brightly and the front panel display illuminates. When the unit is off, the blue ring glows dimly, the front panel display turns off, control functions are disabled, and all outputs are muted.

B. IR sensor
The IR sensor receives commands from the remote control. Do not block or cover it. If the unit is inside a cabinet or behind tinted glass doors you may need to use an optional external IR sensor.

C. Front panel display (see page 15)
Indicates program source, DSP mode, channel inputs, tuner preset and/or frequency, digital input, volume level, and other preamp/processor/tuner operating information. Display is not dimmable.

D. VOLUME control (see page 38)
Adjusts the volume level for the line outputs and the headphone jack.

E. Headphone jack (see page 43)
This jack can be used with stereo headphones that have a standard 1/4-inch plug. Headphones with a miniature 1/8-inch/3.5mm plug (the type found on smartphones and MP3 players) can also be used with an adapter, available at most electronics stores. Inserting a 1/4-inch headphone plug mutes the other outputs. The VOLUME control adjusts listening level.

F. TUNER button (see page 44)
This button selects the radio tuner. The front panel display will show which band (AM or FM) is active, and the frequency of the station currently tuned. Pushing the button again will toggle between AM and FM.

G. TUNE MODE button (see page 46)
Toggles between stereo and mono FM tuning modes when the tuner is selected source and the FM band is selected. Does not operate when AM is selected.

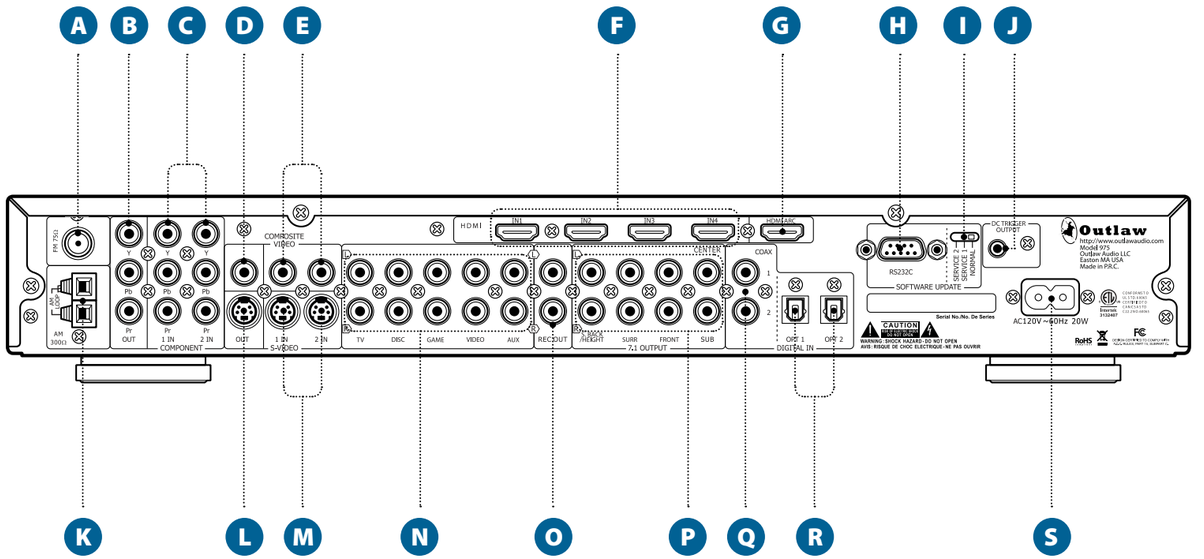
H. INPUT button (see page 37)
Pushing this button repeatedly cycles among the five input sources (TV, Disc, Game, Vid, and Aux) and the AM/FM tuner.

I. SURR MODE button (see page 39)
Press this button repeatedly to activate the matrix surround sound modes and choose among the various surround modes provided by the Model 975. The available surround modes will depend on whether you are listening to a 2-channel, 5.1 or 7.1 signal, and what loudspeaker configuration you are using.

J. MUTE button (see page 38)
This button mutes the line and headphone outputs.

Model 975 Rear Panel

Model 975 Rear Panel
connections and switches



A. FM Antenna terminal (see page 24)
Use to connect the supplied FM antenna or an external 75Ω antenna.

B. Component Video Output jacks (see pages 22-23)
Use these jacks to connect to a display with component video input, such as a TV or video projector.

C. Component Video Input jacks (see pages 22-23)
Use these jacks to connect devices with component video outputs such as a DVD player or HDTV tuner.

D. Composite Video Output jack (see pages 22-23)
This jack connects to a display with composite video input, such as older TVs.

E. Composite Video Input jacks (see pages 22-23)
These two jacks connect to older video devices with composite video output, such as VCRs, laserdisc players and vintage video game consoles.

F. HDMI Input jacks (see pages 22-23)
These four jacks provide the best possible audio and video connection to audio/video source devices with HDMI jacks. They carry high-definition video and are the only way to listen to the latest high-resolution formats such as DTS-HD Master Audio and Dolby TrueHD.

G. HDMI/ARC Output jack (see page 23)
Use this output to connect to video displays with HDMI inputs. If your display has an HDMI input, you will get the best quality by using this connection. This connection can also carry audio back from your TV set into the Model 975, so it can be reproduced through your home theater sound system.

H. RS-232C connector
This jack allows the Model 975 to be connected to a computer for software updates. It is also used for servicing. It cannot be used to control the Model 975.

I. RS-232C control switch
This switch is used to set the mode for the RS-232C connection. For normal operation, it should be left in the NORMAL position.

J. DC Trigger output (see page 24)
This jack emits a 12-volt DC trigger signal when the Model 975's power is on. Use it to control external devices (such as a power amplifier) with a 3-32 VDC trigger input. The connected device will turn on and off automatically, in sync with the Model 975.

K. AM Antenna terminals (see page 24)
Connect the supplied AM loop antenna or an external AM antenna to these terminals.

L. S-Video Output jack (see pages 22-23)
This jack connects to a display with an S-video input, such as older TVs.

M. S-Video Input jacks (see pages 22-23)
These two jacks connect to video devices with S-video outputs, such as S-VHS VCRs and laserdisc players.

N. Analog Audio Input jacks (see pages 20-21)
These five sets of jacks connect to audio or audio/video sources with analog outputs. They may be used with audio-only devices, such as an iPod dock or satellite radio tuner, and should be used with any audio/video source device that does not offer digital output.

O. Analog Audio Rec Out jacks (see pages 20-21)
This set of jacks can be used for recording stereo sound from the currently selected audio or audio/video input.

Dual Function Universal Remote Control

Controls both the functions of the Model 975 Preamp/Processor and when programmed, other components in your system.

Compact Remote Control

Duplicates all of the front panel functions of the Model 975,and also provides direct access to functions in the Model 975's on-screen setup and configuration menus.

Universal Remote Control Overview

POWER / COMPONENT SELECT / NUMERIC buttons

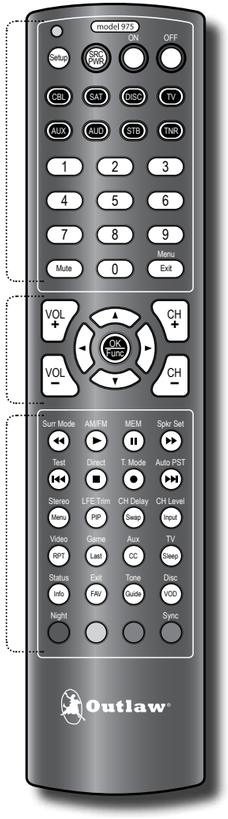
These buttons are used to power the Model 975 on and off, and to select the components in your system to control when the remote is in its programmed mode. You can also access the setup menus from here, as well as enter numbers when needed.

DIRECTIONAL / CHANNEL and VOLUME buttons

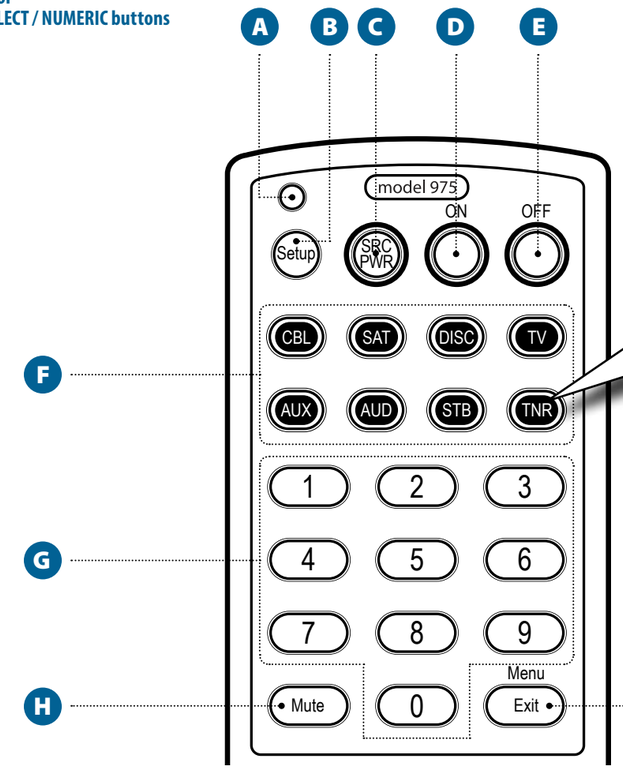
These buttons are used to navigate through menus, and control volume and channel selection for the device being controlled by the remote.

DIRECT ACCESS / DEVICE CONTROL buttons

These buttons have dual roles. The labels printed above each button indicate a direct control function of the Model 975 operated by the remote when the TNR button has been pressed. The labels printed directly on the buttons represent functions operated by the remote control for the device selected by pressing one of the system component buttons you've programmed (CBL, SAT, DISC, etc.) at the top of the remote.



Universal Remote Control POWER / COMPONENT SELECT / NUMERIC buttons



PLEASE NOTE: To operate the functions of the Model 975, access the setup menus, or select a source input, you must first press the TNR button. Once pressed, you can directly control the functions of the Model 975 indicated by the labels printed above each button on the remote.

For your convenience, the Model 975 comes with two remote controls.

The universal remote can control both the functions of the Model 975 Preamp/Processor and when programmed, other components in your system. In addition to duplicating the Model 975 front panel buttons, the universal remote can control additional functions, including setup and configuration menus through the on-screen display. Many buttons on the remote access functions directly without having to view the on-screen display to make every adjustment.

The compact remote is designed to duplicate all of the front panel functions of the Model 975, and also provides direct access to functions in the Model 975's on-screen setup and configuration menus.

The main functions of each button for both remotes are listed in the next two sections . For complete information about their use, please refer to the section titled "Remote Control Operation" on page 47.

P. 7.1 Output connection (see pages 22-25)
Use these jacks to connect the Model 975 to an external power amplifier. The Sub jack connects to a powered subwoofer or external subwoofer amplifier. Note that the brown and cream-colored jacks on the left can be used for back surround or front height channels (but not both).

Q. Coaxial Digital Input jacks (see pages 22-23)
Use these inputs to connect the coaxial digital audio signal output from such digital devices as CD, DVD or LD players. These inputs are fully assignable.

R. Optical Digital Input jacks (see pages 22-23)
Use these inputs to connect the optical digital audio signal output from such digital devices as CD, DVD or LD players, or TVs lacking ARC compatibility. These inputs are fully assignable.

S. AC Input (see page 25)
Use to connect the supplied AC power cord (see Precautions on page 2).

A. LED indicator (see pages 47-51)
This light flashes when the remote is sending command signals, and during programming of other components.

B. SETUP button (see pages 47-51)
Push and hold this button during the process of programming the remote to control other components.

C. SRC PWR button (see pages 47-48, 51)
This button turns the power on and off for any component selected using the Device Control Select buttons

D. ON button (see page 37)
Press this button to turn the Model 975 on. This button does not turn the unit off; use the OFF button for that. It does not affect other components in your system.

E. OFF button (see page 37)
Press this button to turn the Model 975 off. It will not turn the power on; use the red ON button for that. It does not affect other system components.

F. Component selection buttons (see page 37)
Use these buttons to select which device in your A/V system the remote will control. To operate the controls of the Model 975, hit the TNR button. To operate the functions of another device in your system, press the appropriate component selection button (CBL, SAT, DISC, etc.)

The component selection buttons cannot be used to select the input on the Model 975. To change the input source on the Model 975, follow the steps in "Selecting a Source" shown on page 38.

G. 10-key numeric keypad (see pages 45-46)
Use these buttons to select an AM or FM station stored in memory.

H. MUTE button (see page 38)
This button mutes the sound on all outputs, including the headphone jack. Press it again to unmute.

I. MENU/EXIT button (see pages 26-35)
Pressing this button toggles the on-screen display (OSD) menu system on and off. The sound will mute and the menu will fill the screen. Note that the OSD functions only on the Model 975's HDMI output. This button also acts as the return to the previous menu or EXIT function on a device that the remote has been programmed to control.

J. Four-way directional control (see pages 26-35)
Use these four directional buttons (up, down, left, right) to navigate the on-screen menus. These can also be used to navigate the menus of devices that the remote has been programmed to control.

K. VOL +/- control (see pages 38, 48-49)
These buttons raise or lower the volume of the Model 975, as well as devices that the remote has been programmed to control.

L. OK/FUNC button (see pages 26-35)
Use this button to select items and submenus in the on-screen display. This button will also operate the OK/Enter function of a device that the remote has been programmed to control.

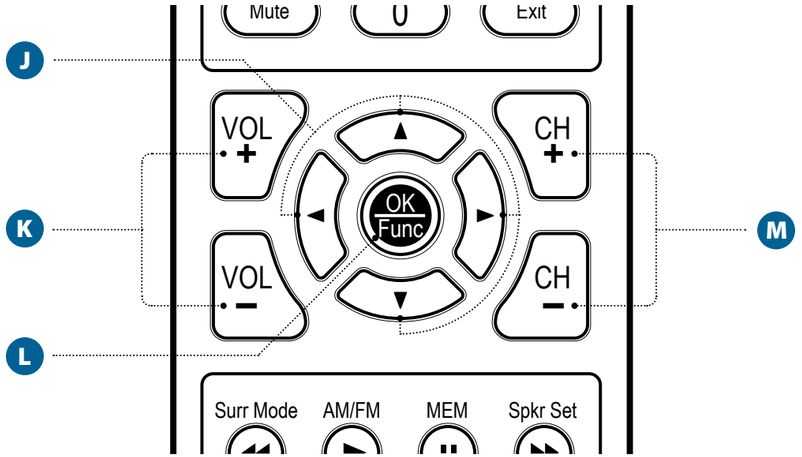
M. CH +/- control (see pages 44, 50-51)
Use these up/down buttons to tune AM/FM stations. Press and hold the CH + or CH - button for 2 seconds to scan for the next active frequency. These buttons can also select the channel on a device that the remote has been programmed to control.

N. SURR MODE/◄◄ button (see page 39)
Press this button to activate the Model 975's matrix surround processing. Pressing it repeatedly cycles through the various matrix surround modes. The available modes depend on whether you are listening to a 2-channel, 5.1 or 7.1 signal, and on your system's speaker configuration. This button also operates the Reverse Scan function on devices that the remote has been programmed to control.

O. AM/FM/► button (see pages 44 and 46)
This button switches the Model 975's input to the internal AM/FM tuner. Pressing it again toggles between AM and FM. This button also operates the Play function on devices that the remote is programmed to control.

P. MEM/II button (see page 45)
Use this button to memorize a radio station into a preset that can be accessed later. Tune the station, press and hold the MEM button for 1 second, then push the number on the numeric keypad you wish to use for that station. It also serves as the Pause button for a device that the remote has been programmed to control.

Universal Remote Control
DIRECTIONAL / CHANNEL and VOLUME buttons



Q. SPKR SET/▶▶ button (see page 41)
This button lets you change your speaker configuration settings without going into the on-screen menu. Push the button repeatedly to select which speaker's settings you want to change. Use the directional control up/down buttons to select Large, Small or None for each speaker. It also serves as the Forward Scan button for a device that the remote has been programmed to control.

R. TEST/I◀◀ button (see page 42)
This button lets you calibrate your surround-sound channel levels without going into the on-screen menu. Press the button to start the process, and press it again to switch to a different channel/speaker. Use the up and down buttons on the four-way directional control to raise or lower each channel's level. This button also operates the Reverse Chapter Skip function on devices that the remote has been programmed to control.

S. DIRECT/■ button (see page 46)
Use this button to directly tune a radio station. After selecting the band you want, press the button once, then enter the number of the station's frequency. This button also operates the Stop function on devices that the remote has been programmed to control.

T. STEREO/MENU button (see page 39)
This button deactivates any active surround modes and switches the Model 975 back to stereo operation. If a subwoofer is connected and configured through the setup menu, it will still be active in stereo mode. This button also operates the Menu function on devices that the remote has been programmed to control. Note that it does not operate the Model 975's on-screen menu.

U. LFE TRIM/PIP button (see page 41)
This button adjusts the low-frequency effects (LFE) channel level in a movie soundtrack or multichannel music recording. Push it to activate the control, then use the directional control up/down buttons to raise or lower the LFE level. Note that this is an LFE level control, not a subwoofer level control, so it will work only on 5.1 and 7.1 soundtracks that contain an LFE. This button also operates the PIP (picture-in-picture) function on devices that the remote has been programmed to control.

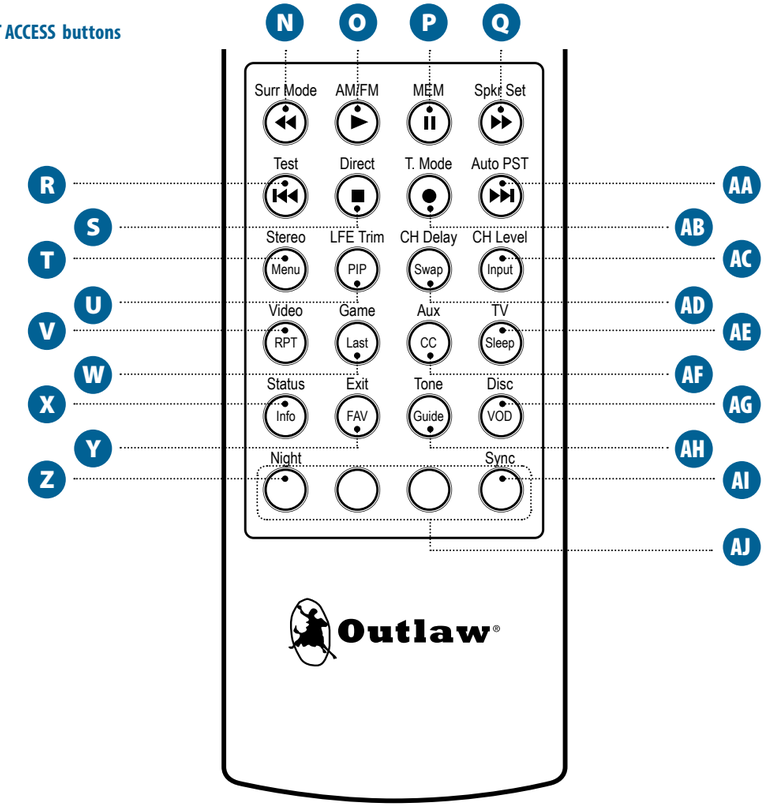
V. VIDEO/RPT button (see page 38)
This button selects the Video input on the Model 975. It also controls the RPT (repeat) function on a device that the remote has been programmed to control.

W. GAME/LAST button (see page 38)
This button selects the Game input on the Model 975. It also controls the LAST (i.e., last channel) function on a device the remote has been programmed to control.

X. STATUS/INFO button (see page 42)
This button provides information on what kind of soundtrack you're listening to, such as PCM, DTS-MSTR[3/4].1 or Dolby Digital [3/2].1. It also serves to call up information screens of devices, such as Blu-ray Disc players and cable boxes, that the remote has been programmed to control.

Y. EXIT/FAV button
This button selects the FAV (favorite) function on a device that the remote has been programmed to control.

Universal Remote Control
PLAYBACK CONTROL / DIRECT ACCESS buttons



Z. NIGHT button (see page 40)
This button activates the Night listening mode, which uses dynamic range compensation (DRC) to quiet loud sounds without affecting dialogue when using one of the Model 975's Dolby processing modes. Choose from on, off, and auto settings.

AA. AUTO PST/▶▶I button (see page 45)
This button scans the radio band you have selected (AM or FM) and automatically memorizes the available stations into presets. A maximum of 15 stations per band can be memorized. It also serves as the Forward Chapter Skip button for a device that the remote has been programmed to control.

AB. T. MODE/● button (see page 46)
Toggles between stereo and mono tuning modes when the tuner is the source and the FM band is selected. Does not operate when AM or other external sources are selected. It also serves as the Record button for a device that the remote has been programmed to control.

AC. CH. LEVEL button (see page 42)
This button allows you to adjust channel balance without having to go through the on-screen menu. Push the button repeatedly to cycle through the channels. Use the directional control up/down buttons to raise or lower that channel's level.

AD. CH. DELAY button
This button allows you to adjust channel delay without having to go through the on-screen menu. Push the button repeatedly to cycle through the channels. Use the directional control up/down buttons to increase or decrease that channel's delay.

AE. TV/SLEEP button (see page 38)
This button selects the TV input on the Model 975. It can also select the Sleep function on a device that the remote has been programmed to control.

AF. AUX/CC button (see page 38)
This button selects the Aux input on the Model 975. It can also select the CC (closed caption) function on a device that the remote has been programmed to control.

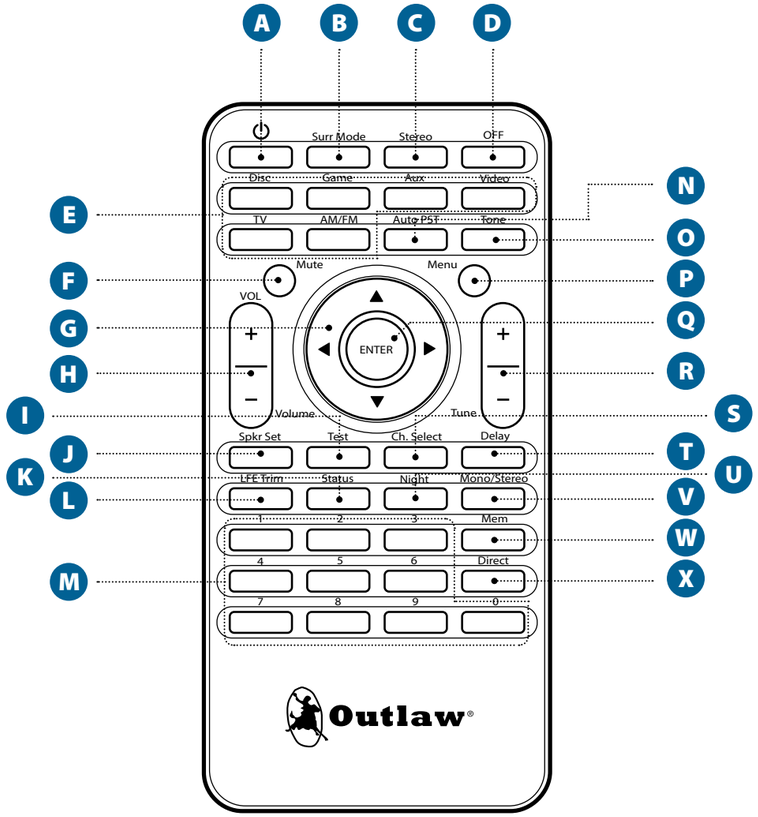
AG. DISC/VOD button (see page 38)
This button selects the Disc input on the Model 975. It also selects the VOD (video on demand) function on a device that the remote has been programmed to control.

AH. TONE/GUIDE button (see page 40)
Press this button to select either Treble or Bass for adjustment. Once the desired parameter appears on the front panel display, use the directional control up/down buttons to raise or lower bass and/or treble in 2 dB increments, to a maximum of ±10 dB. This button also calls up the Guide function for a device that the remote has been programmed to control.

AI. SYNC button (see page 40)
Press this button to adjust the delay of the audio signal to correct lip-sync issues. These sometimes occur on TV programs shown on cable, satellite or broadcast. Press the button once to see the current setting. Use the directional control up/down buttons to increase or decrease the setting in 10-millisecond steps. The maximum delay is 300 ms.

AJ. RED/YELLOW/BLUE/GREEN buttons
These buttons perform the same functions on a device that the remote has been programmed to control, such as a cable or satellite remote.

Compact Remote Control



A. POWER ON button (see page 37)
Turns the Model 975's power on.

B. SURR MODE button (see page 39)
Cycles through the Model 975's matrix surround processing modes. Available modes depend on the source signal (2, 5.1 or 7.1), and speaker configuration.

C. STEREO button (see page 40)
Deactivates any active surround modes and switches the Model 975 to stereo operation. A connected and configured subwoofer will be active in stereo mode.

D. OFF button (see page 37)
Turns the Model 975 off.

E. Input select buttons (see page 38)
Use these buttons to select an input. Press the AM/FM button repeatedly to toggle between the two bands.

F. MUTE button (see page 38)
This button mutes the sound on all outputs, including the headphone jack. Press it again to un-mute.

G. Four-way directional control (see page 26-35)
Use these to navigate the on-screen menus.

H. VOLUME +/- control (see page 38)
These buttons raise or lower the volume.

I. TEST button (see page 42)
For calibrating the channel levels using a test tone. Press repeatedly to cycle through each channel. Use the up/down buttons **(G)** to raise or lower each channel's level.

J. SPKR SET button (see page 41)
Use this button to change your speaker configuration settings. Press repeatedly to select the speaker's settings you want to change. Use the up/down buttons **(G)** to select Large, Small or None for each speaker.

K. STATUS button (see page 42)
This button displays information about the soundtrack you're listening to, such as Dolby Digital [3/2].1 or PCM.

L. LFE TRIM button (see page 41)
Press this button to adjust the low-frequency effects (LFE) channel level on 5.1 and 7.1 soundtracks w ith an LFE. Use the up/down buttons **(G)** to raise or lower the LFE level.

M. 10-key numeric keypad (see page 45-46)
Use these buttons to select an AM or FM station preset.

N. AUTO PST button (see page 45)
This button scans the current radio band and automatically memorizes up to 15 stations into presets.

O. TONE button (see page 40)
Press to select either Treble or Bass for adjustment. Use the up/down buttons **(G)** to raise or lower bass and/or treble in 2 dB increments, to a maximum of ±10 dB.

P. MENU button (see page 26-35)
Toggles the on-screen display (OSD) menu system on and off. Sound is muted when the OSD menus appear.

Q. ENTER button (see page 26-35)
Use to select items from the on-screen display menus.

R. TUNE +/- control (see pages 44, 50-51)
Use these up or down buttons to tune AM/FM stations. Press and hold the up or down button for 2 seconds to scan for the next active frequency.

S. CHANNEL SELECT button (see page 42)
Use this button to calibrate your channel levels. Press repeatedly to cycle through each channel. Use the up/down buttons **(G)** to raise or lower each channel's level.

T. DELAY button (see page 40)
Adjusts the audio signal delay to correct lip-sync issues. Use the up/down buttons **(G)** to increase or decrease the setting in 10ms steps. The maximum delay is 300 ms.

U. NIGHT button (see page 41)
Activates the Night listening mode. Choose from on, off and auto settings.

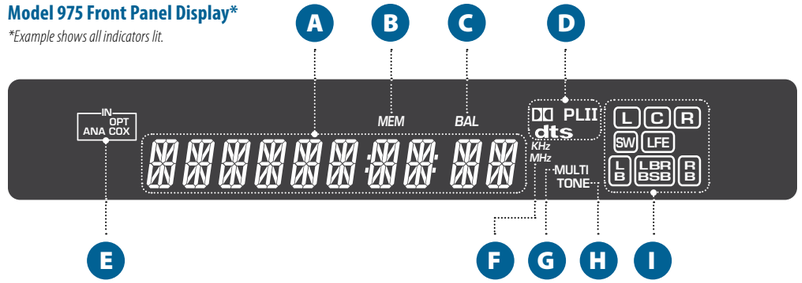
V. MONO/STEREO button (see page 40)
Toggles between stereo and mono tuning modes when the source is the tuner and the FM band is selected.

W. MEM button (see page 45)
Use to memorize a radio station as a preset. Tune to the desired station, press and hold the MEM button for 1 second, then push the number on the numeric keypad you wish to use for that station.

X. DIRECT button (see page 46)
Use this button to directly tune a radio station by frequency. Select the band you want, press the button once, then enter the station's frequency.

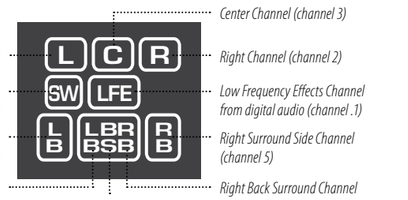
Model 975 Front Panel Display*

**Example shows all indicators lit.*

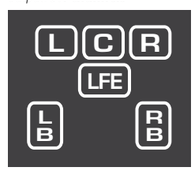


Model 975 Channel Icon Display

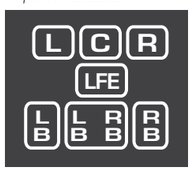
The channel icon display graphically represents the active audio inputs and outputs of the Model 975. Illuminated letters indicate the audio channel(s) being received from the selected source, while the lit boxes show the output mix to the speaker(s). The source is either passed through unchanged (box around letter), upmixed (empty box) or downmixed (letter without a box) depending on your system configuration and surround mode.



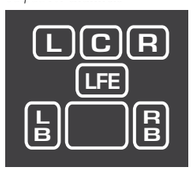
Input Source: ***5.1 channels***
Output: ***5.1 channels***



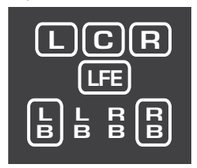
Input Source: ***7.1 channels***
Output: ***7.1 channels***



Input Source: ***5.1 channels***
Output: ***7.1 channels***



Input Source: ***7.1 channels***
Output: ***5.1 channels***



The front panel display provides information and visual feedback whenever the Model 975 is turned on. A brief explanation of the display's readouts is shown below.

For full access to setup and all functions, you will have to use the on-screen display (OSD), which can only be seen on a video monitor connected to the Model 975 through HDMI.

A. Alphanumeric Readout
Displays a range of information, including the selected input (page 38), audio format and surround mode (pages 39-40), volume and other adjustment settings (pages 38-42), and tuner preset and/or frequency (pages 44-46). Information will scroll across the display if necessary.

B. MEM indicator (see page 45)
Flashes when a memory preset has been saved.

C. BAL indicator (see page 30, 42-43)
Lights when the channel level of one or more speakers has been adjusted from the default setting (0 dB).

D. Surround Mode indicator (see page 39)
Lights if the audio signal of the selected source is Dolby Digital (**DD**) or DTS (**dts**). The **PLII** indicator lights when using Dolby ProLogic II processing with a 2-channel source, or when applied to a 5.1, 6.1 or 7.1 audio signal.

E. Input Source indicator (see pages 16-17, 20-23)
Lights when the audio signal of the selected source originates from an analog (**ANA**), optical digital (**OPT**) or coaxial digital (**COX**) input jack. The **ANA** also lights when the tuner is the selected source. When the source is an HDMI jack, the input source indicator turns off.

F. Tuner Frequency Range indicator (see pages 44-46)
Lights when the tuner is the input source and either the AM (**kHz**) or FM (**MHz**) band is selected.

G. MULTI indicator (see page 38)
Lights when the audio signal of the selected source is multi-channel LPCM (lossless PCM).

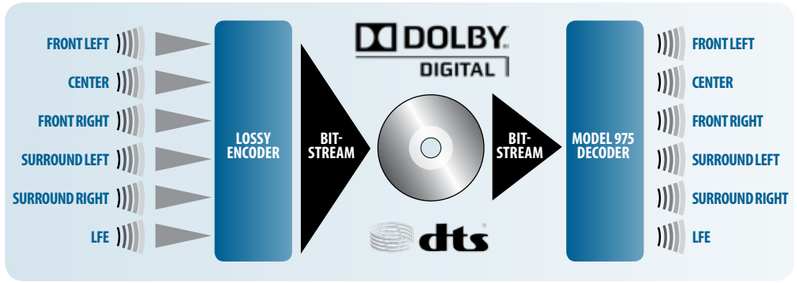
H. TONE indicator (see page 38)
Lights when either the bass and/or treble level has been adjusted from the default setting (0 dB).

I. Channel Icons (see page 26-35)
Indicates the audio channels present in the source signal (one, two or multi-channels) as well as the output channels based on your speaker configuration and surround format chosen. See examples above.

Audio Formats and Listening Modes

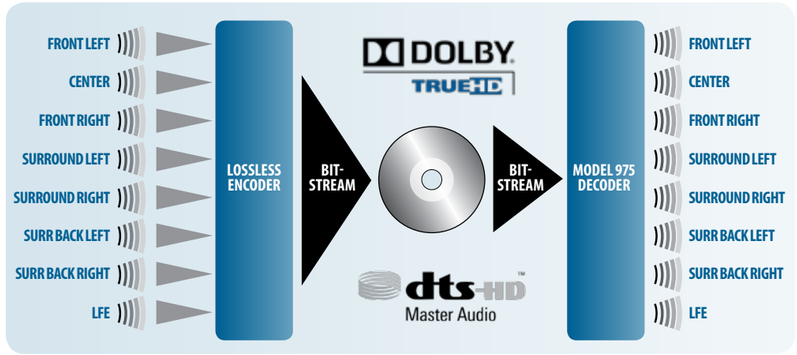
Audio Formats

5.1 Multichannel Digital Audio



7.1 Multichannel Digital Audio

7.1 Multichannel High Resolution Lossless Digital Audio



The Model 975 supports almost any audio format out there. These include the latest lossy and lossless digital audio formats used by Blu-ray and Internet video streaming devices; the older digital audio formats used by DVD and digital TV; and more generic audio data such as analog, stereo PCM, and multichannel PCM. It also includes additional processing modes that can be used with some of those formats. To assist in understanding the supported input formats and processing modes of the Model 975, we are devoting one section of this guide to two separate subjects: audio formats (the incoming audio data), and listening modes (the decoding and processing schemes which can be applied to that audio data).

Analog Stereo and PCM Stereo

These two sources are treated the same way by the Model 975. The first is analog stereo connections, similar to what you might find from a VCR or some game consoles (Nintendo Wii, for example). The second is digital connections with stereo PCM signals, including sources such as CDs and some digital cable channels. The first case (stereo analog) is converted to stereo PCM by an analog-to-digital converter (ADC), so both inputs may be handled by the digital signal processor (DSP).

Dolby Digital

Dolby Digital was first called AC-3 when it appeared in the 1990s on LaserDisc, and it was the first format to provide true multichannel digital audio for consumer use. When the DVD specifications were established a few years later, Dolby Digital (often abbreviated "DD") was included as the default audio format. Dolby Digital offers up to five discrete full-range channels (left, right, center, left surround, and right surround) and a low frequency effects (LFE) channel; these six channels are often referred to as "5.1" because the LFE channel is limited to low frequency data only. To allow these tracks to fit on media such as DVD and be passed across digital connections originally designed for just two audio channels, lossy compression is used to compact the original data into a smaller size, allowing the audio tracks to use much less space than would be required for an uncompressed multichannel track.

Dolby Digital soundtracks are not required to use all six channels, so you will often encounter Dolby Digital 2.0 tracks (stereo) or even Dolby Digital mono tracks. Those mono tracks sometimes include two channels (left and right) with identical data in both (or "Dolby Digital 2.0 Mono"), but other times they contain a single channel ("Dolby Digital 1.0").

Dolby Digital Plus

Dolby Labs developed a successor to Dolby Digital for use with Blu-ray and Internet streaming services. This audio format is called Dolby Digital Plus (DD+). Dolby Digital Plus offers up to 7.1 discrete channels (extensible to 16 channels); it's not limited to 5.1 discrete channels as its predecessor was. It also employs more powerful lossy compression, enabling both lower bitrates and higher quality at higher bitrates. This format can only be delivered to the receiver in its native form via HDMI or transcoded to Dolby Digital 640 kbps for output via coaxial or optical digital audio.

Dolby TrueHD

Dolby TrueHD was developed for use with HD disc formats such as Blu-ray Disc. The technology is an extension of Meridian Lossless Packing (MLP), the lossless audio compression format employed on DVD-Audio. Since the compression used does not discard any data, a TrueHD track preserves the original integrity of the uncompressed master.

DTS

DTS is an alternative to Dolby Digital that shares the same basic concept: six channels of audio, compacted using a lossy compression algorithm to save space. DTS uses an algorithm that is not as efficient as Dolby Digital and therefore not as heavily compressed, which many people believe allows it to sound better.

DTS-HD High Resolution

DTS responded to Dolby Digital Plus with DTS-HD High Resolution. DTS-HD High Resolution is an extension to DTS 96/24 that allows higher bitrates, but it still employs lossy compression. Like DD+, DTS-HD HR supports 7.1 channels, may be included on both Blu-ray and HD-DVD, and can only be transmitted via HDMI v1.3 or higher.

DTS-HD Master Audio

Despite the similarities in name, DTS-HD Master Audio is a completely separate audio format from DTS-HD High Resolution. Like Dolby TrueHD, DTS-HD MA employs lossless compression to provide a format that offers the sound quality of an uncompressed PCM track while offering a way to use less disc space. DTS-HD Master Audio also supports 7.1 channels.

Multichannel PCM

HDMI allows sources to output multichannel PCM because the connection can support the greater volume of data required to transmit up to eight channels of uncompressed digital audio. A multichannel PCM signal may be as delivered directly on a Blu-ray Disc, or as derived from any compressed audio bitstream the player can decode (including the formats listed above).

Listening Modes

Dolby Pro Logic II Movie

This mode takes two-channel movie and TV content, such as Dolby Digital 2.0 DVDs, most TV shows, Netflix programs, etc., and converts them to 5.1 or 7.1. Through Dolby Pro Logic IIz technology, it can also derive signals for two front height channels if back surround speakers are not used. The parameters in this mode are non-adjustable. You can leave this mode on for all two-channel TV and movie material. It's comparable to DTS NEO:6 Cinema, so you should try both and see which one you like better.

Dolby Pro Logic II Music

This mode converts two-channel music from analog or digital sources to 5.1 or 7.1. It offers three adjustable parameters: Center Width, Dimension and Panorama. For explanations of these, see pages 33-34. It's roughly comparable to DTS NEO:6 Music mode; we recommend you use whichever mode you like best. You may find one or the other works better for certain types of music. Through Dolby Pro Logic IIz technology, the Model 975 can also derive signals for two front height channels if back surround speakers are not used.

Dolby Pro Logic II Game

The PLII Game mode is optimized for use with video games that have 2.0-channel sound, and especially for use with games that are Pro Logic II-encoded. The Model 975's Pro Logic IIz decoding can derive front height channels from games that are encoded in Pro Logic IIz, if back surround speakers are not used.

DTS NEO:6 Cinema

NEO:6 Cinema converts any two-channel movie or TV content into 5.1, 6.1 or 7.1. It works great with most TV shows, Netflix programs, etc., and you can leave it on for all two-channel TV and movie material. It's similar in function to Dolby Pro Logic II Movie mode, so you can compare the two and use whichever one you prefer.

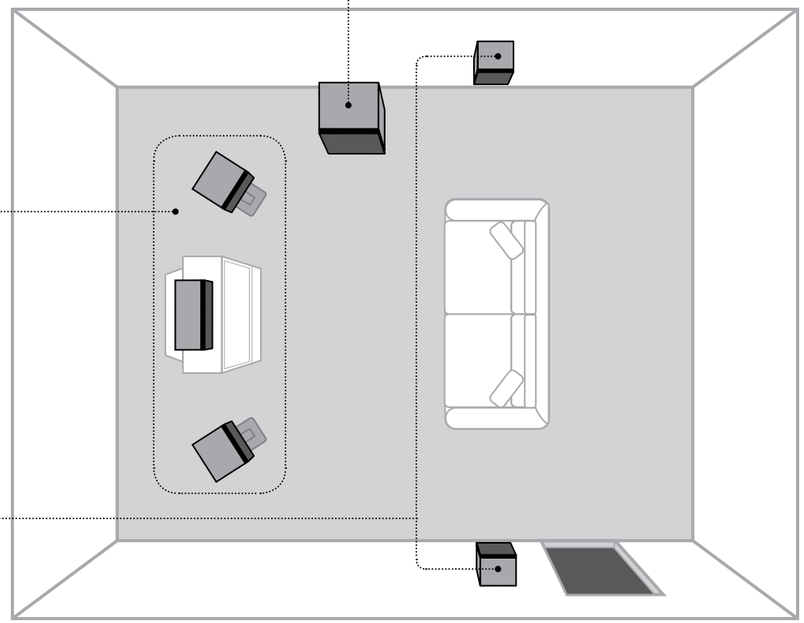
DTS NEO:6 Music

NEO:6 Music is tuned to work well with any two-channel music source, whether analog or digital. Compare it with Dolby Pro Logic II Music mode and use the technology that sounds best to you.

All Channel Stereo

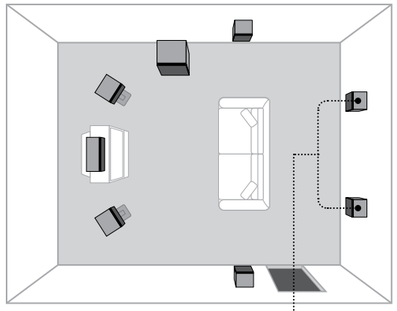
This is the only non-licensed surround mode we chose to include in the Model 975, and we included it for a very good reason: It's the perfect mode for parties. The same sound comes from the front and rear speakers—it's not matrix-decoded as it is with PLII and NEO:6—so the sound spreads nicely around the room and all your guests can hear the music. Some people like it for regular music listening, too.

Typical 5.1 Surround Speaker Placement



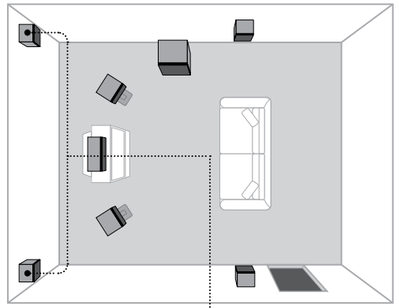
6.1 / 7.1 Surround Speaker Placement Options

Note that in a 6.1 or 7.1 surround sound setup, you can use back surround or front height speakers, but not both.



Surround Back Speakers

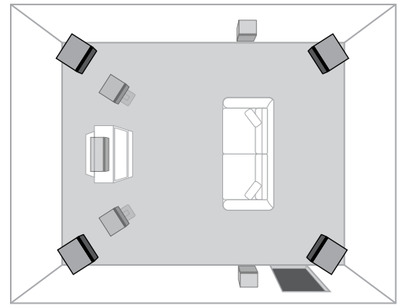
If you are using surround back speakers, place them approximately 3 feet (1 meter) above the listener's ear level and 30° off the center axis.



Front Height Speakers

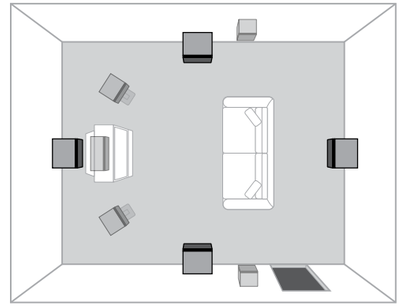
If you are using front height speakers, place them high on the front wall at least 3 feet above the front speakers and 2-6 feet farther apart.

Subwoofer Placement Options



Subwoofer(s)

Using two or four matching subwoofers results in much smoother bass response across a large seating area. The subwoofers can either be placed in the corners of the room, or in the middle of the walls.



Before we explain how to configure your Model 975 for your speaker system, let's make sure your speakers are already set up to get the best possible performance. Even if you're an experienced home theater enthusiast, you may pick up a useful tip here. After all, the Outlaws have been designing and working with home theater systems since 1989! We've heard everything, read everything, tried everything.

The best speaker placement for your particular room will depend on its size, furnishings, seating arrangement, the acoustical properties of the space, including wall type, coverings, and various other factors.

Due to the complex nature of these variables it is impossible to recommend any one-size-fits-all placement. You may well have to experiment with various placement options to determine the best configuration for your specific situation. Please note that, the configuration and placement of your speakers is critical for creating the best possible surround sound playback.

When connecting any speakers, be sure to read the instruction manuals that came with the product and check your power amplifier's instruction manual for proper hook-up of the loudspeakers

Front left, center, and right speakers

- These speakers should be placed at the same relative height from the floor and a similar distance from any walls. Most speakers sound best when located with the tweeter at ear height when you're seated. Typically, the further away from the walls the speakers are, the better they will sound.
- Ensure that the speakers are aimed at the listener's ears within your chosen seating position.

Surround left and right speakers

- Place these speakers so that their height is approximately 1 meter (3 feet) higher than that of the listener's ears if feasible.

Note on dipole surround loudspeakers

Most dipole surround speakers have an arrow which indicates their proper orientation relative to your video display/ screen. Dipoles placed on side walls should have the arrows pointing forward. Dipoles placed on a rear or back wall should have the arrows pointing towards each other to achieve the correct acoustical image in the room.

Surround back left and right speakers

- These speakers are required for 6.1 or 7.1 audio playback. Place them behind the listener so that the angle between each speaker and the listener is approximately 30 degrees.
- Place these speakers so that their height is 1 meter (3 feet) higher than that of the listener's ears.

In a 6.1 or 7.1 surround sound setup, the additional channels can used for back surround or front height speakers, but not both.

Front height speakers

- These speakers can be used if back surround speakers are not used.
- Mount the front height speakers against the wall at least three feet above the front left and right speakers.
- Spread the front height speakers 2 to 6 feet further apart than the front left and right speakers.

Subwoofer

Subwoofer placement can frequently be a trial-and-error affair as bass energy sets up "standing waves" in most every room. These standing waves can cause areas with too much bass, areas with too little bass, and areas in between. You may have to move the subwoofer and or the prime listening area to improve the bass response. Be aware that every surface you place the woofer close to (one wall, floor, two walls in a corner) will increase the overall apparent bass in the room. But this can potentially lead to boomy and muddy sounding bass.

Recent research has found that using two or four matching subwoofers results in much smoother bass response across a large seating area. If you want to make the bass sound good for several listeners (and not just you), this is worth exploring. You can place the subwoofers in the corners of the room, or in the middle of the walls. You can use Y-adapters to connect the Model 975's subwoofer output to multiple subwoofers.

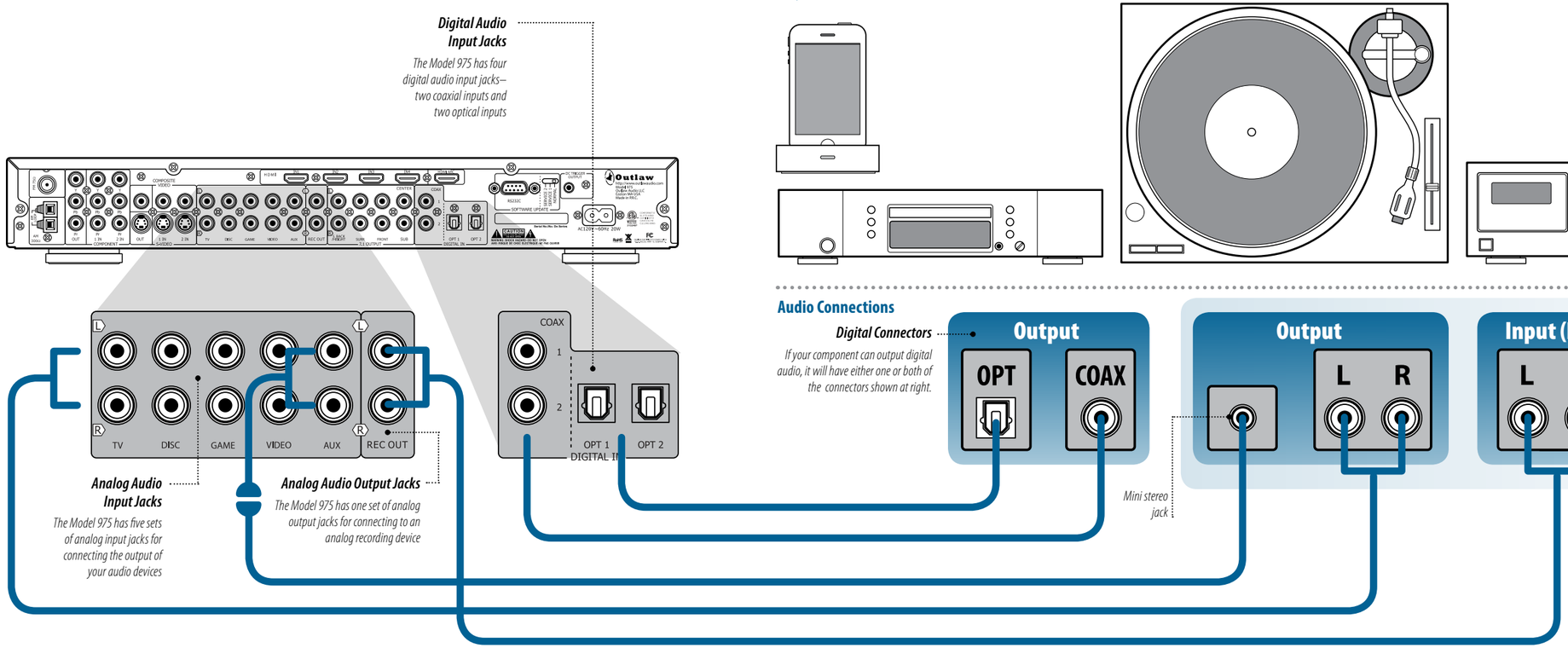
Connecting Your Model 975

There are many possible ways to connect a particular device. Use the diagrams on the following pages as a guideline. The information in this section contains some of the more common situations you might encounter in your system. Always consult the owner's manual that came with the component you are connecting for more information about procedures, warnings and options for the source component's connections.

Chapter 2 **Contents**

Connecting Audio Components

Model 975 Audio Connections



Before you make any connections to your new Model 975, please observe the following precautions:

- Do not plug the power cord into your Model 975 until all other connections have been made.
- For analog audio source device connections, the red input jacks (R) are used for the right channel and white input jacks (L) are used for the left channel.
- For analog video connections, the yellow (Y) jacks are used for composite video. The green (G), blue (B) and red (R) jacks are used for component video.
- If you plan to use the Model 975's REC OUT jacks to record audio onto a computer or tape deck, be sure to connect the analog audio outputs from the components to the analog audio inputs on the Model 975, even if you've already connected them through HDMI, coaxial SPDIF or Toslink optical. The REC OUT jacks will pass only analog signals, including audio from the AM/FM tuner. Even if the input is set to use the incoming digital audio signal, it will route the incoming analog audio signal to the REC OUT jacks when that input is selected.
- Make sure to insert all plugs and connectors securely. Improper connections can result in noise, poor performance, or damage to the equipment.
- Do not bundle audio/video connection cables with power cords and speaker cables. Doing so may adversely affect the picture and sound quality. For example, run all the power cords down one side of the cabinet, all the signal cords down the other side, and the speaker wires down the center.

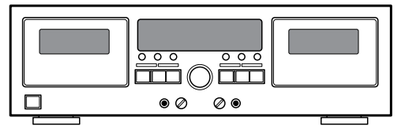
Note about HDMI connectivity

Whenever two or more devices are connected using HDMI cables, during the initial power on cycle there is an initial "handshake" communication between them. This takes place only during the first three to five seconds after powering on the devices. If this handshake is successful, you will achieve normal Video and Audio. However, sometimes there can be handshake issues simply due to a poor connection. HDMI handshake issues can affect video and audio, as both are transmitted through these cables. Some examples are: Flashing picture, no picture, audio popping or crackling sound, snow on image, or no audio. If you experience any of these, please refer to the troubleshooting info on page 54.

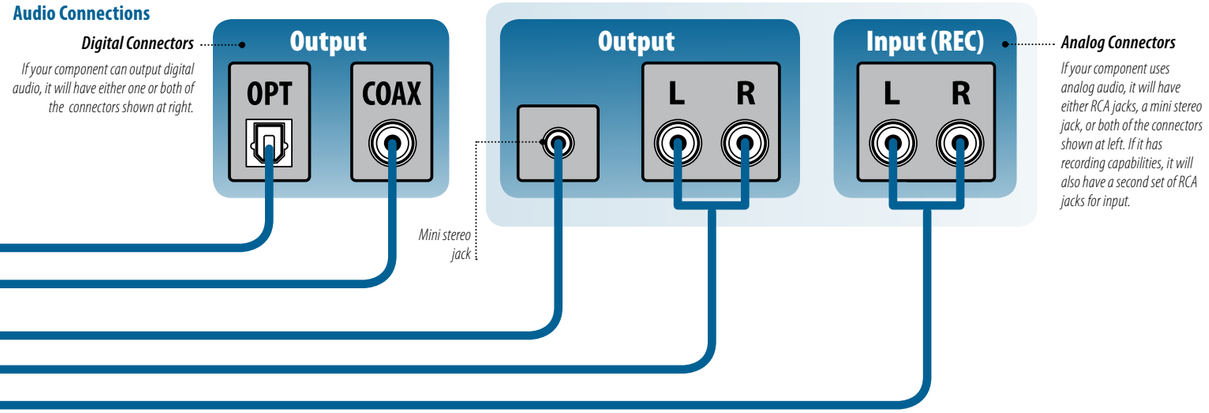
CD Player or other Audio Playback Device Connections

Turntable Connections

Audio Recorder Connections



Audio Connections



IMPORTANT: *We strongly recommend that you complete all needed connections and setup procedures to your Model 975 before connecting any loudspeakers to your system. This will reduce the chances that a misconnection will produce audio output that might damage your speakers or components.*

Given the wide variety of components that can be connected to your Model 975, there are numerous ways to assemble your system. To help, we have provided a chart (page 56) to record the components connected to your unit, as well as which type of input (HDMI, component, analog, coaxial, etc.) is used. Keep this chart for future reference.

In addition to a CD player, you can connect the audio output of any of these other components:

- iPod/iPad Dock
- Satellite Radio Tuner
- Digital Streaming Device, such as Logitech Squeezebox or HRT MusicStreamer
- Video Game

Analog

Connect the L and R channel outputs of the source device to the Aux stereo audio input jacks on the Model 975. Other analog audio input jacks may be used if the Aux jacks are already in use. If the device uses a stereo mini plug jack you will need to obtain a stereo mini plug to RCA adapter.

Digital

If your source device offers digital output, connect it to one of the coaxial (Coax 1 or 2) or optical (Opt 1 or 2) input jacks on the Model 975, depending on the type of connector used. Later, you will configure the Model 975 to use the specific input that you have chosen. For now, note which digital input you connected to on your system chart.

To connect a turntable to the Model 975, you will need a phono preamp to connect between the turntable and the Model 975. Connect the L and R channel outputs (plus the ground wire, if needed) to the inputs of the phono preamp. Connect the L and R channel outputs of the phono preamp to the Aux stereo or other analog audio input jacks on the Model 975.

A recording device such as a cassette deck, MD recorder, DAT deck or CD recorder can be connected to the Model 975.

Note that the Model 975 offers only analog audio output, so a digital recording cannot be made using this preamp/processor, but you can connect the recording device's digital input directly to the source device's digital output if desired.

Analog

Connect the L and R audio outputs on the recorder (usually marked PLAY) to the Aux jacks on the rear of the preamp/processor and connect the L and R audio inputs (usually marked REC) to the REC OUT jacks of the Model 975.

Digital

If your recorder has a digital output jack, connect it to one of the coaxial (COAX 1 or 2) or optical (OPT 1 or 2) input jacks on the preamp/processor, depending on the type of connector used by the device. Later, you will configure the Model 975 to use the specific input that you have chosen. For now, note which digital input you connected to on your system chart.

Connecting Video Components

Model 975 Video Connections

Component Video Jacks

The Model 975 has two sets of component input jacks and one set of output jacks for making connections to your video devices

Composite Video Jacks

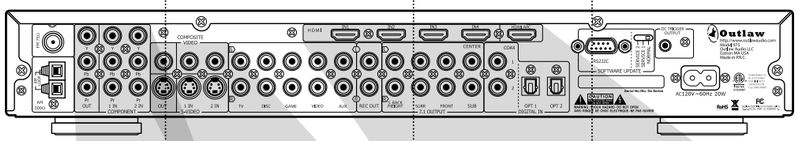
The Model 975 has two sets of composite video input jacks and one set of output jacks for making connections to your video devices

S-Video Jacks

The Model 975 has two sets of S-video input jacks and one set of output jacks for making connections to your video devices

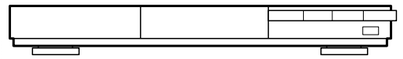
HDMI Jacks

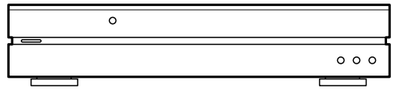
The Model 975 has four HDMI input jacks and one HDMI/ARC jack for connecting to the video and audio signals of your video devices

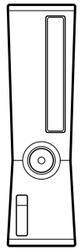


Blu-ray Disc Player

Blu-ray Disc Player or other Video Device Connections

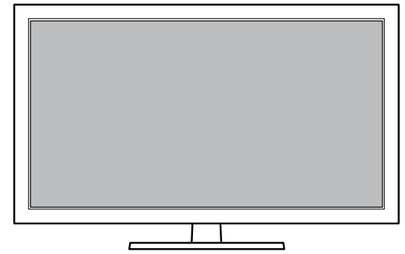


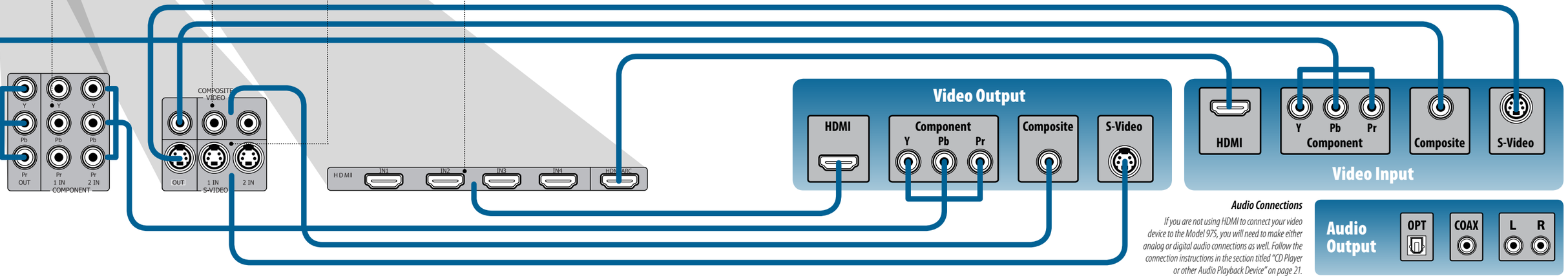




Video Display

Flat-panel TV or other Video Display Device Connections





Audio Connections

If you are not using HDMI to connect your video device to the Model 975, you will need to make either analog or digital audio connections as well. Follow the connection instructions in the section titled "CD Player or other Audio Playback Device" on page 21.

The Model 975 can, and is, recommended to become the command center for all of your Audio and Video devices. HDMI connectivity makes this possible and easier than before. In the past the audio was sent through the AV possessor and the video was sent separately to the display device (TV). With HDMI, this is no longer necessary as it carries both High Definition Audio and Video on a single cable. Connecting the video in this fashion will not decrease the quality of the video signal, as the Model 975 can pass video through as "native" with no video processing at all, or you can elect to Auto Scale legacy Video devices up to HD (see below).

Before making connections to any video devices, it will help to understand how the Model 975 routes the video portion of the signal through its video section.

- All incoming video signals, including Component and Composite video, will be upscaled and appear at the HDMI output only if the "Autoscale" option is selected in the Video Output menu for that source. If an input's video output option is set to "Native", the incoming video signal will appear at the HDMI output in its standard video resolution.
- The component video output carries only signals from the two component video inputs.

All Legacy Video Inputs can be up scaled via the HDMI Output as noted above, however, HDMI Inputs cannot be down-scaled to Legacy Video Outputs.

- The composite video output carries only signals from the two composite and two S-video inputs.
- The S-video output carries only signals from the two composite and two S-video inputs.
- All HDMI inputs can be assigned to the Disc, Game, Aux, Video and TV inputs.
- The Component 1 input, S-Video 1 input and composite video 1 input can be assigned only to the TV, Game and Aux inputs.
- The Component 2 input, S-Video 2 input and composite video 2 input can be assigned only to the Disc and Video inputs.

In addition to a Blu-ray Disc player, you can connect the video output of any of these other components:

- DVD player
- Digital Cable Box
- Satellite TV Tuner
- Digital TV Tuner
- Video Game Console or Internet Video Streaming Device (Apple TV, Roku, Google TV, etc.)

HDMI

Connect the HDMI output of the source device to one of the HDMI inputs on the Model 975. This is the only connection you need to make from the source device to the Model 975. Note which HDMI input you connected on your system chart, because you will have to configure the input later through the on-screen menu. If you have an older DVD player, cable box, or game system that does not support HDMI, you will need to use one of the analog or digital connectors described below. This is the only Output Video connection that carries the OSD menu.

Component

If your TV does not have HDMI inputs but does have a component input, connect the component (Y/Pr/Pb) video output on the source device to one of the two component inputs on the Model 975.

S-Video

If your TV lacks HDMI or component input, your next best choice is S-Video, assuming your source device offers that option. If it does, connect an S-Video cable from the source device's S-Video output to one of the Model 975's S-video inputs.

Composite

If your TV offers only composite video input, you have no other choice. Connect the composite video output from the source device to one of the composite video inputs on the Model 975.

If you are using a component, S-Video, or composite video connection, you will also have to make either analog or digital audio connections to the Model 975. The steps to connect the audio signal from your video device to the Model 975 are the same, as detailed in the section titled "CD Player or other Audio Playback Device" on page 21.

Analog Audio

If your source device offers only analog audio outputs, connect the L and R channel outputs on the source device to the set of analog audio jacks on the Model 975 that are labeled for the input you're using, such as TV or Game.

Digital Audio

If your source device offers digital audio outputs (either coaxial/SPDIF or Toslink optical), use those instead of the analog outputs. Connect one of the digital output jacks on the source device to one of the digital inputs (COAX 1 or 2, or OPT 1 or 2) on the Model 975. Note which digital input you connected on your system chart, because you will have to configure the input later to use the digital connection.

A video display device such as a flat-panel TV or a video projector can be connected to the Model 975 using the following methods.

HDMI

Connect the Model 975's HDMI/ARC output to one of the video display's HDMI inputs. If you are using the ARC function, which feeds audio from the TV back into the Model 975, be sure to connect to the jack on the TV labeled HDMI/ARC.

Component

If your display does not offer HDMI input but does have component video input, connect the Model 975's component video output to the display's component video input.

S-Video

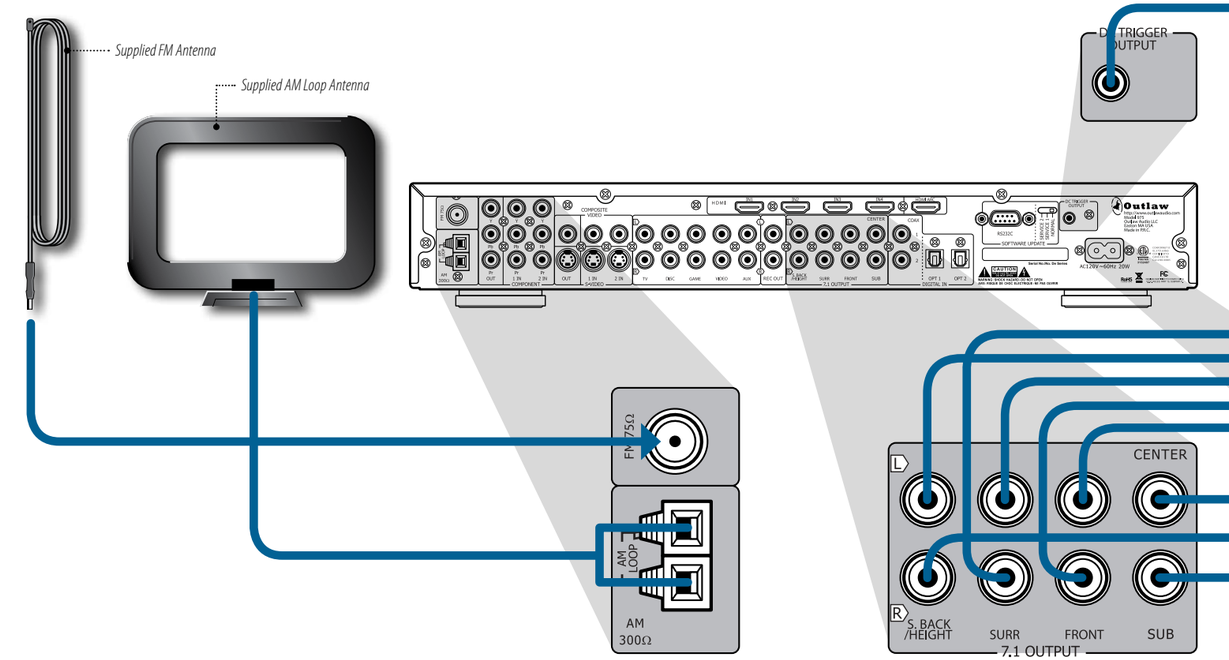
If your display does not offer HDMI or component input but does have S-Video input, connect the Model 975's S-video output to the display's S-Video input.

Composite

If your display offers only composite video input, you'll have to use that. Connect the Model 975's composite video output to the display's composite input.

Antenna Connections

Model 975 FM and AM Antenna Connections



FM Antenna

Connect the supplied FM antenna to the terminal labeled FM 75Ω. The Model 975's coaxial antenna terminal is designed for push-on type antenna cable connectors. For a threaded connector, use the supplied adapter.

The supplied FM antenna is for indoor use only. For best signal reception you must fully extend the antenna. Experiment with the antenna's position to obtain the strongest signal. You can attach it to a wall or other surface using push pins or similar hardware.

If FM reception is poor with the supplied indoor antenna, the use of an amplified indoor or outdoor antenna is recommended.

You can only connect a 75Ω type FM antenna to the Model 975. If you choose to use an antenna other than the one supplied, be sure to verify that it has the correct type of connector or that you obtain an appropriate adaptor.

If you use the same antenna for FM and TV signals, be sure to install a splitter to separate the two signals.

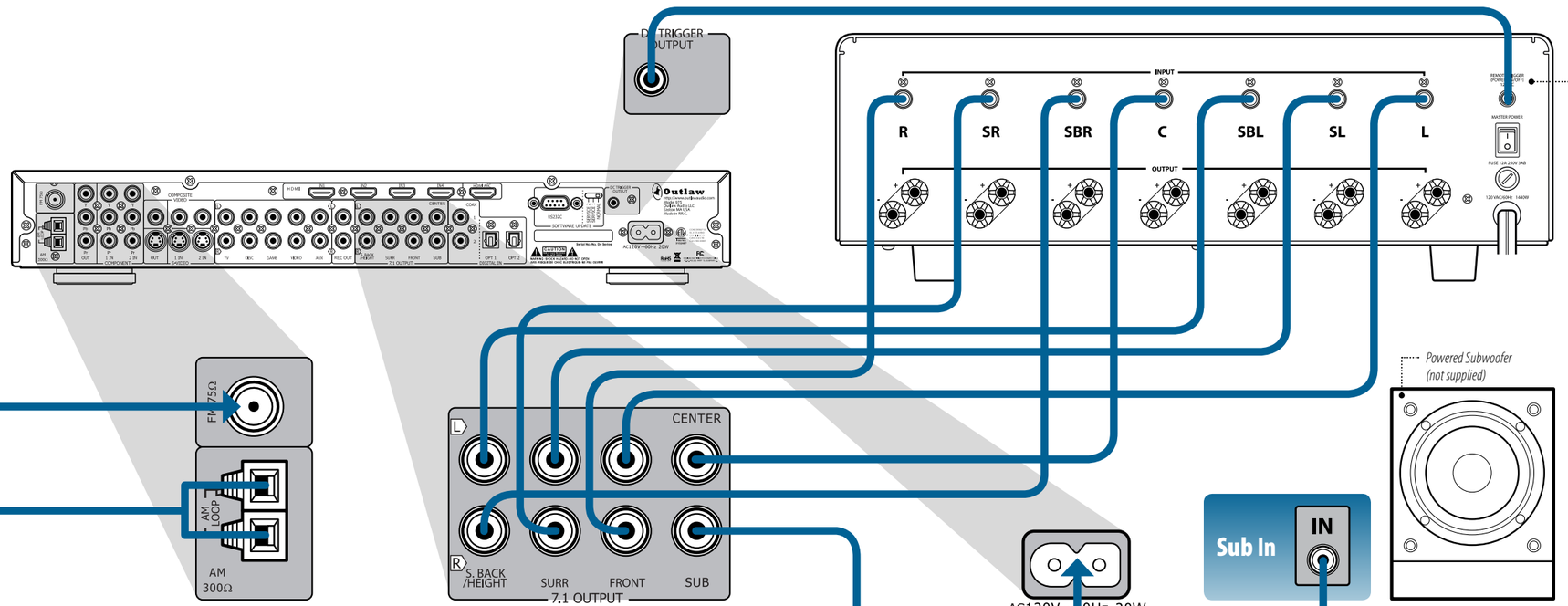
AM Antenna

Connect the AM antenna to the terminals labeled AM 300Ω on the rear panel of the Model 975. Press the spring-loaded levers to open the terminals, insert a wire into each terminal, then release the levers. Give the antenna cables a very light pull to make sure they're connected.

If you experience reception problems, try turning the loop antenna in a different direction.

External Amplifier Connections

Model 975 Power Amplifier Connections



IMPORTANT NOTE: *Before attempting to plug any jacks into any power amplifier verify that the power amplifier is turned off and/or disconnected from the AC power . Failure to do so can potentially result in severe damage to your amplifier and loudspeakers.*

Power Amplifier

Use the audio jacks labeled 7.1 OUTPUT to connect the Model 975 to an external power amplifier such as the Outlaw Audio Model 7125 Power Amplifier. The Model 975 can output up to 7.1 channels of sound (seven main speakers and one subwoofer channel) depending on source components and material.

The output jacks on the Model 975 include (left to right): back surround/front height L and R, side surround L and R, front L and R, center and subwoofer.

If you are using a single surround back speaker as part of a 6.1 channel system, make sure to use the surround back/ front height L output jack when connecting the Model 975 to your external amplifier.

Power Control Connections

Model 975 DC Trigger Connections

Subwoofer Connection

When a powered subwoofer is used, connect the Subwoofer output jack to the Line Input jack on your subwoofer and follow any specific connection and/or configuration instructions supplied with the subwoofer. If your subwoofer is a passive speaker, connect the subwoofer output jack on the Model 975 to the input of the amplifier used to power the subwoofer, and then connect the subwoofer speaker itself to the amplifier.

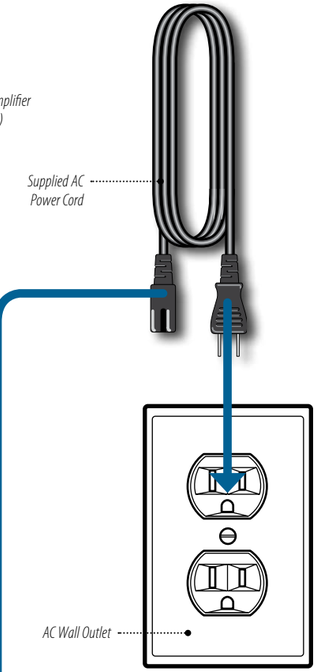
The DC TRIGGER OUTPUT jack is used to remotely turn-on other devices in your system when the Model 975 is powered on. Power (12 volts DC) is applied to this jack when the Model 975 is turned on from the Standby mode. We recommend that this jack be used to turn on a compatible power amplifier such as those available from Outlaw, but it may also be used to activate compatible products such as projection screens or motorized blinds.

Begin by having your amplifier ON and your Model 975 turned OFF. Make sure that if there is a separate switch, or input to turn the trigger on, that it is activated as well. Next, take the mono 3.5mm cable (which is supplied with all Outlaw Audio multichannel amps), and plug it into your Model 975's DC Trigger Output, then take the other end and plug it into the amplifier's DC Trigger.

If connected properly, the amplifier should then turn off. Your trigger is now set up. You can verify this by turning the Model 975 ON and the amplifier will come ON as well. The amplifier must be in ON mode for the trigger to continually control its operation from the Model 975.

Power Connection

Model 975 AC Power Connections



Insert the supplied power cord into the AC input on the rear panel of the preamp/processor. While we don't recommend substituting a different power cord, replacements are available if needed.

CAUTION: *Before you plug the power cord into an AC wall outlet, confirm that all connections to the Model 975 have been made correctly.*

WARNING: *Never disconnect the power cord from the Model 975 while the other end is plugged into an AC outlet. Doing so may cause an electric shock. Always connect power by plugging into the AC outlet last and disconnect by unplugging from the AC outlet first.*

System Setup

At this point you should have made all the necessary physical connections between the Model 975 and your source equipment, amplifiers and speakers. All that remains is to properly setup the system to suit your speaker, amplifier, and room configuration using the universal remote control in and on-screen display (OSD). The section titled "Menu Navigation" explains how to use the universal remote to access and configure the Model 975's setup menus. The sections that follow detail each setup menu and describe the available parameters that can be adjusted.

Later, you can adjust any of these parameters through the OSD, or directly through the front panel display and dedicated buttons on the either remote control.

Remote Control menu navigation buttons

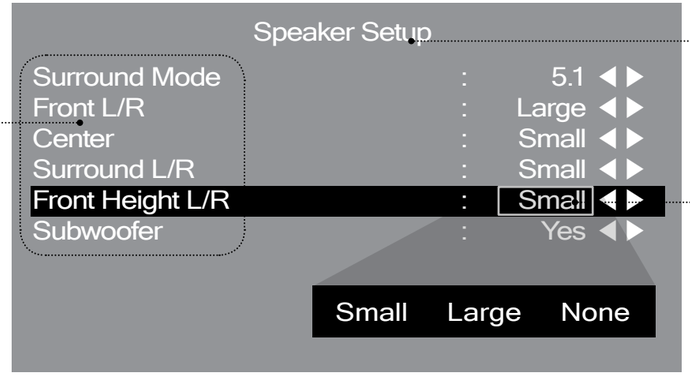
UP and DOWN arrow keys
Use these buttons to scroll up and down through the list of available setup or configuration menus.

LEFT and RIGHT arrow keys
Use these buttons to scroll through the list of available parameters for the selected configuration item.

MENU button
Press this button to see the System Setup menu on your video display. Press it again to go back one level, or to dismiss the menu completely.

OK/FUNC button
Press this button to make a selection from a highlighted menu item or parameter.

On-screen display menu

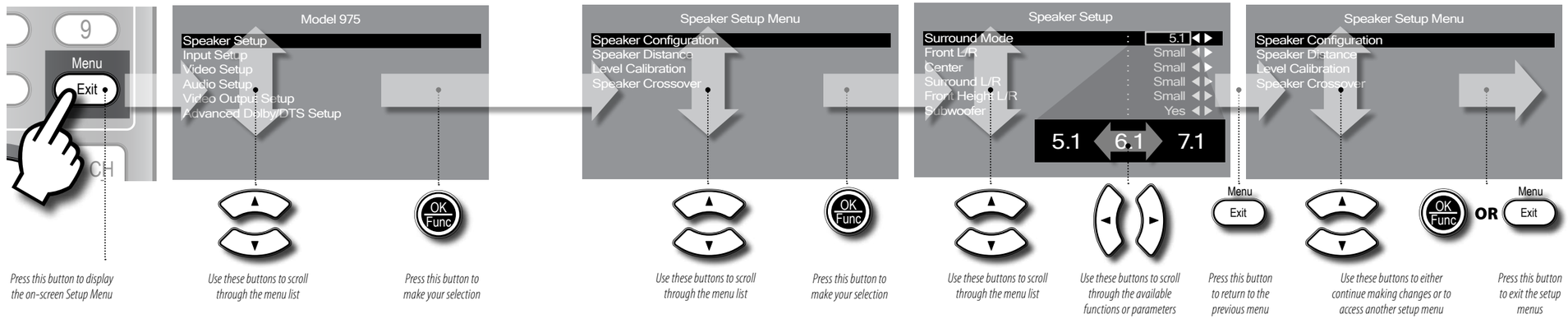


Menu list
Use the UP and DOWN arrow keys on the remote control to select from the list of available setup or configuration menus. The list of available options will vary depending on the connections you have made and what surround mode is selected.

Menu title
Indicates the name of the current setup or configuration menu.

Configuration parameter
Use the LEFT and RIGHT arrow keys on the remote control to select the desired parameter for the selected menu item.

Using the menu navigation buttons to access the Model 975 setup menus



Press this button to display the on-screen Setup Menu

Use these buttons to scroll through the menu list

Press this button to make your selection

Use these buttons to scroll through the menu list

Press this button to make your selection

Use these buttons to scroll through the menu list

Use these buttons to scroll through the available functions or parameters

Press this button to return to the previous menu

Use these buttons to either continue making changes or to access another setup menu

Press this button to exit the setup menus

Chapter 3 **Contents**

Before you begin, make certain that the AC power cord supplied with the Model 975 is firmly inserted into the socket on the unit's rear panel, then plug the power cord into an AC wall outlet or UL-approved power strip or surge protection device. The ring around the STANDBY button on the front panel will light up.

To turn the Model 975 on:

1. **Press the STANDBY button on the front panel of the Model 975, or the POWER ON button on the remote to turn on the unit.**
   The front panel display will illuminate and the ring around the STANDBY button will glow brighter.
2. **Turn on the amplifier(s), source devices, and the video display.**
   If your amplifier is connected to the Model 975's DC trigger, it should have turned on automatically.

We recommend that you perform the entire setup through the on-screen display (OSD), which can be seen on any video monitor connected to the Model 975's HDMI/ARC output. You can also access some of the Model 975's setup functions directly through the front panel display and dedicated buttons on the remote control.

IMPORTANT NOTE: *The on-screen display (OSD) only functions from the Model 975's HDMI output, and only when an HDMI source device is connected and powered up.*

All selections are made using the same combination of buttons, as shown above. The MENU button activates or cancels the on-screen menu.

Remember to press the TNR button on the remote before trying to access the controls of the Model 975 and the on-screen setup menus.

The UP and DOWN arrow keys select a particular function or parameter from the on-screen display menu, while the LEFT and RIGHT arrow keys adjust whatever function or parameter you've just selected.

The OK/FUNC button (in the middle of the navigation buttons) locks in the adjustments you've just made.

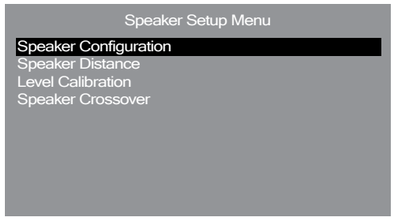
To access, choose, and set parameters from the Model 975 Setup Menus:

1. **Press the TNR button on the remote control.**
   This directs the remote control to send commands to the Model 975.
2. **Press the MENU button on the remote control.**
   A list of the Model 975's six setup menus will be shown on your video display.
3. **Use the UP and DOWN arrow keys (▲▼) on the remote control to highlight the setup menu you want to access.**
   The black highlight bar will indicate which menu is currently selected.
4. **Press the OK/FUNC button on the remote control to select the highlighted setup menu.**
   The list of settings for the selected setup menu will be shown on your video display.
5. **Use the UP and DOWN arrow keys (▲▼) on the remote control to highlight the item you want to configure.**
   The black highlight bar will indicate which configuration menu is currently selected.
6. **Use the LEFT and RIGHT arrow keys (◀▶) on the remote control to select one of the available parameter choices.**
7. **Use the UP and DOWN arrow keys (▲▼) on the remote control to highlight another setting you want to adjust in the current configuration menu.**
8. **When you have finished, press the MENU button to return to the previous menu level.**
   Use the UP and DOWN arrow keys to make additional selections from the menu list.
9. **Repeat steps 2-7 to access the other setup menus.**
10. **To exit the Setup Menu, keep pressing the MENU button until the OSD disappears.**

For the best audio and video performance possible, use the information on the following pages to properly configure your system to work with your speakers and other devices connected to your Model 975. It will be useful to have the owner's manuals for your other components handy during the setup process.

Speaker Setup

Speaker Setup Menu



The Speaker Setup menu enables you to select the following configuration settings:

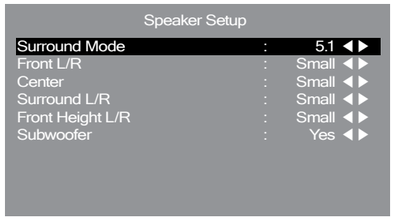
- Speaker Configuration
- Speaker Distance
- Level Calibration
- Speaker Crossover

Each configuration menu is explained on the following pages. Before you configure the Model 975 for your speaker system, we recommend reviewing "Speaker Setup Tips" on page 18 to make sure your system is set up for the best possible performance. Then read the section titled "Menu Navigation" on pages 26-27 to learn how to access and navigate the on-screen display setup menus using the Model 975's remote control.

Make sure that all the connections between the Model 975 and your source equipment, amplifiers and speakers are complete, and that your video monitor/TV is hooked up to the HDMI output of the Model 975 and that everything is powered on.

Speaker Configuration

Speaker Configuration Menu

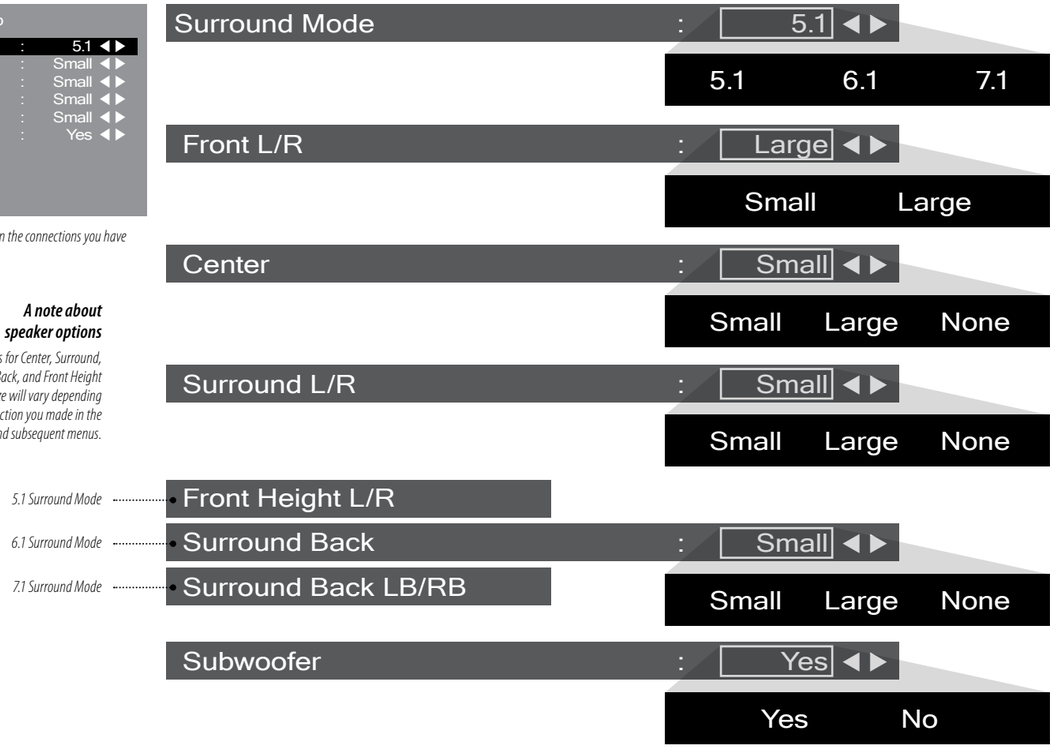


The list of available speakers will vary depending on the connections you have made and what surround mode is selected.

A note about speaker options

The options for Center, Surround, Surround Back, and Front Height speaker size will vary depending on what selection you made in the Front L/R and subsequent menus.

Speaker Configuration Menu Options



The Speaker Configuration menu is shown above. These settings tell the Model 975 how many, what size and what type of speakers are connected to your system.

To set the surround mode and configure the speakers connected to the Model 975:

1. **Use the remote control's menu button and navigation keys to access the Speaker Configuration menu.**
2. **Next, use the remote control to set the appropriate surround mode for your system.**
   The selection you make here also affects the options for setting up your back surround or front height speakers. The available choices are:
   5.1 → 6.1 → 7.1
   The Model 975 creates the appropriate speaker configurations to suit different incoming surround-sound formats.

The remaining settings tell the Model 975 the type and size speakers you have connected to the system. We recommend following your speaker manufacturer's suggestions for size (Large or Small) and Crossover settings. If not available, check your speaker's low end frequency response specifications to determine if they can reproduce full range signals down to at least 30Hz. If so, set the speakers to Large which will send a full range signal to them, and render the crossover settings inactive for these channels. Your subwoofer will not receive signals for any channels set to Large. Otherwise select Small and set the speaker crossover (page 31) frequency to suit the speaker.

3. **Next, use the remote control to set the distance for the Front L/R speakers.**
   Select the size of your front speakers. The choices are:
   Small → Large
4. **Repeat for each type of speaker in your system.**
   The available settings for each speaker type are shown below.

Center Depending on what you selected for the Front L/R speakers, there are up to three options for the Center speaker:
Small → Large → None

If you select None, then the center channel info will be routed to the left and right channels.

Surround L/R Depending on what you selected for the Front L/R speakers, there are up to three options for the Surround speakers:
Small → Large → None

Front Height L/R, Surround Back, or Surround Back LB/RB The selection you make for Surround Mode determines which of these three options are displayed in the configuratiuon menu. A summary of the menus and their options is shown below:

Surr Mode	Speaker Type	Options
5.1	Front Height L/R	Small → Large* → None
6.1	Surround Back†	Small → Large* → None
7.1	Surround LB/RB	Small → Large* → None

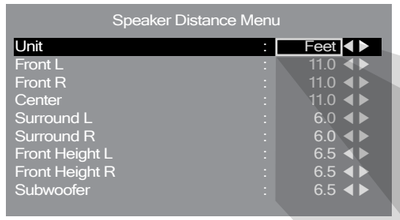
**Only available if you set the Surround L/R's to Large.*
†Only available when one Surround Back speaker is connected to the Surround Back/Front Height L output jack of the Model 975.

Subwoofer Choose one of these options:
Yes → No

5. **When you are finished, use the remote control's menu button and navigation keys to access the next menu, or exit the OSD.**

Speaker Distance Settings

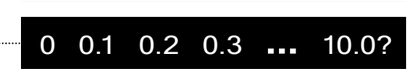
Speaker Distance Menu



The list of available speakers will vary depending on the connections you have made and what surround mode is selected.

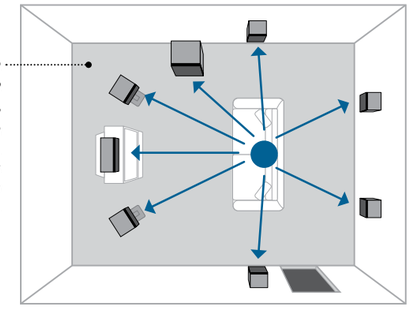
When Feet is chosen from the Unit Menu Item

When Meters is chosen from the Unit Menu Item



Measure speaker distance

Use a tape measure to find the distance from the listening area to each speaker in your system. Measure to the nearest 6 inches or 1/10 of a meter, depending on what system you are using.



The Speaker Distance menu is shown above. Setting the correct distances will enable the Model 975 to create a more realistic, three dimensional soundfield.

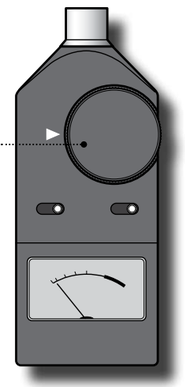
Using a tape measure, determine the distances from each speaker (and the subwoofer) to where your head would be positioned when you're in your favorite listening seat. Measure to the nearest 6 inches or 1/10th of a meter, depending on what system you are using. Have these measurements available when following the steps below.

To set the speaker distance settings:

1. **Use the remote control's menu button and navigation keys to access the Speaker Distance menu.**
   First, choose whether you are using feet or meters to measure the speaker distances from the Unit menu.
2. **Next, use the remote control to set the distance for the Front Left speaker.**
   Each press of the Left or Right arrow keys will increase or decrease the distance by 0.5 if you chose Feet in the Unit menu, or 0.1 if you chose Meters.
3. **Repeat the process for each speaker in your system.**
   The list of speakers will vary depending on what information you entered in the Speaker Configuration Menu.
4. **When you are finished, use the remote control's menu button and navigation keys to access the next menu, or exit the OSD.**

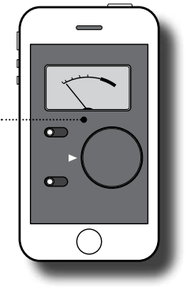
Level Calibration

Level Calibration Menu



Sound Pressure Level (SPL) Meter

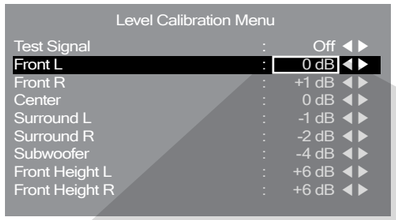
Use an SPL meter to accurately measure the difference in sound levels from each speaker in your system.



Smartphone SPL Meter App

If you have a smartphone, you can download an SPL meter app.

Level Calibration Menu



The list of available speakers will vary depending on the connections you have made and what surround mode is selected.

+6dB +5dB +4dB +3dB +2dB +1dB 0dB -1dB -2dB -3dB -4dB -5dB -6dB

The Level Calibration menu is shown above. Use this menu to set the individual output level of each speaker in your system. Adjusting these settings can compensate for room effects, as well as for speakers placed different distances from the listening area, ensuring a more natural and accurate soundfield.

While it's possible to "rough in" the channel levels by ear, you'll get much better results by using a sound pressure level (SPL) meter. You can use either a dedicated meter like those sold under the RadioShack and Galaxy brands, or if you have a smartphone, use an SPL meter app.

Search the iPhone App Store or Android Play Store for "SPL meter." Most are available for free or at low cost. The SPL meter app does not need to be calibrated for this adjustment—only the comparitive dB level between channels matters, not the absolute dB level of each channel.

To measure and set the speaker channel levels:

1. **Sitting in your favorite listening seat, turn on the SPL meter (or start the SPL meter app on your phone).**
   Hold the device at ear level facing the front of the room.
2. **Set the range (if necessary) to 70dB.**
3. **Use the remote control's menu button and navigation keys to access the Level Calibration menu.**
4. **Activate the test signal.**
   While you can make adjustments without activating the test signal, in almost all cases you'll get best results by using the test signal. When you activate the test signal, the highlighted box will move down to Front L, and you should hear the test noise coming from the front left speaker.

You may need to adjust the Model 975's test tone volume to a comfortable level. To do this, you'll have to back out of the OSD, make the volume adjustment, then get back into the Level Calibration menu following the steps above.

5. **Set the SPL meter to C-Weighting Slow and the level to 75 dB.**
   The dB level is not critical—you can use 80 or 85dB if it's convenient—but 75dB is the level most commonly used in home theater calibration.
6. **Move the test tone to Front R and set the level so it matches that of the front left speaker.**
   The change will be displayed and the BAL indicator will light on the front panel display.
7. **Repeat the process for all speakers in the system.**
8. **When you are finished, use the remote control's menu button and navigation keys to access the next menu, or exit the OSD.**

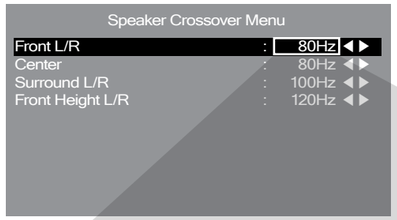
If you are using front height speakers, we recommend setting their level +6dB higher than the other speakers to start. At the standard calibration for Dolby Pro Logic IIz, the level of the front height speakers are too low to be heard on most soundtracks.

Once your Model 975 is fully set up, play some action movies and adjust the volume of the front height speakers to your taste.

If you are using a subwoofer, you may find that its level control needs to be adjusted in order to achieve a balance with the other speakers. Re-adjust the subwoofer control if necessary to the approximate level you need, then use the Model 975's Subwoofer setting in the Level Calibration menu to fine-tune it.

Speaker Crossover Settings

Speaker Crossover Menu



The list of available speakers will vary depending on the connections you have made and what surround mode is selected.

40Hz 50Hz 60Hz 70Hz 80Hz 90Hz ... 150Hz 200Hz

The Speaker Crossover menu is shown above. We recommend you use the speaker/subwoofer crossover settings suggested by the manufacturer of your speakers. However a quick way to determine the proper place to start is to check the frequency response of your loudspeakers. We suggest that you set the crossover to approximately 10Hz above the speaker "rolloff." For example, if your speakers are rated at 50Hz–20kHz, then you would set the crossover to 60Hz.

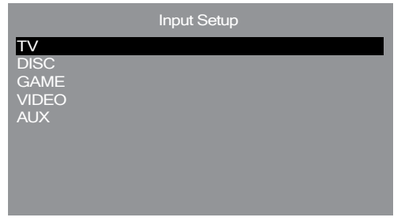
If you hear distortion coming from a speaker, raise its crossover point to a higher frequency. If you hear a lack of upper bass response, or if you hear voices coming from the subwoofer, lower the crossover point for the front left, center and right speakers. The smaller your speakers, the more you may find yourself compromising between distortion and realistic tonal balance. Let your ears be your guide.

To set the speaker crossover frequencies:

1. **Use the remote control's menu button and navigation keys to access the Speaker Crossover menu.**
2. **Set the crossover frequency for the Front L/R speakers.**
   Use the speaker/subwoofer crossover settings suggested by the manufacturer of your speakers, or follow our suggestions above.
3. **Repeat the process for each speaker (or pair of speakers) in your system.**
4. **When you are finished, use the remote control's menu button and navigation keys to access the next menu, or exit the OSD.**

Input Setup

Input Menu



The Input Setup menu is shown above. The Model 975 can handle input from as many as five source devices. These inputs are labeled TV, Disc, Game, Video and Aux, but each can be used for any type of audio or audio/video source you wish.

Please note that while there are many options for A/V connections on your Model 975, there are a total of only 5 selectable inputs.

First the inputs must be configured. To do this, you use the menu and OSD to tell the Model 975 which of the various connections on the back will be assigned to which input.

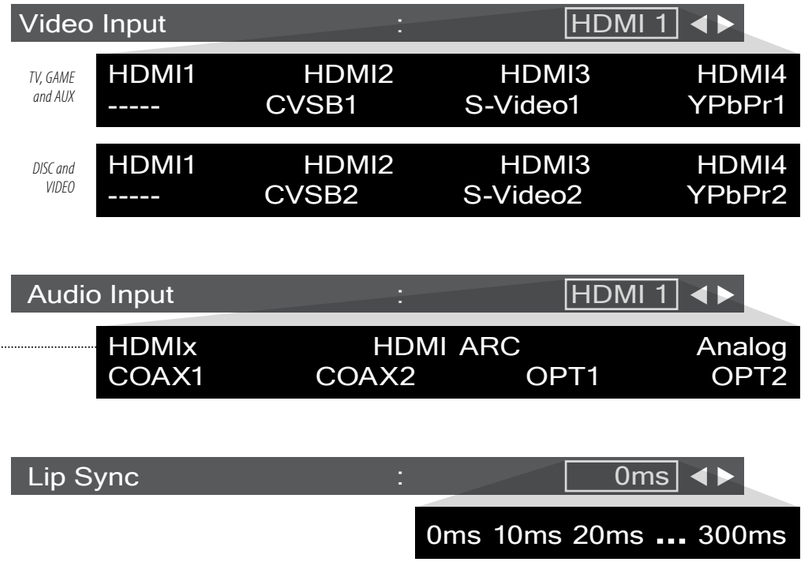
Before you begin, you'll need to know how your devices are connected. If you filled out the connection chart we included in this manual, you're ready to go.

The process for setting up the five inputs is the same, although they each offer slightly different options. The basic process involves choosing the input to be configured, then selecting the video and audio connections you're using.

The Input Setup menu also offers audio delay adjustment for each input to correct lip sync problems, but you should adjust this after the system is up and running and you've had a chance to use it for a while.

Input Menu

Input Options



If you select an HDMI input from the menu above, it will be available as a choice for your audio input as well.

Before you configure your inputs, there are a few important notes about what combinations are supported by the Model 975:

- All HDMI inputs can be assigned to the Disc, Game, Aux, Video and TV inputs.
- The Component 1 input, S-Video 1 input and Composite Video 1 input can be assigned only to the TV, Game and Aux inputs.
- The Component 2 input, S-Video 2 input and Composite Video 2 input can be assigned only to the Disc and Video inputs.

To configure your Model 975's inputs:

1. **Use the remote control's menu button and navigation keys to access the Input Setup menu.**
2. **Select the input you want to configure.**
3. **Now select the video input you want to use.**
   The available options for TV, GAME and AUX are:
   HDMI 1 → HDMI 2 → HDMI 3 → HDMI 4 → ----- → CVSB1 → S-Video1 → YPbPr1

   The available options for DISC and VIDEO are:
   HDMI 1 → HDMI 2 → HDMI 3 → HDMI 4 → ----- → CVSB2 → S-Video2 → YPbPr2

   Select NONE if you are configuring an audio-only source, such as a satellite radio tuner or turntable.
4. **Then select the audio input you want to use.**
   The available options are:
   HDMI x → HDMI ARC → Analog → COAX 1 → COAX 2 → OPT 1 → OPT 2

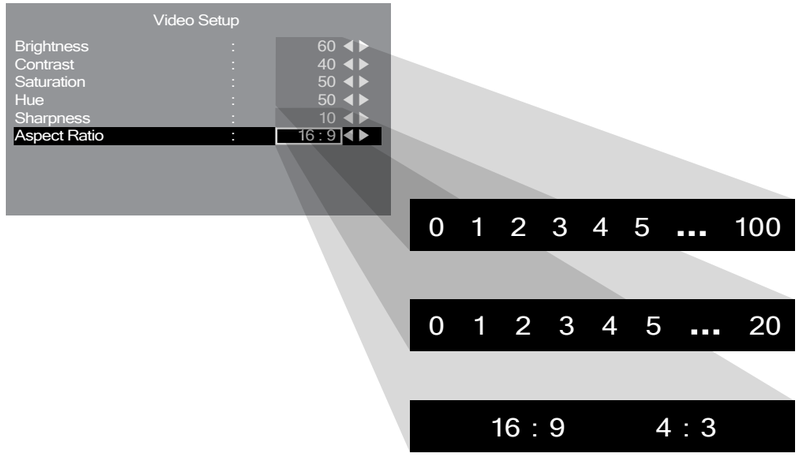
   If you selected one of the HDMI inputs in step 3, it will be displayed as one of the choices here.

If an HDMI video source is not selected, you cannot select one of the HDMI inputs as your audio source. However, you can select to receive audio from this input through an HDMI/ARC connection from your TV. See pages 22-23 for more information.

5. **Repeat the process for each input that you want to configure in your system.**
6. **When you are finished, use the remote control's menu button and navigation keys to access the next menu, or exit the OSD.**

Video Setup

Video Setup Menu



The Model 975's Video Setup menu is shown above. It lets you adjust the basic video parameters (Brightness, Contrast, Saturation, Hue, and Sharpness) of the video image. Of course, these controls are also available on your video display, so they're provided here merely as a convenience.

The one control you may need to set is for Aspect Ratio, which must be set to either 16:9 (for widescreen displays) or 4:3 (for old-style standard displays). The factory setting is for 16:9, which is correct for every TV set and almost every home theater projector currently on the market.

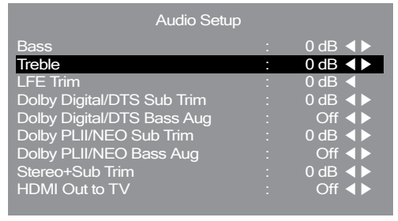
The options in this menu are only active on video inputs set to "Autoscale" in the Video Output Setup Menu. See page 35 for more information.

To make adjustments to the video parameters:

1. **Use the remote control's menu button and navigation keys to access the Input Setup menu.**
2. **Select the parameter you want to adjust.**
   Use the remote control to change the setting. As you use the LEFT and RIGHT arrow keys, the OSD will disappear and the adjustment reading will display at the bottom of the picture from the currently selected video source.
3. **Adjust the setting until it's to your liking, then press OK/FUNC button.**
   You are returned to the Video Setup menu.
4. **Repeat the process for other parameters you want to adjust.**
5. **When you are finished, use the remote control's menu button and navigation keys to access the next menu, or exit the OSD.**

Audio Setup

Audio Setup Menu



The Audio Setup menu is shown above. It lets you adjust basic audio parameters such as Bass and Treble, and also provides extremely flexible control of subwoofer levels. You can fine-tune the bass performance to suit different audio formats and types of soundtracks, and your settings will be used automatically whenever you're listening to that type of material.

To adjust the audio parameters of the Model 975:

1. **Use the remote control's menu button and navigation keys to access the Audio Setup menu.**
2. **Select the audio parameter you want to adjust.**
3. **Use the remote control to adjust the selected parameter.**

Below is a brief explanation of the different adjustments available for each item in the Audio Setup menu.

Bass Use this control to boost or cut bass. The available choices are:
-10db → -8dB → -6dB → -4dB → -2dB → 0 → +2dB → +4dB → +6dB → +8db → +10db

Audio Setup Menu Options

Treble Use this control to boost or cut treble. The available choices are:

-10db → -8dB → -6dB → -4dB → -2dB → 0 → +2dB → +4dB → +6dB → +8db → +10db

LFE Trim This control reduces the level of the LFE (or ".1") component in a 5.1, 6.1 or 7.1 soundtrack. It does not affect signals from other channels. Use it if you find the bass in movie soundtracks to be too loud. There's no "proper" setting; whatever sounds good to you is correct. The available choices are:

0 → -1dB → -2dB → -3dB → -4db → -5db → -6dB → -7dB → -8dB → -9db → -10db

Dolby Digital/DTS Sub Trim This adjustment lets you alter the level of the subwoofer output when Dolby Digital and DTS soundtracks are playing. This does not affect the subwoofer level with non Dolby Digital/DTS material. Use it if you want a little more or a little less bass when this material is playing. The available choices are:

-5db → -4dB → -3dB → -2dB → -1dB → 0 → +1dB → +2dB → +3dB → +4db → +5db

Dolby Digital/DTS Bass Aug This mode can enhance bass performance during Dolby Digital and DTS soundtrack playback. It works only if the front speakers are set to Large. In this mode, the signal to the front left and right speakers is unaltered, but the bass component of that signal is also sent to the subwoofer, so you can get enhanced bass output. The available choices are:

On → Off

Dolby PLII/NEO Sub Trim This adjustment lets you alter the level of the subwoofer output when Dolby Pro Logic II and DTS NEO:6 surround modes are activated without affecting the sound when these modes are off. Use this adjustment if you want a little more or a little less bass when using these modes. The available choices are:

-5db → -4dB → -3dB → -2dB → -1dB → 0 → +1dB → +2dB → +3dB → +4db → +5db

Dolby PLII/NEO Bass Aug This mode can enhance bass performance when Dolby Pro Logic II or DTS NEO:6 mode is engaged. It only works if the front speakers are set to Large. In this mode, the signal to the front left and right speakers is unaltered, but the bass component of that signal is also sent to the subwoofer. The available choices are:

On → Off

Stereo+Sub Trim This adjustment lets you alter the level of the subwoofer output when stereo material is playing, without affecting the subwoofer level with other material. Use it if you want a little more or a little less bass for stereo material. The available choices are:

-5db → -4dB → -3dB → -2dB → -1dB → 0 → +1dB → +2dB → +3dB → +4db → +5db

HDMI Out to TV This feature allows you to route audio from the Model 975 into your TV's speakers. Use it when you want to watch TV without running your surround-sound system. This setting requires that the Model 975 remain powered on. The available choices are:

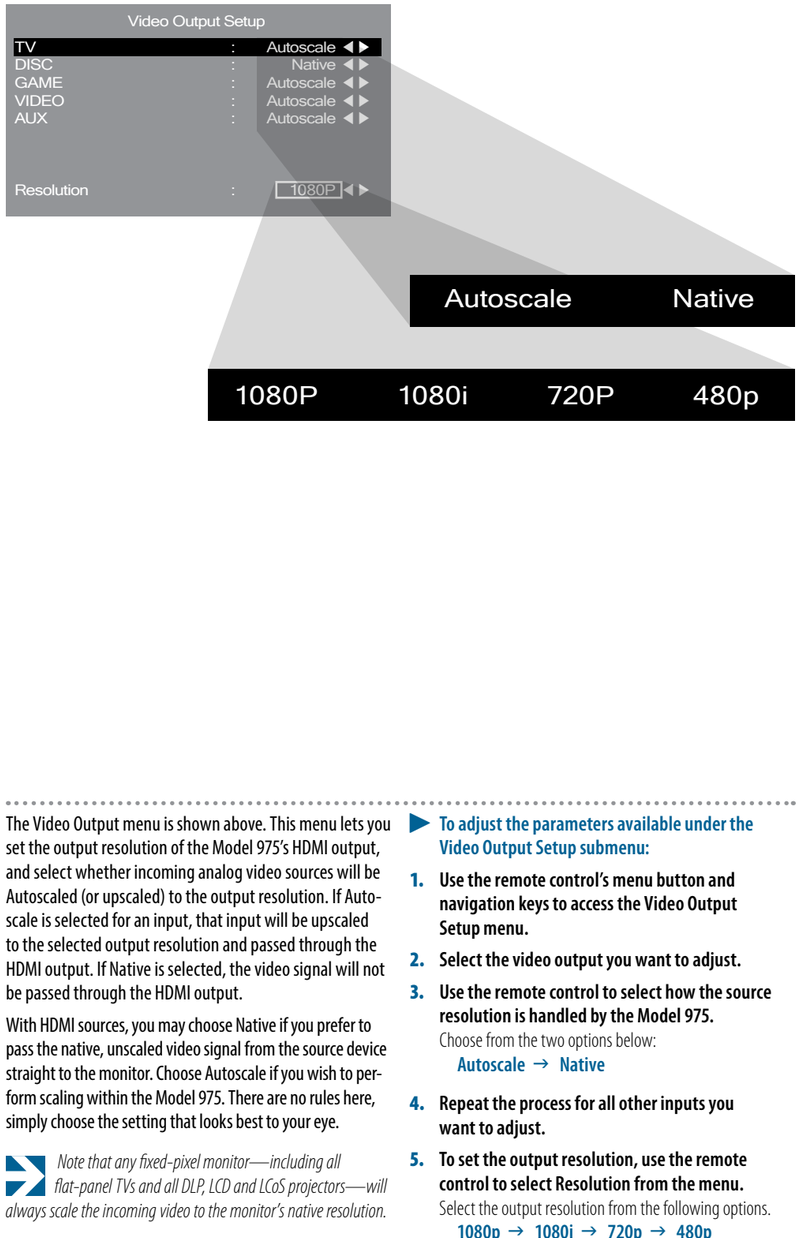
On → Off

The default is set to OFF. Turning this feature ON will completely turn off all of the speakers connected to your Model 975, and must be turned back to OFF in order for your speakers to be active again.

4. **When you are finished, use the remote control's menu button and navigation keys to access the next menu, or exit the OSD.**

Video Output Setup

Video Output Setup Menu



The Video Output menu is shown above. This menu lets you set the output resolution of the Model 975's HDMI output, and select whether incoming analog video sources will be Autoscaled (or upscaled) to the output resolution. If Autoscale is selected for an input, that input will be upscaled to the selected output resolution and passed through the HDMI output. If Native is selected, the video signal will not be passed through the HDMI output.

With HDMI sources, you may choose Native if you prefer to pass the native, unscaled video signal from the source device straight to the monitor. Choose Autoscale if you wish to perform scaling within the Model 975. There are no rules here, simply choose the setting that looks best to your eye.

Note that any fixed-pixel monitor—including all flat-panel TVs and all DLP, LCD and LCoS projectors—will always scale the incoming video to the monitor's native resolution.

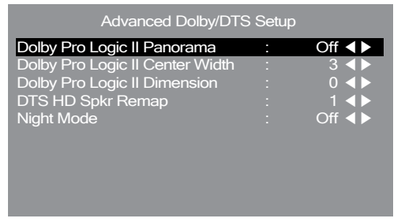
Before you set the output resolution, consult the manual for your video display to find out the optimal resolution to send to the TV. If this information is not available, simply set this parameter to the TV's maximum resolution.

▶ To adjust the parameters available under the Video Output Setup submenu:

1. **Use the remote control's menu button and navigation keys to access the Video Output Setup menu.**
2. **Select the video output you want to adjust.**
3. **Use the remote control to select how the source resolution is handled by the Model 975.**
   Choose from the two options below:
   Autoscale → Native
4. **Repeat the process for all other inputs you want to adjust.**
5. **To set the output resolution, use the remote control to select Resolution from the menu.**
   Select the output resolution from the following options.
   1080p → 1080i → 720p → 480p
6. **When you are finished, use the remote control's menu button and navigation keys to access the next menu, or exit the OSD.**

Advanced Dolby/DTS Setup

Advanced Dolby/DTS Setup Menu



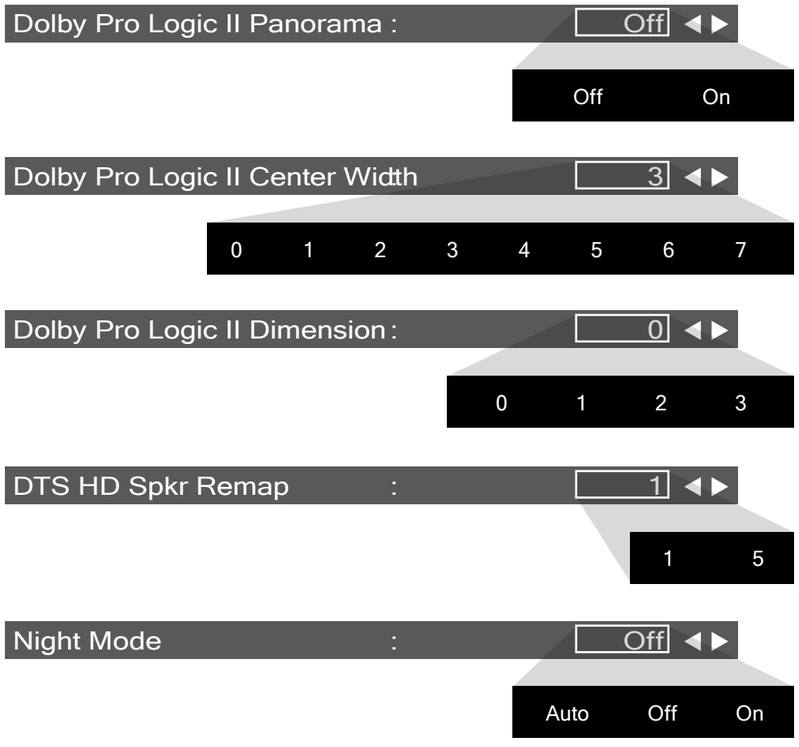
Advanced Dolby/DTS Setup menu is shown above. This menu lets you adjust some of the specific features available from the DTS and Dolby technologies employed in the Model 975.

▶ To adjust the parameters of the Model 975:

1. **Use the remote control's menu button and navigation keys to access the Advanced Dolby/DTS Setup menu.**
2. **Select the function you want to adjust.**
3. **Use the remote control to make adjustments to the parameters of the selected function.**

Below is brief explanation of the different adjustments available and what they do for each item in the Advanced Dolby/DTS Setup menu.

Advanced Dolby/DTS Options



Dolby Pro Logic II Panorama This feature provides a more "wraparound" effect when Dolby Pro Logic II Music mode is engaged. The available options are:

Off → On

Dolby Pro Logic II Center Width This control operates only when Dolby Pro Logic II Music mode is engaged. It adjusts the mix of the right and left channels into the center channel. A setting of 7 provides no center-channel sound at all. A setting of 0 provides the strongest center-channel sound. We recommend a setting of 3 for most music and systems.

0 → 1 → 2 → 3 → 4 → 5 → 6 → 7

Dolby Pro Logic II Dimension Use this control to increase or decrease the surround effect in Pro Logic II Music mode. A setting of 0 gives the least surround effect, while 3 gives the most surround effect. We recommend starting with a setting of 0 and adjusting from there to your taste.

0 → 1 → 2 → 3

DTS HD Spkr Remap Because there's no standard speaker layout for 7.1 mixing, DTS-HD Master Audio 7.1 soundtracks can carry metadata that tells the surround processor what speaker configuration was used for mixing. The processor can then adjust the sound to allow your speakers to simulate the surround effect you'd hear on the actual speaker system on which the soundtrack was mixed. A setting of 1 should be selected if your surround L/R speakers are placed to the sides of the listening position. A setting of 5 should be selected if your surround speakers are located behind the listener, just outside of the surround back speakers.

1 → 5

Night Mode This mode affects soundtracks produced in Dolby Digital, Dolby Digital Plus or Dolby TrueHD. It employs Dynamic Range Compression (DRC), which quiets the loud peaks in a soundtrack while retaining the same volume level for dialogue. There are three modes. "Auto" activates DRC using instructions encoded in the soundtrack itself; you may have more or less DRC effect depending on how the engineers produced the soundtrack. "On" activates DRC for all Dolby soundtracks. "Off" deactivates DRC entirely.

Auto → Off → On

Operation

Now that your Model 975 is properly connected and configured, you're ready to enjoy it! We designed the Model 975 to be simple and intuitive, so for most of its operations you probably don't need to read the manual. However, it's worth browsing through the operation instructions so that you don't miss out on any of the Model 975's useful features.

Although you've already used the menus and on-screen display to set up the Model 975, many of its settings can be changed "on the fly," directly from the remote, without going through the menus.

Chapter 4 **Contents**

Choose a Device to Operate

You can use the universal remote control to operate the functions of the Model 975, as well as other components in your system.

Operate functions on Model 975

Operate functions of another device

▶ **To select a device for the universal remote control to operate:**

1. **To control the functions of the Model 975, press the TNR button at the top of the remote.**
   Use the remote control to access the Model 975's controls and setup menus. In this mode, functions controlled by the remote are indicated by the labels printed above the buttons.
2. **To operate the functions of another device in your system, press the appropriate component selection button (CBL, SAT, DISC, etc.) from the top of the remote control.**
   When in this mode, functions controlled by the remote are indicated by the labels printed directly on the buttons.

Power

Turning the unit on

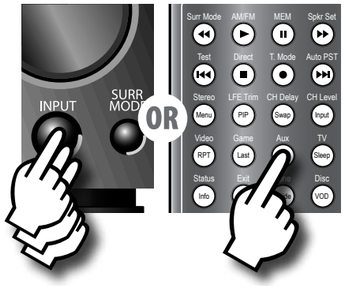
Turning the unit off

▶ **To turn the Model 975 on and off:**

1. **To turn the unit on, press the STANDBY button on the front panel or the POWER ON button on the remote control.**
   The front panel display will illuminate and the ring around the STANDBY button will glow brighter.
2. **To turn the unit off, press the STANDBY button on the front panel again or press the OFF button on the remote control.**
   The front panel display will go out and the ring around the STANDBY button will dim.

Selecting a Source

Selecting an input



Front Panel Display

The Model 975 lets you select from one of five sources, labeled TV, Disc, Video, Game and Aux. The names of the input sources are indicated by the labels printed above the buttons on the remote control. These can be configured to carry signals from any audio or audio/video source device you wish. To find out how to configure the inputs, see pages 31-34.

▶ To select a source with the remote control:

1. **Press the TNR button at the top of the remote.**
2. **Press one of the source buttons (AM/FM, Video, Game, Aux, TV, or Disc) on the remote control.**

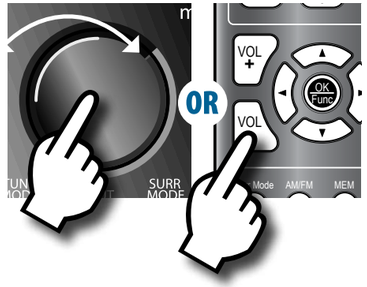
▶ To select a source from the Model 975 front panel:

Press the INPUT button on the front panel to cycle through the input sources.

The front panel display will show the selected source, as shown above. If the source you have selected gets its audio from one of the HDMI inputs, the number of that input will also be displayed, as seen above.

Volume Control

Increasing or decreasing volume level



Front Panel Display

Use this control to adjust the volume level of all currently connected speakers.

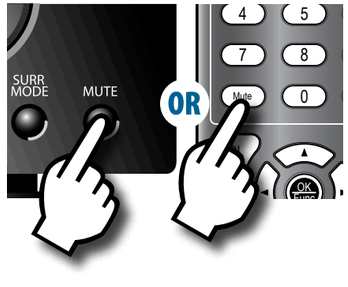
▶ To adjust the volume level:

Press the VOL + or – button on the remote, or turn the VOLUME knob on the front panel.
The volume level in decibels (dB) will be shown on the front panel display as seen above.

Minimum volume setting is -90 dB. The maximum volume setting may vary depending on how you have set the levels of the individual channels. Setting trims to higher than 0 dB may reduce the maximum volume setting.

Muting

Turn Mute on and off



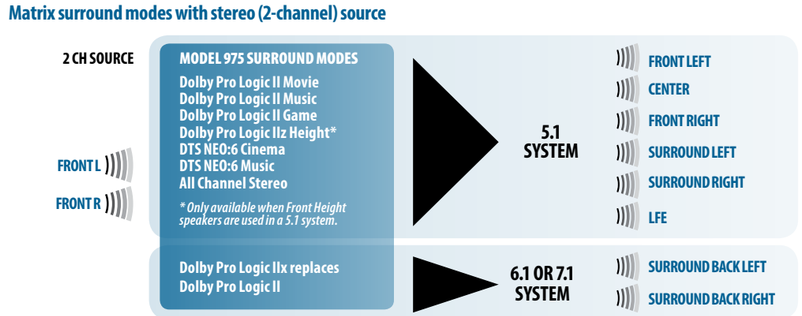
Front Panel Display

▶ Use this control to turn the sound off momentarily.

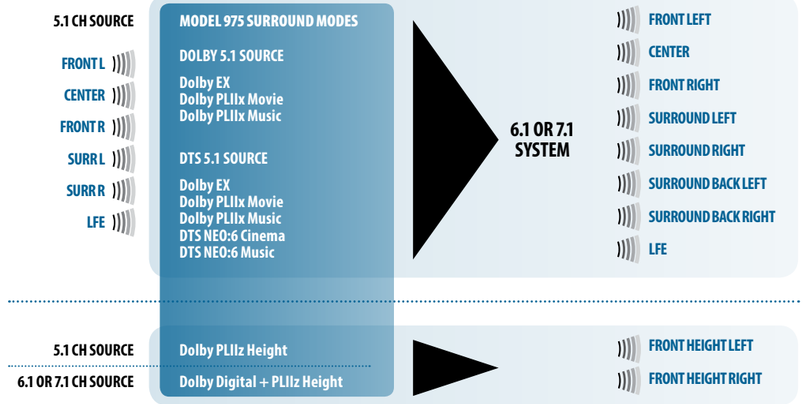
1. **Press the MUTE button on the remote control or the front panel.**
The sound will be muted and the front panel display will read MUTE ON, as shown above.
2. **Press either MUTE button again to restore the volume to its previous level.**

Changing the Surround Mode

Matrix surround modes with stereo (2-channel) source



Matrix surround modes with 5.1, 6.1 or 7.1 source



The SURR MODE control activates the Model 975's matrix surround sound modes, and changes the surround mode from the one currently selected. The modes available will depend on whether the incoming signal is stereo, 5.1, 6.1 or 7.1, and what speaker configuration you are using.

If the Model 975 is receiving a stereo (2-channel) signal and you are using a 5.1 speaker setup, you will be able to choose among these modes:

Dolby Pro Logic II Movie → Dolby Pro Logic II Music → Dolby Pro Logic II Game → DTS NEO:6 Cinema → DTS NEO:6 Music → All Channel Stereo

If you are using a 5.1 setup with front height speakers added, you will also have the option to select the Pro Logic IIz Height mode.

If you are using a 6.1 or 7.1 setup, Pro Logic IIx will be employed instead of plain Pro Logic II.

If the Model 975 is receiving a 5.1 signal and you have a speaker system using front height speakers, pressing the SURR MODE button will let you access the PLIIz Height mode.

If you have a speaker system using one (6.1) or two (7.1) back surround speakers, pressing the SURR MODE button when 5.1 material is playing will let you expand the two surround channels into three or four surround channels.

With Dolby 5.1 material, you can access three surround modes:

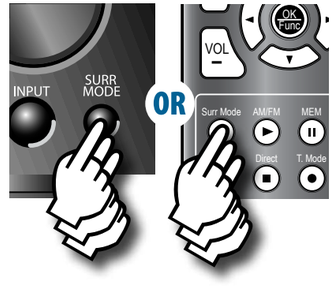
Dolby EX → Dolby PLIIx Movie → Dolby PLIIx Music

When DTS 5.1 material is playing, you can access these surround modes:

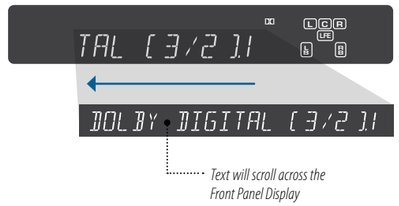
Dolby EX → Dolby PLIIx Movie → Dolby PLIIx Music → DTS NEO:6 Cinema → DTS NEO:6 Music.

If the Model 975 is receiving a 6.1 or 7.1 signal and you have a speaker system using front height speakers, pressing the SURR MODE button will let you access the Dolby Digital + PLIIz Height mode.

To activate available surround modes



Front Panel Display



Text will scroll across the Front Panel Display

▶ To activate one of the Model 975's surround modes:

1. **Press the SURR MODE button on the remote or the front panel**
The front panel display will read out the currently selected surround mode or, if no surround mode has been selected, the format of the incoming signal.

   If a digital 5.1 or 7.1 soundtrack is playing, you will see a readout of the format of that material and its channel content, such as DOLBY DIGITAL [3/2].1. The first number in the parentheses is the number of front channels, while the second number is the number of surround channels. The ".1" after the parentheses indicates the presence of a low-frequency effects (LFE) channel.
2. **Press the SURR MODE button again to change the surround mode.**
The front panel display will show which mode is selected.
3. **Press the SURR MODE button repeatedly until the mode you want is selected.**

Switching to Stereo

Deactivate surround mode and switch to stereo

Front Panel Display

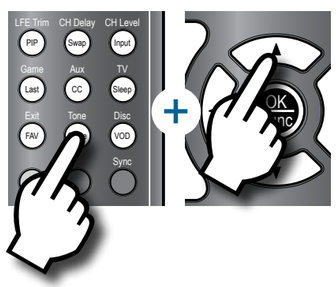
The Model 975 lets you deactivate surround sound and switch to stereo at the push of a button. If you have a subwoofer in your system, the subwoofer can function in stereo mode.

▶ To switch the Model 975 to stereo mode:

1. **Press the STEREO button on the remote control**
   Any surround sound mode currently in use will be deactivated, and the front panel display will read either STEREO or STEREO+SW (stereo plus subwoofer), depending on your speaker configuration settings.
2. **To go back into surround sound, press the SURR MODE on the remote or the front panel.**

Adjusting the Tone Controls

Accessing the tone controls



Front Panel Display

The Model 975 has bass and treble controls that can boost or cut treble in 2 dB steps, to a maximum ±10 dB. These controls can be used to fine-tune the sound of your system for all material, or just for certain movies or music that need a bit of tweaking.

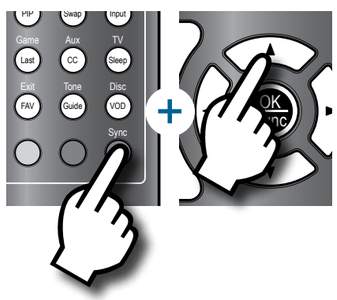
The bass and treble settings can be adjusted using the remote control and the front panel display, or through the menu and on-screen display. To adjust these controls through the menu/OSD, see pages 33-34.

▶ To adjust the bass and treble:

1. **Press the TONE button on the remote.**
   The front panel display will show the setting of the bass control, as shown above.
2. **Press the UP or DOWN arrow keys (▲▼) on the remote to raise or lower the level of bass in dB.**
3. **Press the TONE button again to set the treble.**
   The front panel display will show the setting of the treble control, such as TRB -2 dB.
4. **Press the UP or DOWN arrow keys (▲▼) on the remote to raise or lower the level of treble in dB.**

Adjusting the Lip Sync Delay

Setting Lip Sync Delay



Front Panel Display

If you notice a lip sync problem with a movie or TV show you're watching, it's because the audio is taking less time to process than the video. (Most common when you're watching broadcast TV.) The Model 975 lets you delay the audio slightly to get the audio and video back in sync.

If you find that a particular source, such as a digital TV tuner, has a consistent lip sync problem, you can preset the lip sync for that source only through the Input Setup submenu (see page 31).

▶ To set the lip sync delay for a source you are viewing:

1. **Play the source material (movie or TV show) with the lip sync problem.**
2. **Press the SYNC button on the remote.**
   The front panel display will show the current audio delay setting, as shown above.
3. **Press the UP or DOWN arrow keys (▲▼) on the remote to increase or decrease the lip sync delay in increments of 10 milliseconds (10 mS).**
   Experiment until you get the dialogue in sync with picture.

Activating Night Mode (DRC)

Activating Night Mode

Front Panel Display

Night mode affects soundtracks produced in Dolby Digital, Dolby Digital Plus or Dolby TrueHD. It employs Dynamic Range Compression (DRC), quieting the loud peaks in a soundtrack while retaining the same volume level for dialogue. There are three modes:

- **Auto** Activates DRC using instructions encoded in the soundtrack itself; you may have more or less DRC effect depending on how the soundtrack was produced.
- **On** Activates DRC for all Dolby soundtracks.
- **Off** Deactivates DRC entirely.

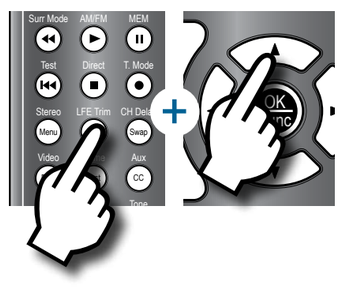
Night Mode can be set using the remote control and the front panel display, or through the menu and the on-screen display (see page 36).

▶ To activate Night Mode:

1. **Press the NIGHT button on the remote control.**
   The front panel display will show the currently selected DRC mode, as shown above.
2. **Press the NIGHT button repeatedly to change the mode to DRC on, DRC off or DRC Auto.**

Adjusting LFE Trim

Adjusting the LFE trim



Front Panel Display

This control reduces the level of the LFE (or ".1") component in a 5.1, 6.1 or 7.1 soundtrack, to a maximum of -10 dB. It does not affect signals from other channels. Use it if you find the bass in movie soundtracks to be too loud. There's no "proper" setting, whatever sounds good to you is correct.

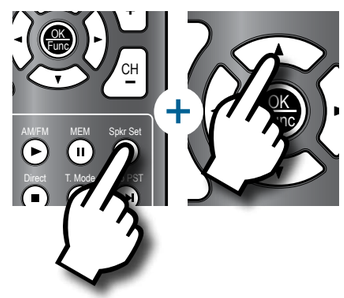
LFE Trim can be set using the remote control and the front panel display, or through the menu and the on-screen display. To set LFE trim through the menu/OSD, see page 32. The front display will read "Mode Unavailable" if the soundtrack you're playing lacks an LFE signal.

▶ To adjust the LFE trim:

1. **Press the LFE TRIM button on the remote.**
   The current LFE Trim setting will be shown on the front panel display, as shown above.
2. **Press the up or down buttons (▲▼) on the remote to adjust the LFE Trim.**

Setting Speaker Size

Accessing speaker size settings



Front Panel Display

You can change the size settings for the speakers in your system using the remote control and the front panel display, or through the menu and the on-screen display. To set speaker size through the menu/OSD, see pages 28-29.

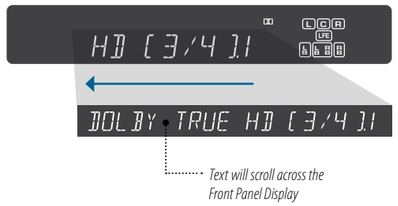
▶ To change the size settings of your system's speakers:

1. **Press the SPKR SET button on the remote.**
   The front panel display will show the current size setting for the front left and right speakers, as shown above.
2. **Press the up or down buttons (▲▼) on the remote to change the size setting for the front left and right speakers.**
3. **Press the SPKR SET button again to access the other speakers in your system.**
   The available speakers will depend on what surround mode you set in the Speaker Configuration menu on page 28.
4. **Repeat the process for the remaining speakers.**

Checking Operating Status

Display the operating status of the Model 975

Front Panel Display



Text will scroll across the Front Panel Display

The Model 975 can give you an immediate indicator of the digital multichannel format (i.e., DTS-HD Master Audio, Dolby Digital, etc.) that it is currently playing. Or if the Model 975 is receiving a stereo/2.0 signal, it can display the currently selected surround sound mode (i.e., Dolby Pro Logic II Music, DTS NEO:6 Cinema, etc.).

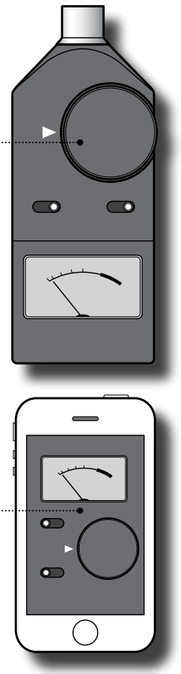
If a digital 5.1 or 7.1 soundtrack is playing, you will see a readout of the format of that material and its channel content, such as DOLBY TRUE HD [3/4].1. The first number in the parentheses is the number of front channels, while the second number is the number of surround channels. The ".1" after the parentheses indicates the presence of a low-frequency effects (LFE) channel.

▶ To check the current operating status of your system:

Press the STATUS button on the remote control.
The front panel display will show the current status, as shown above.

Adjusting Channel Levels

Measuring Sound Pressure Levels



Sound Pressure Level (SPL) Meter

Use an SPL meter to accurately measure the difference in sound levels from each speaker in your system.

Smartphone SPL Meter App

If you have a smartphone, you can download an SPL meter app.

The Model 975 allows you to adjust channel levels two ways: while listening to source material during playback, or by using the internal test tone. Either method makes it easy to adjust the channel levels.

Adjusting the channel levels by using the internal test tone can be accomplished by using either remote control and the front panel display, or through the Model 975 Setup menu and on-screen display. To set channel levels with the test tone through the OSD, see page 30.

While it's possible to "rough in" the channel levels by ear, you'll get much better results by using a sound pressure level (SPL) meter. You can use either a dedicated meter like those sold under the RadioShack and Galaxy brands, or if you have a smartphone, use an SPL meter app. Search your iPhone's App Store or your Android's Play Store for "SPL meter." Most are available for free or at low cost. In either case, set the SPL meter to C-Weighting Slow while testing.

The SPL meter app does not need to be calibrated for this adjustment—only the comparitive dB level between channels matters, not the absolute dB level of each channel.

Both methods are described in detail at right.

Using the Test Tone

Adjusting the channel levels of the Model 975 using the internal test tone

Front Panel Display

▶ To adjust the channel levels of the Model 975 using the internal test tone generator:

1. **Sitting in your favorite listening seat, turn on the SPL meter (or start the SPL meter app on your phone).**
2. **Press the TEST button on the remote control.**
   The left channel level will be shown on the front panel display and the test tone will come from the left speaker.
3. **Note the level of the test tone on the SPL meter.**
   This is the level you'll want to match when setting the level of the other channels.
4. **Press TEST repeatedly and observe the level on the SPL meter on the other channels.**
5. **Press the UP or DOWN arrow keys (▲▼) on the remote to adjust the level of the selected channel to match the level of the front left channel.**
   The change will be displayed and the BAL indicator will light on the front panel display.
6. **Repeat the process for the remaining channels.**
   The test tone will stop when it has played through all channels, or after about 5 seconds if you don't press the TEST button again.

During Playback

Adjusting the channel levels of the Model 975 during playback

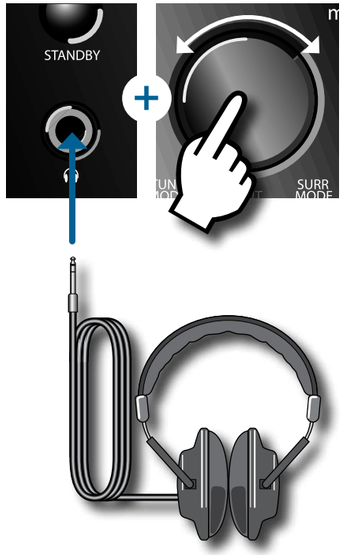
Front Panel Display

▶ To adjust the channel levels of the Model 975 during playback:

1. **Press the CH. LEVEL button on the remote control.**
2. **The left channel level will be shown on the front panel display.**
3. **Press the UP or DOWN arrow keys (▲▼) on the remote to change the level of the selected channel.**
   The change will be displayed and the BAL indicator will light on the front panel display.
4. **Press CH. LEVEL repeatedly until the next channel you want to adjust appears.**
   The available channels will depend on how you configured your system during speaker setup.
5. **Repeat the process to adjust the level of other channels.**

Listening With Headphones

Listening with headphones



The Model 975's front headphone jack works with any standard headphones equipped with a 1/4-inch plug, or headphones equipped with a 1/8-inch plug and used with a 1/8- to 1/4-inch adapter.

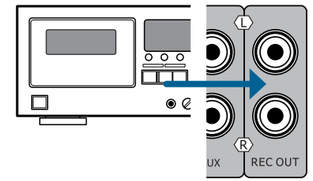
IMPORTANT NOTE: *To avoid the possibility of hearing damage, we strongly recommend reducing the Model 975's volume to -30 to -40 dB before you play any material through your headphones, then bring the volume up to a comfortable listening level. Before disconnecting the headphones you should turn the volume down as the main speakers will again become active.*

▶ To use headphones with the Model 975:

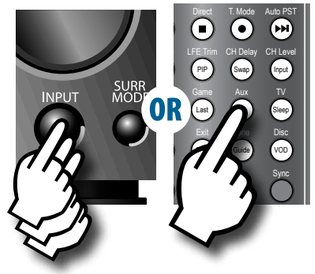
1. **Select a source to listen to on the Model 975, and turn the volume down to -30 or -40 dB.**
2. **Plug in your headphones and put them on.**
   The main system sound will mute and you should hear your selected audio source at a very low volume.
3. **Slowly turn the volume up to a comfortable level.**
4. **Before changing sources, turn the Model 975's volume down, then raise it again to a comfortable level after the audio is playing.**

Audio Recording

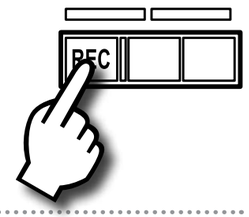
Connect audio recording device to Model 975



Selecting an input source to record



Set your device to record



You can use the Model 975's REC OUT jacks to record from any of the Model 975's analog inputs or the AM/FM tuner. Digital sources cannot be recorded directly, however, you can record them if you connect the source device's analog output to one of the Model 975's analog inputs.

The REC OUT jacks carry a full-scale (maximum line level) audio signal and are not affected by the setting of the Model 975's volume control.

▶ To record the audio from a source connected to the Model 975:

1. **Connect the analog audio inputs of your recording device to the REC OUT jacks on the rear panel of the Model 975.**
   Follow the recording device manufacturer's recommended procedures for the settings needed to make the recording.
2. **Use the source buttons on the Model 975's remote or the INPUT button on its front panel to select the source you want to record.**
3. **Set the device to the record mode and begin recording.**

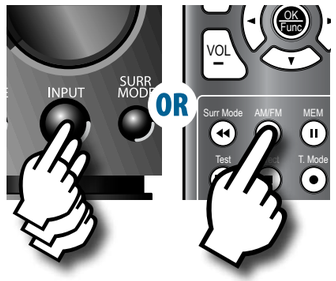
Tuner Operation

The AM/FM tuner built into the Model 975 can be tuned to any of 15 AM and 15 FM stations that you set into memory. It can also be tuned manually. Radio reception requires that appropriate AM and FM antennas be connected to the Model 975's rear panel (see page 24).

Chapter 5 **Contents**

Select Tuner and Band

Activating the Tuner and selecting a band



Front Panel Display

To select the tuner and band from the remote control:

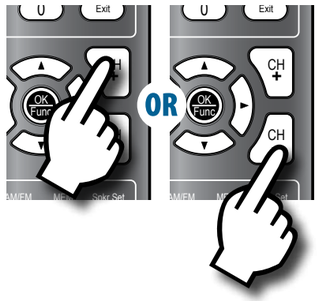
1. **Press the AM/FM button on the remote control.**
   You will hear the radio station and band that were last playing, and the front panel display will show you the band and frequency as shown above.
2. **Press the AM/FM button again to switch to the other band.**

To select the tuner and band from the front panel of the Model 975:

Press the INPUT button on the front panel repeatedly until the display shows FM or AM, whichever you choose.
You will hear the radio station and band that were last playing, and the front panel display will show you the band and frequency as shown above.

Tune a Station Manually

Tuning to a radio station



To tune a radio station manually:

1. **Press the CH + button on the remote to go to a higher frequency or the CH – button to go to a lower frequency.**
   Each push will change the frequency by 0.1 MHz in FM or 10 KHz in AM.
2. **To automatically scan to the next station, hold either the CH + or CH – button down for about 1 second and release it.**
   The scan will stop when the Model 975's tuner finds the next active frequency.

Create Memory Preset Manually

Creating a memory preset manually

Front Panel Display

To create memory presets for your favorite stations manually:

1. **Use the CH +/– buttons on the remote to tune the station you want to set into memory.**
2. **Press and hold the MEM button on the remote until the MEM indicator on the front panel display flashes.**
3. **Use the numeric keypad to enter the preset number.**
   For presets 11 to 15, press 1 first then the second number. You can enter as many as 15 presets for FM and 15 for AM.

Create Memory Preset Automatically

Creating a memory preset automatically

To create memory presets automatically:

1. **Select the AM or FM band.**
2. **Press the AUTO PST button on the remote.**
   The Model 975's tuner will automatically scan the band, locate any stations that can be tuned in, and automatically assign the first 15 stations it encounters in each band to presets. The station at the lowest frequency will be assigned preset 1, the station next highest in frequency will be assigned preset 2, etc.
3. **Repeat the process for the other band (AM or FM) if you wish.**

Select a Preset Station

Selecting a memory preset

Front Panel Display

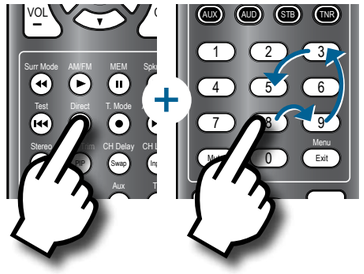
To select a preset station:

1. **Use the AM/FM button on the remote or the INPUT button on the front panel to select AM or FM.**
2. **Use the numeric keypad to enter the number of the station you want to listen to.**
   The station will start playing and its frequency will be shown on the front panel display.

To access preset 1 more quickly, enter 0 then 1 on the remote control.

Entering a Station Manually

Tuning a frequency manually



Front Panel Display

The Model 975 allows you to select radio stations directly if you know the station's frequency.

To tune stations directly by frequency:

1. **Select the band (AM or FM) you want to listen to.**
2. **Push the DIRECT button on the remote control.**
3. **Use the numeric keys on the remote to enter the frequency of the desired station.**
   For example, to tune to 1150 AM, push 1, 1, 5, 0. For 106.9 FM, push 1, 0, 6, 9. If you enter an invalid frequency, such as 1950 AM, the tuner will revert to the previously tuned station.

Select FM Mono

Switching to FM mono

Front Panel Display

Sometimes FM reception is clearer in mono than in stereo. If you're hearing a lot of interference or static in your FM signal, try listening in mono to see if it clears up. The same signal will play from the left and right speakers, but it will probably be clearer.

To select FM mono:

1. **When you are listening to an FM station, press the T. MODE button on the remote control.**
   The sound will change from stereo to mono, and the front panel display will show the mode, as shown above:
2. **To switch back to stereo, press the T. MODE button on the remote again.**
   The front panel display will indicate that you are back in FM stereo mode.

Remote Control Operation

The universal remote control that comes with the Model 975 can be programmed to control your TV as well as six other components in your system.

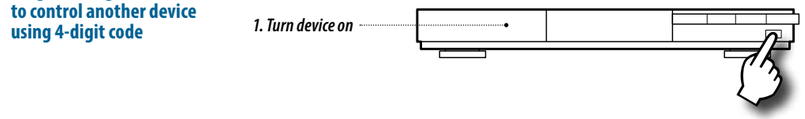
When the remote is transmitting IR command codes to the components in your system, the red LED near the top of the remote will blink.

The remote's backlight is activated when you press any key. The keys will stay lit for 8 seconds, then go out. Be careful not to leave anything on top of the remote or lay the remote upside-down as it could keep the backlight activated and run down the remote control's battery prematurely.

Chapter 6 **Contents**

Programming Using Direct Code Entry

Programming the remote to control another device using 4-digit code



The remote control for the Model 975 can be programmed to control a large number of audio/video devices. Consult the included list of 4-digit codes on page 57 to find the device you want to control. For large/popular brands, you will probably be given many different codes. If you do not see your brand of component, try using auto code search as explained in the next section.

Use direct code entry to program the remote to control another component:

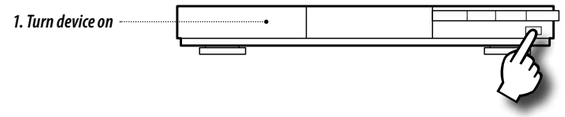
1. **Turn on the power of the device you want to control.**
2. **Press and release the button on the remote for the device you want to control (i.e., DISC, SAT, TV).**
   The LED indicator will blink once.

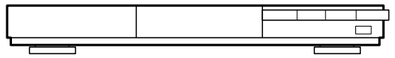
Any type of device can be programmed for any key—i.e., the AUX control can be used to select TV control if you wish. The TNR key cannot be programmed, because it is used to control the Model 975.

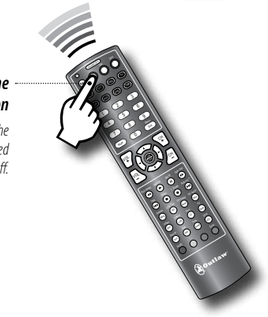
3. **Press and hold the SETUP button for about 3 seconds until the LED indicator glows solid, then release the SETUP button.**
4. **Use the remote's 10-key pad to enter the first 4-digit code listed for your brand and type of component.**
   You will see the LED flash once for each number you enter. If the code is valid for that type of component, the LED will turn off when the last number is entered and the code will be saved. If the code is invalid, the LED flashes twice and then turns off. If the code is invalid, make sure you entered it correctly. If you did, check to make sure you have the right code. If you do not enter anything for 8 seconds, the remote will go out of programming mode.
5. **Point the remote at the device you want to control, then press the SRC PWR button on the remote.**
   If the power on the selected component turns off, you have entered the appropriate code. If the power doesn't turn off, find the next code on the list and repeat steps 2 through 5 until you find a code that allows the remote to turn off the power on the selected component.

Programming Using Auto Code Search

Programming the remote to control another device using auto code search







Using auto code search to program the remote to control another component:

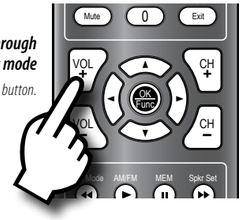
1. **Turn on the power of the device you want to control.**
2. **Press and release the button on the remote for the device you want to control (i.e., DISC, SAT, TV, etc.)**
   The LED indicator will blink once.

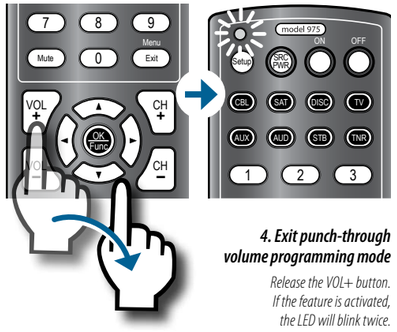
Any type of device can be programmed for any key—i.e., the AUX control can be used to select TV control if you wish. The TNR key cannot be programmed, because it is used to control the Model 975.

3. **Press and hold the SETUP button for about 3 seconds until the LED indicator glows solid. Release the SETUP button.**
4. **Point the remote at the device you want to control, then press the SRC PWR button on the remote.**
5. **If the device turns off, press the device button (i.e., DISC, SAT, TV, etc.) to save the code.**
   The LED indicator will go out.
6. **If the device does not turn off, hit the SRC PWR button on the remote again.**
   Given the vast library of compatible device codes, you may need to press the button as many as 350 times before the component powers off. When the device turns off, press the device button (i.e., DISC, SAT, TV, etc.) to save the code. The LED indicator will go out.

Activate Punch-through Volume

Programming the remote to use the punch-through volume feature





The punch-through volume feature allows the VOLUME and MUTE commands to bypass the currently controlled device and adjust the volume on the Model 975, without requiring you to hit the TNR button to tell the remote to control the Model 975.

To activate the punch-through volume feature:

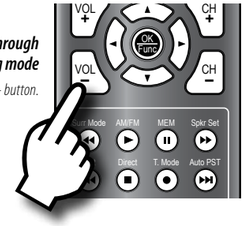
1. **Press the desired component selection button (i.e., CBL, SAT, etc.) for which you want to use the VOL+/- buttons to control the Model 975 instead of the device.**
2. **Press and hold the VOL+ button.**
3. **While pressing and holding the VOL+ button, press the TNR button once.**

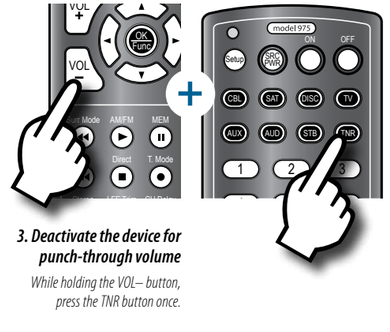
Make sure to only press the TNR button once. If you press the TNR button more than once, the LED will flash 6 times and the remote will exit programming mode and you will have to begin again.

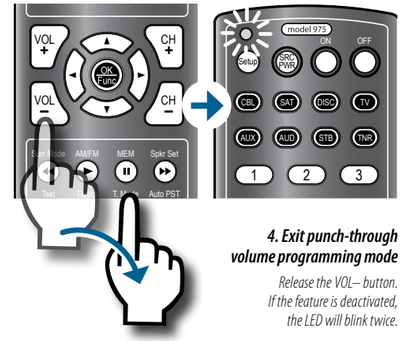
4. **Release the VOL+ button.**
   The LED will flash twice if the punch-through volume feature is activated.
5. **Check to make sure the function works by pressing the button on the remote for the device in question (i.e., CBL, SAT, etc.), and verify that the VOL+/- controls can operate the Model 975 volume.**
   If they do not, repeat the above steps.

Deactivate Punch-through Volume

Programming the remote to stop using the punch-through volume feature







To deactivate the punch-through volume feature:

1. **Press the desired component selection button (i.e., CBL, SAT, etc.) for which the VOL+/- buttons currently control the Model 975 instead of the device.**
2. **Press and hold the VOL- button.**
3. **While pressing and holding VOL- button, press the TNR button once.**

Make sure to only press the TNR button once. If you press the TNR button more than once, the LED will flash 6 times and the remote will exit programming mode and you will have to begin again.

4. **Release the VOL- button.**
   The LED will flash twice if the punch-through volume feature is deactivated.
5. **Check to make sure the function is deactivated by pressing the button on the remote for the device in question (i.e., CBL, SAT, etc.), and verify that the VOL+/- controls do not operate the Model 975.**
   If the volume controls still work the Model 975 , repeat the above steps.

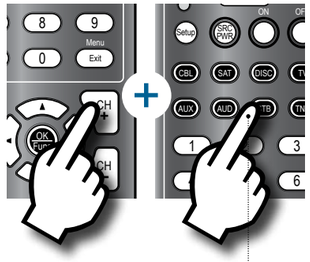
Activate Punch-through Channel

Programming the remote to use the punch-through channel feature

1. Press the TNR button

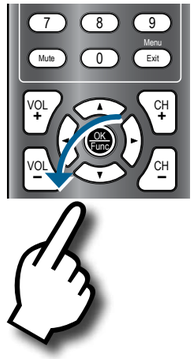
2. Activate punch-through channel programming mode

Press and hold the CH + button.



3. Select the device for punch-through channel

While holding the CH+ button, press the device input button that will use punch-through channel



4. Release the CH+ button

If the feature is activated, the LED will blink once.

The punch-through channel feature allows the CH +/- commands to bypass the currently controlled device (i.e., DISC, AUX or the Model 975) and change the channels on a second device (i.e., TV, CBL, etc.)

To activate the punch-through channel feature:

1. **Press the TNR button on the remote.**
2. **Press and hold the CH + button.**
3. **While pressing and holding the CH + button, press the desired device key (i.e., DISC, AUX, etc.) for which you want to replace the CH +/- button functions.**

If you push the same device selected in step 1, the LED will flash 6 times and the remote will exit programming mode.

4. **Release the CH + button.**
   The LED will flash once if the punch-through channel feature is activated.
5. **Check to make sure the function works by pushing the button on the remote for the device in question (i.e., DISC, AUX, etc.), and verify that the CH +/- controls operate the second device (i.e., TV, CBL, etc.)**
   If they do not, repeat the above steps.

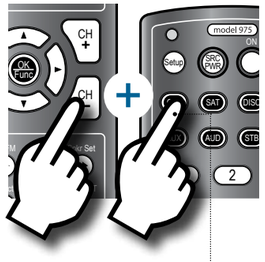
Deactivate Punch-through Channel

Programming the remote to stop using the punch-through channel feature

1. Press the TNR button

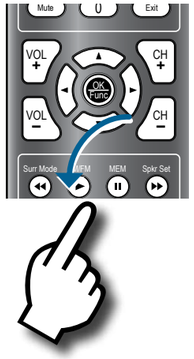
2. Activate punch-through volume programming mode

Press and hold the CH - button.



3. Select the device currently set for punch-through channel

While holding the CH- button, press the device input button for which you want to deactivate punch-through channel



4. Release the CH- button

If the feature is deactivated, the LED will blink twice.

To deactivate the punch-through channel feature:

1. **Press the TNR button on the remote.**
2. **Press and hold the CH - button.**
3. **While pressing and holding the CH - button, press the desired device key (i.e., DISC, AUX, etc.) for which you want the CH +/- button functions to no longer control the other device.**
4. **Release the CH - button.**
   The LED will flash twice if the punch-through channel feature is deactivated.
5. **Check to make sure the function works by pushing the button on the remote for the device in question (i.e., DISC, AUX, etc.), and verify that the CH +/- controls still operate the second device (i.e., TV, CBL, etc.)**
   If they do, repeat the above steps.

Macro Power Mode

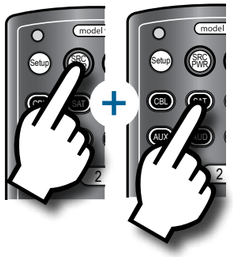
Activating and deactivating macro power mode

1. Press first device button

This will be the first device to power on.

2. Press and hold the SRC PWR button while pressing the second device button

This will be the second device to power on.



3. Release the SRC PWR button

This LED will blink when the macro power mode is activated.

The Macro Power mode enables the remote control's power button to turn on two devices: first the selected device, then a second device about 1 second later. For Macro Power to work, the remote must already be programmed to control both devices.

To activate the Macro Power setting:

1. **Press the device button for the first component.**
2. **Press and hold the SRC PWR button.**
3. **Press the device button for the second component you want to turn on automatically (i.e., DISC, AUX, etc.)**
4. **Release the SRC PWR button.**
   The LED will flash when the macro power mode is activated.
5. **Check to make sure your programming has worked by pressing the device button for the first device.**

To deactivate the Macro Power setting:

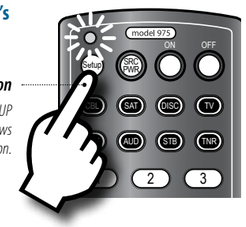
Repeat the steps above.
When a Macro Power sequence has already been programmed, repeating the steps above deactivates this function.

Restoring Factory Settings

Restore the remote's factory settings

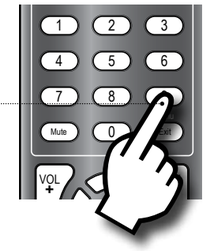
1. Press SETUP button

Press and hold the SETUP button until the LED glows solid, then release the button.



2. Enter reset code

Enter 9999 on the numeric keys



3. The LED will turn off

To restore the remote's factory settings:

1. **Press and hold the SETUP button for about 3 seconds until the LED glows solid, then release the SETUP button.**
2. **Enter the reset code 9999.**
   The LED will go out.

Care and Maintenance

Chapter 7 **Contents**

Cleaning

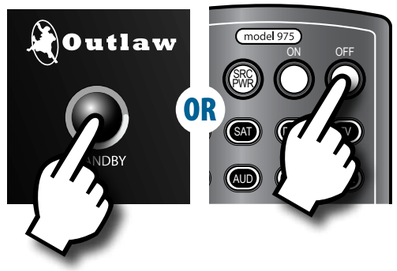
Avoid using volatile, abrasive or spray cleaners

When the Model 975 becomes dirty, wipe it with a clean, soft, dry cloth. For tougher dirt or stains, first unplug the Model 975, then wipe the surface with a slightly dampened soft cloth. Wipe dry immediately with a dry cloth. Wait 1 hour before plugging the unit back in to make sure that all moisture used in cleaning has dried.

NEVER use benzene, thinner, alcohol, ammonia (commonly found in many cleaning products), or any other volatile cleaning agent. Do not use abrasive cleaners, as they may damage the finish of the metal parts. Avoid spraying insecticide, waxes, polishing agents, or any aerosol product near the unit.

When You Are Away

Turn the unit off

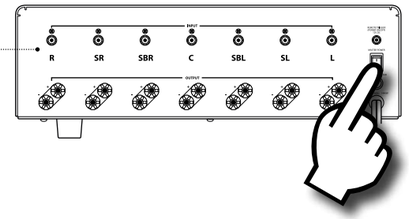


If you will not be using your home theater system for an extended period of time, it is always a good idea to turn the unit off using the OFF button on the remote or the STANDBY button on the front panel. This will reduce power consumption and maximize the life of the internal components.

System Reset

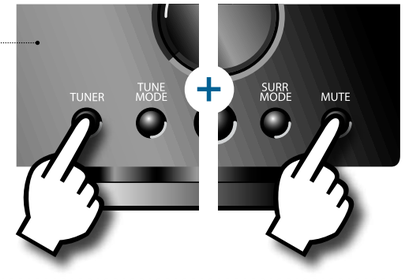
Resetting the Model 975 to factory defaults

1. Turn off any connected amplifier(s)



2. Press and hold the TUNER and MUTE buttons simultaneously

Press and hold the buttons for 5 seconds until the front panel display reads RESET, then release the buttons. The Model 975 will automatically shut down.



3. Press the STANDBY button to turn the Model 975 back on

The factory default settings will be restored.

In rare cases the Model 975's internal processor may freeze or lock-up causing abnormal operation. This is common to all microprocessor-controlled devices when the unit is subject to excessive static discharge, AC line noise or power spikes.

In most cases it is easy to solve this problem by simply unplugging the Model 975 from its AC power source for about 5 minutes. After waiting, reconnect the power cord and turn the unit on. If the unit functions normally, no further action is needed.

In the event that the unit still does not operate properly, it may be necessary to manually reset the processor. Note, however, that when the processor is reset you will lose all settings including speaker setup, input setup, and tuner presets. For this reason we strongly recommend that you record these settings on the chart provided on page 56 of this manual so that it is easy to restore them after resetting the processor.

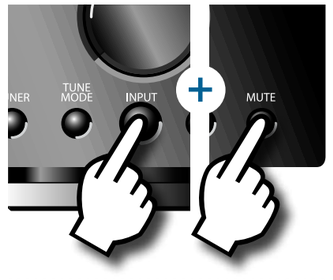
To reset the unit:

1. **Turn off any connected amplifiers.**
2. **Simultaneously press and hold the TUNER and MUTE buttons on the front panel until the front panel displays RESET.**
   This will take about 5 seconds.
3. **Release the buttons and wait a few more seconds while the Model 975 resets itself.**
   It will then power off automatically.
4. **Turn the unit back on again.**
   The Model 975 will return to its factory settings.
5. **Go back through the steps outlined in System Setup section (see page 24) to restore your Model 975's proper configuration and calibration.**

If the manual reset does not solve the problem, contact Outlaw Audio for further advice.

Software Version and Upgrade

Display the software version installed on the Model 975



Front Panel Display

The operating software installed on your Model 975 can be updated by using the RSS-232C port (see H on page 9) on the rear panel. You will be notified by email when a software update available.

To display the software version currently installed on the Model 975:

Press the INPUT and MUTE buttons on the front panel at the same time.
The front panel display will show the software version currently installed on your Model 975.

Troubleshooting Guide

Your new Model 975 is designed to provide years of trouble-free operation. However, the complexity of today's sophisticated home theater systems means that you might encounter an occasional problem with your system involving the Model 975.

Listed below are some of the more common issues you could encounter. For additional hints, we suggest that you look at the Support/FAQ section of our website at www.outlawaudio.com. Or enter the Model 975 Section of our Outlaw Saloon.

If your problem persists, please contact us via e-mail at customerservice@outlawaudio.com, or call us at 866-OUTLAWS (688-5297).

Symptom	Possible Cause	Solution Options
Unit does not turn on when remote or front panel buttons are pressed	▶ No AC Power ▶ Power strip or conditioner turned off	▶ Make certain AC power cord is plugged into a live outlet. ▶ Make certain power strip or power conditioner is turned on, if applicable.
Unit produces a flashing picture, no picture, audio popping or crackling sound, snow on image, or no audio, though the Channel Balance tones (Pink Noise generator) does produce audio.	▶ Incomplete HDMI Handshake	Resolving an HDMI handshake issue is easiest when observing the results of unplugging and re-connecting in real time. ▶ Try a "hot swap" of the HDMI cables at the back of the processor. ▶ Make sure that the source devices, TV, and processor are powered on. ▶ Ensure each end of the cable is plugged in securely. ▶ Try plugging and unplugging the HDMI cable(s), at the back of the processor, one to three times in succession. ▶ Observe the playback material to verify the connected HDMI cable has achieved a solid connection. It takes approximately 3 to 7 seconds (handshaking time) to see a result. » When it appears a solid connection is made, you may try to gently wiggle the cable at the back of the processor, while observing that neither the Video nor the Audio is affected by this. If you are able to affect the video or audio, then repeat the 'hot swap' procedure. » Once a solid connection is achieved, it should not be necessary to repeat this procedure.
No sound from digital audio source	▶ Input not properly selected ▶ Input not properly configured	▶ Make certain the correct digital input (HDMI, coax, or optical) is associated to the source.
No sound from speakers even though Model 975 is on	▶ Amplifier not on ▶ Amplifier(s) disconnected ▶ Speakers disconnected ▶ Incorrect setting in Audio Setup Menu	▶ Check to be sure amplifier is on. ▶ Check connections between Model 975 and amplifier(s). ▶ Check connections between amplifier and speakers. ▶ Check the Audio Setup Menu and make sure that the HDMI Out to TV is OFF.
No sound from subwoofer	▶ Subwoofer off ▶ Subwoofer disconnected ▶ Speaker setup in Model 975 not properly configured	▶ Make sure the subwoofer is plugged in, powered up, and that its volume is turned up. ▶ Make sure the cable between the Model 975's subwoofer output and the subwoofer's line input is connected and in good condition. ▶ Check the settings in the Model 975's Speaker Setup menu to make sure the subwoofer output is activated.
Buzzing or noise in AM and FM programs	▶ Station incorrectly tuned ▶ Antenna improperly positioned ▶ Antenna cable disconnected or damaged ▶ Wrong type of antenna used	▶ Push the CH +/– buttons on the remote a few clicks in either direction to see if sound improves. ▶ Change the antenna position and see if sound improves. ▶ Check the connection between the antenna and the Model 975's antenna jacks to make sure it is connected and in good condition. ▶ Make sure you're using an FM antenna for FM and an AM antenna for AM.
Remote control does not function	▶ Weak battery in remote ▶ Remote sensor obscured ▶ Remote used at too sharp an angle to the front panel ▶ A different component is selected to be controlled by the remote	▶ Replace the battery in the remote with a fresh one. A weak battery is indicated by the blue backlight flashing when a function button is pressed. ▶ Make sure there's nothing in between you and the front panel of the Model 975. ▶ Try using the remote from directly in front of the Model 975. ▶ Push the TNR button on the remote to control the Model 975.
No sound from one or more channels	▶ Poor connections ▶ Incorrect surround mode ▶ Incorrect speaker configuration	▶ Check interconnects to the amplifier and connections from the amplifier to the speakers. ▶ Check surround mode to make certain it provides output to all speakers. ▶ Make certain all speakers are properly configured in the Model 975's Speaker Setup menu.

Specifications

Analog Section	
Input Impedance	47 KΩ
Output Impedance (Main-RCA)	<1 KΩ
Pre Out	2 V
Maximum Output	2.7 V
Volume Range (Main)	-90 dB to +0 dB (1 dB resolution)
Frequency Response	10 Hz to 22 KHz ±1 dB
S/N Ratio (IHF-A)	-100 dB

Bass Management	
Crossover Frequency Choices (Small Speaker Setting)	40/50/60/70/80/90/100/110/120/130/140/150/200Hz
High-Pass (Satellite) Crossover Slope	12 dB/octave (2nd order)
Low-Pass (Subwoofer) Crossover Slope	24 dB/octave (4th order)

Tone Controls	
Bass Center Frequency/Range	100 Hz ±10 dB
Treble Center Frequency/Range	10 KHz ±10 dB

FM Tuner Section	
Sensitivity	
IHF	10 dBu typ.
50dB S/N	13 dBu typ.
S/N Ratio	
Mono	70 dB
Stereo	67 dB
Distortion	
Mono	0.2%
Stereo	0.3%
Stereo Separation	40 dB typ.
Adjacent Channel Selectivity	70 dB ±400 KHz
IF Rejection Ratio	120 dB
Frequency Response	20 Hz to 15 KHz ±1.5 dB

AM Tuner Section	
Sensitivity (20dB S/N)	300 uV
S/N	-45 dB
Selectivity	25 dB
Distortion	0.7%

Video Section (NTSC Format)	
Bandwidth	
Composite & S-Video	6 MHz, –3 dB
Component	>100 MHz
Input Sensitivity @ 75 ohms	
Composite & S-Video	1.0Vp-p
Component R-Y Signal	0.7Vp-p
Component B-Y Signal	0.7Vp-p
Component Y Signal	1.0Vp-p

Digital Audio	
S/PDIF Coax Impedance	75 Ω
S/PDIF Coax Signal Strength	0.5Vp-p
Digital Signal Processor	Cirrus Logic CS497024 DSP Engine
Digital to Analog Converter	Cirrus Logic CS42528 DAC in custom configuration

General	
Supply Voltage	120V, 60Hz only
Standby Power Consumption (Power Off)	0.5 W
Trigger Output Sequential Delay	50 mA @ 12 VDC
Dimensions (H/W/D)	2.8 x 16.9 x 9.5 in 70 x 430 x 242 mm
Weight	8.27 lb 3.75 kg

Model 975 Connection and Settings Chart

Use this chart to record the components connected to your Model 975, as well as which type of input (HDMI, component, analog, coaxial, etc.) is used.

Additionally, we recommend that you record all of the video and audio settings made during setup of your Model 975 for future reference. In the event that you need to reset your unit to its factory defaults, or after performing a software upgrade, you can use the information here to restore your Model 975 to your preferred configuration.

TV	DISC	GAME	VIDEO	AUX
Device	Device	Device	Device	Device
Video	**Video**	**Video**	**Video**	**Video**
HDMI 1 ☐	HDMI 1 ☐	HDMI 1 ☐	HDMI 1 ☐	HDMI 1 ☐
HDMI 2 ☐	HDMI 2 ☐	HDMI 2 ☐	HDMI 2 ☐	HDMI 2 ☐
HDMI 3 ☐	HDMI 3 ☐	HDMI 3 ☐	HDMI 3 ☐	HDMI 3 ☐
HDMI 4 ☐	HDMI 4 ☐	HDMI 4 ☐	HDMI 4 ☐	HDMI 4 ☐
Component 1 ☐	Component 2 ☐	Component 1 ☐	Component 2 ☐	Component 1 ☐
S-Video 1 ☐	S-Video 2 ☐	S-Video 1 ☐	S-Video 2 ☐	S-Video 1 ☐
Composite 1 ☐	Composite 2 ☐	Composite 1 ☐	Composite 2 ☐	Composite 1 ☐
None ☐	None ☐	None ☐	None ☐	None ☐
Video Output Settings *Choose One*	**Video Output Settings** *Choose One*	**Video Output Settings** *Choose One*	**Video Output Settings** *Choose One*	**Video Output Settings** *Choose One*
Native ☐	Native ☐	Native ☐	Native ☐	Native ☐
Autoscale ☐	Autoscale ☐	Autoscale ☐	Autoscale ☐	Autoscale ☐
Resolution	Resolution	Resolution	Resolution	Resolution .....
Audio	**Audio**	**Audio**	**Audio**	**Audio**
HDMI 1 ☐	HDMI 1 ☐	HDMI 1 ☐	HDMI 1 ☐	HDMI 1 ☐
HDMI 2 ☐	HDMI 2 ☐	HDMI 2 ☐	HDMI 2 ☐	HDMI 2 ☐
HDMI 3 ☐	HDMI 3 ☐	HDMI 3 ☐	HDMI 3 ☐	HDMI 3 ☐
HDMI 4 ☐	HDMI 4 ☐	HDMI 4 ☐	HDMI 4 ☐	HDMI 4 ☐
Analog ☐	Analog ☐	Analog ☐	Analog ☐	Analog ☐
Coax 1 ☐	Coax 1 ☐	Coax 1 ☐	Coax 1 ☐	Coax 1 ☐
Coax 2 ☐	Coax 2 ☐	Coax 2 ☐	Coax 2 ☐	Coax 2 ☐
Optical 1 ☐	Optical 1 ☐	Optical 1 ☐	Optical 1 ☐	Optical 1 ☐
Optical 2 ☐	Optical 2 ☐	Optical 2 ☐	Optical 2 ☐	Optical 2 ☐
Audio Settings	**Audio Settings**	**Audio Settings**	**Audio Settings**	**Audio Settings**
Lip Sync (Ms)	Lip Sync (Ms)	Lip Sync (Ms)	Lip Sync (Ms)	Lip Sync (Ms) .....

SURROUND MODE

Choose One

5.1 ☐
6.1 ☐
7.1 ☐

TONE (dB)

Bass .....
Treble .....

LFE TRIM (dB)

.....

SPEAKER	Size		Distance	Calibration Level (dB)	Crossover (Hz)
Front L (Channel 1)	Sm ☐	Lg ☐			
Front R (Channel 2)	Sm ☐	Lg ☐			
Center (Channel 3)	Sm ☐	Lg ☐	None ☐		
Surround L (Channel 4)	Sm ☐	Lg ☐	None ☐		
Surround R (Channel 5)	Sm ☐	Lg ☐	None ☐		
Front Height L (Channel 4)	Sm ☐	Lg ☐	None ☐		
Front Height R (Channel 5)	Sm ☐	Lg ☐	None ☐		
Surround LB (Channel 6)	Sm ☐	Lg ☐	None ☐		
Surround RB (Channel 7)	Sm ☐	Lg ☐	None ☐		
Subwoofer (Channel .1)	Sm ☐	Lg ☐	None ☐		

Remote Control Codes

TELEVISIONS

Brand	*Code(s)*
ABEX	0401
ADMIRAL	0681, 1441, 1661
ADVENT	0631, 2131
ADVENTURA	0151
AIKO	1011
AIWA	0411, 0651, 0931, 1411
AKAI	0351, 0781, 1901
ALLERON	1711
AMARK	1441
AMTRON	2191
ANAM NATIONAL	0271, 1941, 2151, 2191, 2331
AOC	0001, 0011, 0251, 0391, 0611, 0891, 1221
APEX	0191, 0431, 0671, 1891, 2911
ARCHER	1441
ASPECT	1271
AUDIOVOX	2191
AXION	0881
BANG & OLUFSEN	1591
BELCOR	0001
BELL & HOWELL	1261, 1421, 1661, 1691
BENQ	1741, 1761, 2221
BRADFORD	2191
BROKSONIC	0211, 0371, 0851, 1631
BROKWOOD	0001, 0001, 0151, 0961, 1221
CAPEHART	0391
CELEBRITY	1901
CELERA	0191
CENTRIOS	1361
CENTURION	1221
CETRONIC	1941
CHANGHONG	0191, 1891, 0001, 0351, 0371, 0961, 1011, 1221, 1311, 1381, 1661, 1941, 2191
CLAIRTONE	0011
CLASSIC	0191, 1891, 1941
CLP	0061
CLP CLASSIC	0001, 0041, 0161, 2511, 2521, 2531, 2541, 2551
COLOR VOICE	1431
COLORTYME	0001, 1221, 1431
CONCERTO	0001, 1221
CONCIERGE	1781, 0011, 1911, 1941, 2191
CORNEA	1471
CRAIG	1941, 2191
CROSLEY	1961
CROWN	1941, 2191
CTX	1441
CURTIS MATHES	0001, 0261, 0351, 1191, 1221, 1261, 1311, 1421, 1551, 1661, 1691
CXC	1941, 2191
DAEWOO	0001, 0221, 0251, 0591, 0721, 0831, 0971, 1011, 1081, 1221, 1231, 1251, 1431, 1501, 1521, 1551, 1561, 1941, 2181
DAYTRON	0001, 1221
DELL	0981, 1401, 2041
DIAMOND VISION	1211, 1611, 2001
DIGISTAR	0381, 0581, 0871, 1061, 2451
DIMENSIA	1421, 1691
DISNEY	1101
DUKANE	1271, 1981
DUMONT	0001, 1781
DURABRAND	0371, 0861, 0921, 1381, 2291
DYNASTY	1941
ELECTROBAND	0011, 1901
ELECTROHOME	0001, 1221, 1921, 2151
ELEKTRA	1661
ELITE VIDEO	0901
EMERSON	0001, 0021, 0031, 0041, 0271, 0281, 0291, 0371, 0441, 0451, 0691, 0701, 0731, 0741, 0851, 0931, 1221, 1251, 1261, 1371, 1381, 1451, 1461, 1551, 1631, 1681, 1701, 1711, 1931, 1941, 2171, 2191, 2361
ENVISION	0001, 0071, 1221
FISHER	1161, 1261, 1531, 1581, 1911
FUJITSU	0901, 1711
FUNAI	0701, 0931, 1381, 1711, 1941, 2191
FUTURETEC	1941, 2191
GATEWAY	0501
GE	0001, 0041, 0051, 0141, 0261, 0361, 0791, 0811, 1221, 1421, 1691, 1921, 1951, 2111, 2151
GIBRALTER	0001, 1781
GOLDSTAR	0001, 0251, 0611, 0761, 0931, 1181, 1221, 1501, 1911
GRUNDY	1711, 2191
GUESTVISION	1861
HAIER	0671, 0861, 0921, 1741
HALLMARK	0001, 1221
HARVARD	2191
HISENSE	0671, 2081, 2211
HITACHI	0001, 0841, 0931, 1041, 1221, 1271, 1341, 1371, 1481, 1661, 1721, 1751, 1801, 1911, 1981, 2051, 1141, 1971, 2391, 2481
IMA	2191
INFINITY	1171, 1961
INITIAL	2481, 0371, 0581, 0701, 0871, 0921, 1241, 1381, 2241, 2271, 2891, 2921
INTEGRA	1841
INTEQ	1781
JANEIL	0151
JBL	1961, 0001, 0051, 0251, 0261, 0351, 0791, 0811, 0961, 1221, 1311, 1421, 1451, 1691, 1911, 1921, 1951
JCB	1901
JENSEN	0001, 1221, 2271
JVC	0311, 0481, 0771, 0901, 0941, 1281, 1481, 1801, 1911, 2381, 2751
KAWASHO	0001, 1221, 1901
KAYPANI	0391
KEC	1941
KENWOOD	0001, 1221
KLH	0191
KLOSS NOVABEAM	0151, 1021
KONKA	0471, 0521, 0751, 1241, 1671, 2121, 2191, 2241, 2371
KTV	0011, 1491, 1681, 1941, 2191
KURAZAI	1661
KWORLD	2931
LASONIC	1211, 1611
LG	0001, 0251, 0611, 0761, 0931, 1181, 1221, 1471, 1501, 1911
LIQUIDVIDEO	0881, 1111
LODGENET	1421, 1661, 1691, 2091
LOEWE	1871, 1961
LOGIK	1421, 1661, 1691
LUCE	0301
LUXMAN	0001, 1221
LXI	0001, 0261, 0811, 0931, 1221, 1261, 1311, 1421, 1691, 1961
MAGNASONIC	1711
MAGNAVOX	0001, 0321, 0681, 0701, 0961, 1021, 1171, 1221, 1801, 1961, 2321
MAJESTIC	1421, 1661, 1691
MARANTZ	0001, 1221, 1841, 1961
MEDION	1101, 1141, 2351
MEGATRON	0001, 1221, 1271
MEI	0011
MEMOREX	0001, 0371, 1161, 1221, 1261, 1421, 1631, 1661, 1691, 1711
MGA	0001, 0251, 1221, 1581, 1711, 1801, 1911, 1921
MIDLAND	0051, 0261, 0811, 1691, 1781
MINUTZ	1951
MITSUBISHI	0001, 0251, 1221, 1581, 1711, 1801, 1811, 1921, 2701
MONIVISION	0491
MONT. WARD	1421, 1661, 1691
MOTEVA	1261
MOTOROLA	1441, 2151
MTC	0001, 0011, 0251, 0351, 1221, 1311
MULTITECH	2191
MULTIVISION	0081
MYRON & DAVIS	2101
NAD	0001, 0401, 1221, 1311
NEC	0001, 0251, 0341, 1221, 1431, 1801, 1841, 2151
NET TV	0121, 0501
NEXXTECH	0871, 1201
NIKEI	1941
NIKKO	0001, 1011, 1221
NORCENT	0511, 0671, 2181
NTC	1011
OLEVIA	2431, 2771, 2781, 2791
ONCOMMAND	1861
ONKING	1941
ONWA	1941, 2191
OPTIMUS	0201, 0401, 1571, 1881
OPTOMA	2441
OPTONICA	0341, 1441
ORION	0281, 0371, 1781
PANASONIC	0051, 0201, 0951, 1091, 1491, 1571, 1651, 1831, 1881, 1961, 2151, 2711, 2801
PHILCO	0001, 0251, 0321, 0961, 1021, 1221, 1801, 1961, 2151, 2321, 2941
PHILIPS	0001, 0161, 0181, 0321, 0421, 0541, 0661, 0701, 0791, 0911, 0961, 1021, 1151, 1171, 1381, 1391, 1601, 1801, 1961, 2151, 2321, 0181, 0681, 0911, 1171, 1961, 2321
PILOT	0001, 0001, 0401, 1221, 1371, 1511, 1841, 1981
PIVA	2411
POLAROID	2081, 2271, 2311, 0001, 0251, 1011, 1081, 1221, 1551
PRECISION	0621
PRICE CLUB	0351
PRIMA	0381, 0581, 0871, 2451
PRINCETON GRPHCS	1301, 1441
PRISM	0051
PROSCAN	0261, 0811, 1421, 1691, 2061, 2301
PROTON	0001, 0391, 0641, 1221, 1911, 2231
PROVIEW	2401, 2421
PULSAR	0001, 1781
QUASAR	0051, 0201, 1091, 1491, 1571, 1831, 1881, 1961, 2151
RADIO SHACK	0001
RADIO SHACK	0341, 0931, 1001, 1221, 1261, 1421, 1571, 1691, 1701, 1911, 1941, 2111, 2191
RCA	0001, 0051, 0091, 0251, 0261, 0361, 0551, 0811, 0891, 1001, 1131, 1221, 1331, 1371, 1421, 1521, 1691, 1851, 1921, 2011, 2061, 2111, 2151, 2251, 2301, 2851, 2951
REALISTIC	0001, 0341, 0931, 1001, 1221, 1261, 1421, 1571, 1691, 1701, 1911, 1941, 2191
RHAPSODY	0011
RUNCO	1771, 1781, 1841
SAMPO	0001, 0121, 0391, 0501, 1221, 1911
SAMSUNG	0001, 0101, 0251, 0261, 0331, 0351, 0531, 0571, 0711, 0781, 1191, 1221, 1311, 1501, 1911, 2071, 2141, 2721
SAMSUX	1221
SAMTRON	0351
SANSUI	0371, 1631
SANTECA	0171
SANYO	0001, 0801, 1051, 1161, 1261, 1531, 1581, 1911, 2871, 2881
SCOTCH	0001, 1221
SCOTT	0001, 0021, 0281, 1221, 1711, 1941, 2191
SEARS	0001, 0211, 0261, 0351, 0701, 0811, 1221, 1261, 1291, 1311, 1381, 1421, 1531, 1581, 1691, 1711, 1911, 1961, 2021
SELECTRON	2471, 2491, 2501
SHARP	0001, 0341, 0461, 0681, 0691, 1221, 1291, 1441, 2031, 2201, 2261, 2731
SHOGUN	0001
SIGNATURE	1421, 1661, 1691, 2171
SIGNET	2811, 2821, 2861
SIMPSON	0961
SONIC	0011
SONY	1071, 1641, 1731, 1901, 2161, 2741
SOUNDESIGN	0001, 0961, 1221, 1711, 1941, 2191
SPECTRAVISION	2341
SQUAREVIEW	1381
SSS	0001, 1941, 2191
STAR SIGHT	0061
STARLITE	2191
SUPERSCAN	0701, 1291, 2021
SUPERSONIC	0241
SUPRA	0001, 1991
SUPREMACY	0151
SUPREME	1901
SVA	0671
SYLVANIA	0001, 0321, 0371, 0701, 0931, 0961, 1021, 1221, 1381, 1801, 1821, 2761, 1961, 2321
SYMPHONIC	0021, 0701, 0931, 1381, 2191
SYNTAX	2431
TANDY	1441
TATUNG	1141, 1741, 2151
TECHNICS	0051
TECHWOOD	0001, 0051, 1221
TEKNIKA	0001, 0151, 0251, 0351, 0961, 1011, 1221, 1311, 1421, 1571, 1661, 1691, 1711, 1911, 1941, 2191
TELECAPTION	0821
TELERENT	1421, 1661, 1691
TERA	0001, 0641
TEVION	1141
TMK	0001, 1221
TOSHIBA	0211, 0231, 0341, 0341, 0351, 0821, 1121, 1191, 1261, 1311, 1351, 1541, 1571, 1621, 1801, 1841, 1911, 2691
TRUTECH	2461
UNIVERSAL	0791, 1951
VICTOR	1481
VIDTECH	0001, 0251, 1221
VIEWSONIC	0501, 1981
VIKING	0151
VIORE	2831, 2841
VIZIO	1741, 2901
WARDS	0001, 0021, 0251, 0321, 0341, 0791, 0961, 1021, 1221, 1321, 1421, 1661, 1691, 1711, 1951, 1961
WESTINGHOUSE	0111, 2281
WHITE WESTINGHOUSE	0601, 0931, 1081, 1501, 1521, 1551
YAMAHA	0001, 0251, 1221, 1571
ZENITH	0001, 0061, 0131, 0371, 0681, 0691, 0931, 0941, 0991, 1011, 1031, 1081, 1171, 1181, 1191, 1221, 1251, 1271, 1471, 1631, 1661, 1751, 1771, 1781, 1791, 2171, 2291

HD TV BOX

Brand	*Code(s)*
APEX DT250	2911
GO VIDEO HDT100	2631
HITACHI 61HDX98B	2661
HUGHES HIRD-E8	2591, 2651, 2661
HUGHES HTL-HD	2591, 2651, 2661
INSIGNIA AKB36157101	2921
KWORLD SA290QLE	2931
LG HTL-HD	2591, 2651, 2661
LG LSS-3200A	2591, 2651, 2661
MITSUBISHI SR-HDS	2661
MITSUB. SRHD400	2661
MITSUB. SRHDS00	2661
MOTOROLA HRT100	2601
PHILCO TB100HH9	2941
PHILLIPS DSHD800R	2661
PIONEER SH-DS05	2561
PROSCAN PSHD105	2581
RCA DTA800B1	2951
RCA DTC-100	2581
RCA DTC-210	2581
RCA HD65W20	2611
RCA PSHD105	2581
SAMSUNG SIR-T165	2671
SAMSUNG SIR-T351	2671
SAMSUNG SIR-TS160	2621
SAMSUNG SIR-TS360	2621
SONY SATHD 100	2681
SONY SATHD 200	2681
SONY SATHD 300	2681
SYLVANIA 6900DTD	2641
TOSHIBA DST3000	2591, 2651
TOSHIBA DST3100	2591, 2651
TOSHIBA DW65X91	2591, 2651
ZENITH DTV1080	2571
ZENITH HDSAT420	2571
ZENITH HDSAT520	2571

SATELLITE/DTV/WEBTV

Brand	*Code(s)*
AMPLICA	0103
BELL EXPRESSVU	0073, 0173, 0343, 0433
CHANNEL MASTER	0283, 0393, 0483
CHAPPARAL	0573, 0653
CHEYENNE	0653
DIGITAL STREAM	1203
DIRECTV	0203, 0213, 0233, 0303, 0353, 0443, 0523, 0553, 0623, 0703, 0793, 0803, 0853, 0873, 0983, 0993, 1073, 1083, 1093, 1103, 1113, 1123, 1133, 1143, 1153, 1163, 1173, 1183, 1193
DISH NETWORK	0073, 0173, 0343, 0403, 0433, 0493, 0603, 0783, 1003, 1013, 1023, 1033, 1043, 1053, 1063
DISHPRO	0073, 0403, 0493, 0603
DRAKE	0023, 0293, 0733
DX ANTENNA	0383, 0753
ECHOSPHERE	0433
ECHOSTAR	0073, 0173, 0343, 0403, 0433, 0493, 0603, 0783
EXPRESSVU	0073, 0173, 0343, 0433
FORTEC STAR	0083, 0183, 0263, 0373, 0463, 0473
FUJITSU	0673, 0763
GE	0333, 0543, 0643, 0723, 0793, 0803, 0873, 1073
GEMINI	0123
GENERAL INST. (GI)	0013, 0093, 0163, 0193, 0323, 0453, 0633, 0833, 0893, 0953, 0963
GLOBECAST	0003
HITACHI	0303, 0443, 0523, 0623

Remote Control Codes

HNS	1153
HUGHES NETWORK	0303, 0443, 0523, 0563, 0593, 0703, 1093, 1103
JVC	0433, 0783
KENWOOD	0413
LG	1153
LUXOR	0503
MACOM	0613
MAGNAVOX	0203, 0533, 0783
MITSUBISHI	0303, 0443, 0523, 0623, 1093, 1103
MOTOROLA	0453
NORSTAT	0683
PACE	0053, 0133
PANASONIC	0213, 0223, 0243
PANSAT	0033
PANSAT	0883
PHILIPS	0203, 0303, 0443, 0523, 0533, 0623, 0703, 0783, 1093
PHILIPS-MAGNAVOX	0203, 0533, 0783
PRIMESTAR	0323, 0633
PROSAT	0813
PROSCAN	0333, 0643, 0723, 0803, 0873, 1073
RCA	0333, 0363, 0543, 0643, 0723, 0793, 0803, 0873, 1073
REALISTIC	0273, 0843
SAMSUNG	0043, 0233, 0853, 1113, 1123, 1143
SIERRA I II III	0653
SKY NETWORK	0053, 0133
SONY	0113, 0353, 0553, 0773
STAR SIGHT	0863
STAR TRAK	0423
STARCHOICE	0163, 0323, 0633
STS	0383, 0583, 0663
SUPER GUIDE	0513
TOSHIBA	0063, 0143, 0303, 0443, 0523, 0623, 0713, 0743, 0973, 1093, 1133
ULTIMATE TV	0553, 0873
UNIDEN	0693, 0823, 0863
VIDEO CIPHER II	0023
WEB TV	0113, 0783
ZENITH	0023, 0123, 0153, 0253, 0293, 0313, 0733, 1173

CD PLAYERS

Brand	Code(s)
ADC	0517
ADCOM	0027, 0777
AIWA	0987, 1007, 0357
AKAI	0377, 0167, 0757
AUDIO TECHNICA	0117
CAL. AUDIO LABS	0257
CAPETRONIC	0527
CARVER	0197, 0207, 0317, 0417
CASIO	0397
CENTRIOS	1097
CITIZEN	0277
CURTIS MATHES	0397, 0637
EMERSON	0777, 1017
FISHER	0327, 0217, 0127, 0317, 0457
GENEXXA	0577, 1017, 0427
GOLDSTAR	0687
HARMAN KARDON	0797, 0647
HITACHI	0427
INKEL	0787
JC PENNEY	0397, 0657
JVC	0897, 1107
KENWOOD	0537, 0367, 0137, 0497, 1027, 0467
KRELL	0207
KYOCERA	0517
LUXMAN	0337, 0587, 0477, 0227
LXI	0397
MAGNAVOX	0837, 0207, 0737
MARANTZ	0207, 0547, 0437, 0947
MCS	0397, 0657
MGA	0797
MISSION	0207
MITSUBISHI	0797, 0907
NAD	0827, 1087
NAKAMICHI	0877, 0007, 1037
NEC	0657
NEXXTECH	0887, 0967, 0097, 0607, 0487, 0617, 0727
NIKKO	0217, 0117, 1017
NSM	0207
ONKYO	0937, 0237, 0147, 0867
OPTIMUS	0537, 0317, 0417, 0447, 0667, 0557, 0347, 0857, 0057, 0387
OPTIMUS	0427
PANASONIC	0747, 0997, 1077, 0707, 0257
PHILIPS	0837, 0197, 0207
PIONEER	0407, 0577, 0307, 0427, 0717, 0807, 0917
PROTON	0207
QUASAR	0257
RADIO SHACK	0107, 0267, 0507, 0417, 0247, 0557, 0307, 0717
RCA	1047, 1067, 0107, 1117, 0187, 0087, 0317, 0777, 0307, 0717
REALISTIC	0527, 0317, 0777, 1017, 0547, 0557, 0347, 0427
ROTEL	0207
SAE	0207
SAMSUNG	0847
SANSUI	1067, 0207, 0017, 0047
SANYO	0177, 0157, 0317, 0457, 0957, 1127
SCOTT	0777, 1017
SEARS	0397, 0537, 0547
SHARP	0537, 0547
SHERWOOD	0247, 0447, 0547, 0627, 0787
SHURE	0657
SONY	0737, 0357, 0077, 0977
STS	0517
SYLVANIA	0207
SYMPHONIC	0567
TEAC	0217, 0567, 0817, 0547, 0297, 0557, 0677
TECHNICS	0747, 0997, 1077, 0257
THETA DIGITAL	0837
TOSHIBA	0827
VICTOR	0897
YAMAHA	0287, 0927, 1057, 0117, 0037
ZENITH	0597, 0217, 0067, 0697, 0767

DVD/BLU-RAY PLAYERS

Brand	Code(s)
A-TREND	1585
ADVENT	1515
AFREEY	0575
AIWA	0035
AKAI	0195, 0235
AMES	1275
AMW	0645, 0825
ANABA	1375
APEX	0045, 0245, 0375, 0425, 0615, 0845, 0945, 0965, 1025, 1065, 1105, 1235, 1245, 1405, 1675
ASPIRE	1695
AUDIOVOX	1335
AXION	1335
B & K	0885
BLAUPUNKT	1105
BODYSONIC	0575
BOSE	1475, 1325
BROKSONIC	0015, 0695, 1525
CENTRIOS	0955, 1335, 1365, 1755, 1765, 1785, 1795, 1845, 1875, 1895, 1935, 1975, 2015
CHANGHONG	1245
CINEVISION	0205
CITECH	2065
CITIZEN	2065
CLASSIC	1245, 1275, 1965
COBY	0085, 0245, 0475, 0485, 0505, 0675, 0835, 2085, 2095, 2105, 2115, 2125, 2155
CONCEPT	1105
CRITERION	0785
CURTIS INT'L	0835, 1005
CYBERHOME	0175, 1015, 1585
CYTRON	0435, 0725
DAEWOO	0065, 0345, 1115, 1285, 1385, 1075, 1265
DENZEL	0765
DESAY	0865
DIAMOND VISION	0455, 0855, 1485
DIGITREX	0245
DIGIX	0125
DISNEY	0795
DUAL	0005, 0435, 0515, 0605, 0765
DURABRAND	0205, 0435, 0955
DVD 2000	1415
DYNEX	2255
ELTA	0055, 0235
EMERSON	0205, 0445, 0795, 0975, 1185
ESA	0515
FARENHEIT	1205
FISHER	0405
FUNAI	0445, 0795
GE	0915, 1105
GO-VIDEO	0075, 0255, 0415, 0565, 0665, 1275, 1315, 1385, 1495
GOLDSTAR	0205
GPX	0135, 0495
GRADIENTE	0215
GREENHILL	1105
HAAZ	1295, 1465
HAIER	0315
HARMAN KARDON	0585
HELIOS	2275
HITACHI	0025, 0565, 0765, 0925
HITEKER	0245
HUMAX	1505
ILO	1035
ILO	1945
INFINITY	0575
INITIAL	1105, 1945
INSIGNIA	0205, 0285, 0445, 1105, 1335, 2195
INTEGRA	1435
JBL	0585
JVC	0155, 0395, 0755, 1145, 1685, 2025
JWIN	0275, 1065, 1655
KAWASAKI	0325, 0955
KENWOOD	0935, 1075
KISS	0765
KLH	0375, 0465, 1105
KONKA	0285, 1085, 1255, 1425, 1605
KOSS	0215, 0725
KXD	0085
LASONIC	0855, 1295
LENOXX	0235, 1345
LG	0205, 0635, 1565
LINN	1635
LIQUIDVIDEO	1335
LITEON	0805, 1035, 1495, 1575, 1905
MAGNAVOX	0105, 0295, 0445, 0735, 0745, 1045, 1055, 1225, 1395
MARANTZ	0205, 0735, 0745, 1395, 1615
MAXENT	1685
MEDION	0435
MEDION	0455, 1035, 1325, 1665
MEMOREX	0435, 1925
MERIDIAN	0735
MICROSOFT	0915
MINTEK	1105
MITSUBISHI	1415
MUSTEK	1275
MYRON & DAVIS	1555
NAD	0205, 1625
NAKAMICHI	1445
NESA	1105, 1555
NEXXTECH	0125, 0145, 0335, 0515, 0955, 1025, 1545, 1755, 1765, 1785, 1815, 1835, 2005, 2055
NORCENT	0305, 0485, 0655, 0835, 1575
ONKYO	0355, 1435
OPPO	2285, 2295, 2305
OPTIMUS	0025
ORION	0015
ORITRON	0215, 1935
PACIFIC	0435
PANASONIC	0165, 0385, 0545, 0595, 1075, 1195, 1215
PHILIPS	0265, 0445, 0735, 0745, 0795, 1045, 1055, 1225, 1395, 1615
PHILIPS-MAGNAVOX	0735, 0745, 1055, 1225, 1615
PIONEER	0025, 0525, 0705, 0875, 0985, 1595, 1775
PIVA	1805
POLAROID	0185, 0685, 1025
POLK AUDIO	0735, 0745, 1395
PORTLAND	0235
PROLINE	0215
PROSCAN	0915, 1135
PROSONIC	0485
PYLE	1155
RADIO SHACK	0955, 0995, 1165, 1645
RCA	0915, 0955, 1105, 1135, 1165, 1645
REGENT	1345
REOC	1295
RIO	0205
RJ TECHNOLOGY	1825
ROSEN	1175
ROTEL	0395
SABA	0995
SAMPO	0575
SAMSUNG	0075, 0255, 0565, 1305, 1535, 1725, 2185
SANSUI	0015, 0695
SANYO	0095, 0405, 2205, 2215, 2225, 2235, 2245
SEARS	0015, 0445
SEG	0765
SELECTRON	1855, 1885, 1915, 1955, 1995, 2035, 2075
SHARP	0555, 0625, 0815
SHERWOOD	0225
SHINCO	1105
SHINSONIC	1105
SONIC BLUE	0665
SONY	0365, 0535, 0715, 0725, 0895, 0905, 2165
SOUNDSTORM	1155, 1325
SUNGALE	1715
SUPERSCAN	0445, 0135
SV2000	0445
SYLVANIA	0445, 0795
SYMPHONIC	0445, 0795, 0975
TEAC	0025, 0955
TECHNICS	1075
TECHWOOD	1625, 1985
TERAPIN	1705
TEVION	0435, 0605, 0725, 0785, 1125, 1295, 1465
THETA DIGITAL	0025
TIVO	0985, 1505
TOSHIBA	0015, 0115, 0735, 1735, 1745, 2135, 2145, 2175
TREDEX	1355
TRUTECH	2045
UNITED	0955
VENTURER	0955
VIZIO	2265
WHAREDALE	0575, 1455
WHITE WESTINGHSE	0795
X-BOX	0915
XENIUS	0725
YAMAHA	0745, 1055, 1075, 1095, 1225
YAMAKAWA	0765, 0775, 1865
ZENITH	0205, 0635

AUDIO

Brand	Code(s)
AIWA	0846, 0966, 0586, 0726
APPLE iPOD	0066, 0186
BOSE	0886
CENTRIOS	1116
DELPHI	0376, 0316, 1046, 0976, 1136
FISHER	0826, 0026
GOLDSTAR	0216
HARMAN KARDON	0016, 0436
JVC	0566, 0676, 1056
KENWOOD	1126
MAGNAVOX	0616, 0246, 0426, 0956, 1016
MARANTZ	0206, 0026, 0226
MITSUBISHI	0036
NAD	0366
NEO	0766, 0496, 1026
NEXXTECH	0076
ONKYO	0856, 0916, 0536, 1116, 0576, 0666
OPTIMUS	0996, 0816, 0116, 0936
PANASONIC	0506, 0386, 0776, 0896, 0006, 1036
PHILIPS	0126, 0686, 0796, 0876, 0746, 1096, 0056, 1066
PIONEER	0036, 1066, 0026
RADIO SHACK	1106, 0476, 0266, 0356
RCA	0166, 0236, 0626, 0176, 0476, 0006, 0266, 0356, 1036
REALISTIC	0986, 0276, 0326, 0786, 0146, 0736, 0866, 0906, 0626, 0176, 0486, 0476, 0266, 0356, 0196
SANYO	0946
SCOTT	1166, 1176, 1156
SHARP	0396
SHERWOOD	0556, 0756
SKYFI	0236, 0466, 0606
SONY	0076
TAO	0636, 0136, 0296, 0416, 0546, 0406, 1006, 0046, 1076, 0106, 0256, 0526, 1086
TEAC	0076
TECHNICS	0306, 0156, 0346, 0646
VENTURER	0126, 0696, 0796, 1096, 0056, 1066
XM RADIO	0086
YAMAHA	0376
ZENITH	0076, 0336, 0456, 0596, 0446, 0926, 1146, 0706, 0836, 0806

CABLE BOXES

Brand	Code(s)
ABC	0506, 0386, 0776, 0004, 0074, 0134, 0464, 0594
ADELPHIA	0514, 0574, 0744
ALLEGRO	0054, 0114
AMERICAST	0254
ANTRONIX	0264, 0334
ARCHER	0264, 0334, 0404, 0474
AT&T	0514, 0674
BELL SOUTH	0254
BRIGHT HOUSE	0694
CABLETENNA	0264
CABLEVIEW	0264
CABLEVISION	0174, 0514, 0654, 0694
CENTURY	0474
CHARTER	0174, 0514, 0664, 0684, 0714
CITIZEN	0474
COGECO	0514
COLOR VOICE	0534, 0604
COMCAST	0174, 0514, 0684
COMTRONICS	0014, 0084
CONTEC	0144
COX DIGITAL CABLE	0174, 0514, 0734
DIGITAL MUSIC EXP.	0044
EASTERN	0214
EVERQUEST	0014
GARRARD	0474
GC ELECTRONICS	0334
GE	0384
GEMINI	0204, 0344
GENERAL INS. (GI)	0004, 0044, 0074, 0314, 0374, 0464, 0514, 0594, 0634
HAMLIN	0414, 0464, 0484, 0544
HITACHI	0594
ILLICO	0174
JASCO	0474
JERROLD	0004, 0074, 0194, 0314, 0324, 0444, 0464, 0594
MAGNAVOX	0094
MEMOREX	0154
MOTOROLA	0004, 0074, 0194, 0314, 0374, 0514, 0594, 0634, 0684
MOVIE TIME	0224
NSC	0224
OAK	0144, 0354
PANASONIC	0304, 0394
PARAGON	0154, 0284
PHILIPS	0094, 0344, 0424, 0474, 0494, 0554
PHILIPS-MAGNAVOX	0064, 0104
PIONEER	0024, 0174, 0274, 0614
PULSAR	0154
RADIO SHACK	0064, 0104, 0114
RCA	0244, 0394, 0474
REALISTIC	0334
REGAL	0544
REGENCY	0214
REMBRANDT	0594
ROGERS	0174
RUNCO	0154
SAMSUNG	0014, 0024
SCIENTIFIC ATLANTA	0124, 0134, 0164, 0174, 0234, 0294, 0574, 0714
SHAW	0514
SIGNAL	0014
SIGNATURE	0594
SL MARX	0014
SPRUCER	0394
STANDARD	0364
STAR SIGHT	0244
STAR TRAK	0184
STARCOM	0314, 0464
STARGATE	0014
TANDY	0434
TELEVIEW	0014
TEXSCAN	0364
TIME WARNER	0174, 0514, 0694, 0724
TIVO	0704, 0754, 0764
TOCOM	0004, 0444, 0504, 0634
TOSHIBA	0154
TV86	0224
UNIKA	0264, 0334, 0474
UNITED CABLE	0464
UNIVERSAL	0054, 0264, 0334, 0404, 0474, 0564
VERIZON	0684
VIDEO TECH	0454
VIDEOTRON	0174
VIDEOWAY	0034
VIEWSTAR	0084, 0094, 0224, 0434
ZENITH	0114, 0154, 0474, 0524, 0584, 0624, 0644
ZENITH NETWORK	0254

HOME THEATER IN A BOX

Brand	Code(s)
AIWA	0035, 0586, 0825
APEX	0425
BOSE	1475
CENTRIOS	0955, 1785, 1845
CLASSIC	1965
CRITERION	0785
DURABRAND	0205, 0955
EMERSON	1185
JVC	0155
KLH	0465
KOSS	0215
LENOXX	1345
LG	1565
MAGNAVOX	0206, 0206, 0295, 0745, 1045
MYRON & DAVIS	1555
NESA	1555
NEXXTECH	0955, 1785
NORCENT	0835
ONKYO	0355
PANASONIC	0165
PHILIPS	0206, 0265, 1045
PIONEER	0525, 0875
RADIO SHACK	0085, 0275, 0626, 0955, 1645
RCA	0626, 0955, 1165, 1645
REGENT	1345
RIO	0205, 0286
SABA	0995
SAMSUNG	0075, 1535
SELECTRON	1885, 2075
SONY	0365
TECHWOOD	1985
TEVION	0785
ZENITH	0205, 0286

DVR

Brand	Code(s)
DIRECTV	1163
HUGHES	0593
HUMAX	1505
PANASONIC	0545
PHILIPS	1163
PIONEER	0985
RCA	0915, 1083
SONY	0353
TiVo	0353, 0985, 1505, 1745
TOSHIBA	1745, 2145

LASERDISC PLAYERS

Brand	Code(s)
DENON	0002
PIONEER	0002
PROSCAN	0012
RCA	0012
SANYO	0022
SONY	0032
ZENITH	0032

TV/VCR COMBOS

Brand	Code(s)
BROKSONIC	0851, 0851
DAEWOO	1081, 1251
DIAMOND VISION	2001
DURABRAND	2291
EMERSON	0851, 0851, 1251
GOLDSTAR	1181
LG	1181
SAMSUNG	2141
WHITE WESTINGHSE	1081
ZENITH	1081, 1181, 1251, 2291

TV/DVD COMBOS

Brand	Code(s)
ADVENT	1515
APEX	0191, 1245
AXION	0881, 1335
BROKSONIC	0015
CHANGHONG	1245, 0191
CLASSIC	0191, 1245
DAEWOO	0065, 1561
DIAMOND VISION	0455, 0855, 1611, 2001
DURABRAND	0205, 2291
EMERSON	0445
FUNAI	0445
GPX	0135
HAIER	0315
ILO	1945
INITIAL	1945
INSIGNIA	0285, 0445, 1241
JVC	1685
KAWASAKI	0325
KONKA	1425, 1605
LASONIC	0855, 1611
LIQUIDVIDEO	0881, 1335
MAGNAVOX	0445
MEMOREX	0015
NEXXTECH	2005
PANASONIC	0595, 1195
PHILIPS	0445, 0795, 1381
PIVA	1805
SAMSUNG	1535
SANSUI	0015
SEARS	0015
SUPERSONIC	0135
SYLVANIA	0445
SYMPHONIC	0445
TOSHIBA	0015, 0115

TV/VCR/DVD COMBOS

Brand	Code(s)
BROKSONIC	1525
DIAMOND VISION	2001, 0455
MAGNAVOX	0445
PANASONIC	0595
PHILIPS	0445
SAMSUNG	1535
SEARS	0445
SUPERSCAN	0445
SYLVANIA	0445
TOSHIBA	0115

DVD RECORDERS

Brand	Code(s)
APEX	0845
ASPIRE	1695
BROKSONIC	0695
CENTRIOS	1365, 1935, 1975
COBY	0085
CYBERHOME	1015
EMERSON	0975
GO-VIDEO	1275, 1315, 1495
HITACHI	0925
HUMAX	1505
ILO	1035
JVC	1145, 2025
KXD	0085
LG	0635
LITEON	0805, 1035, 1495
MAGNAVOX	1055, 1225
MEDION	1035, 1665
MEMOREX	1925
MUSTEK	1275
ORITRON	1935
PANASONIC	0545
PHILIPS	1055, 1225
PHILIPS-MAGNAVOX	1055, 1225
PIONEER	0705, 0985, 1775
POLAROID	0185
RCA	0915
SAMSUNG	1305
SANYO	0095
SELECTRON	1955
SHARP	0625
SONY	0535, 0715, 0895
SYMPHONIC	0975
TOSHIBA	0735, 1735
TRUTECH	2045
YAMAHA	1055, 1225
ZENITH	0635

VCR/DVD COMBOS

Brand	Code(s)
APEX	1025
BROKSONIC	0015, 0695
CINEVISION	0205
DAEWOO	1385
DIAMOND VISION	0455
DURABRAND	0205
EMERSON	0445, 0795
FISHER	0405
FUNAI	0445, 0795
GO-VIDEO	0255, 0415, 0565, 1385
HITACHI	0925
INSIGHIA	0205
JVC	0755, 1145
LG	0635
LITEON	1905
MAGNAVOX	0445, 0105, 1045
MEDION	0455
NEXXTECH	1025, 2055, 0955
PANASONIC	0595
PHILIPS	0445, 1045
PIONEER	1775
POLAROID	1025
RCA	0915
RIO	0205, 0255
SAMSUNG	1725
SANSUI	0015, 0695
SANYO	0405
SEARS	0015
SYLVANIA	0445, 0795, 0795
SYMPHONIC	0445, 0795
SYMPHONIC	0975
TECHWOOD	1985
TOSHIBA	0115, 0735
WHITE WESTNGHSE	0795
ZENITH	0205

DVD/SATELLITE COMBOS

Brand	Code(s)
BELL EXPRESSVU	0173, 0343
DISH NETWORK	0173, 0343
ECHOSTAR	0173, 0343
EXPRESSVU	0173, 0343
FORTEC STAR	0083, 0183, 0473
HUGHES NETWORK	0593, 0703
PHILIPS	0703
PROSCAN	0873
RCA	0873
SAMSUNG	2671
SONY	0353, 0553
ULTIMATE TV	0553, 0873
ZENITH	0253

DVD/CABLE COMBOS

Brand	Code(s)
CABLEVISION	0174
ILLICO	0174
PIONEER	0174
ROGERS	0174
SCIENTIFIC ATLANTA	0174
TIME WARNER	0174
VIDEOTRON	0174

DVR/DVD COMBOS

Brand	Code(s)
HUMAX	1505
ILO	1035
JVC	2025
LITEON	1035
MEDION	1035
PANASONIC	0545
PIONEER	0705, 0985
TIVO	0985, 1505
TOSHIBA	1735, 1745

HOME AUTOMATION

Brand	Code(s)
GE HOMEMINDER	0008
HOME AUTOMATION	0018
X10 (NEC)	0028

30-Day Satisfaction Guarantee

This product is guaranteed to satisfy all your needs for a high quality preamp/processor. If for any reason, you are not completely satisfied with it, please contact us at 866-OUTLAWS (688-5297) within 30 days of receipt of the unit and you will receive a return authorization.

The original box and packing materials are required for all returns. We recommend that you keep the packing (even after 30 days) so that if you ever move, or the preamp/processor requires service, the unit will be adequately protected.

If you decide to return the preamp/processor, the only cost you will be responsible for is the original shipping charge at time of purchase. When your unit arrives, we will inspect it to insure that it was shipped back to us in original condition with all of the accessories. Upon satisfactory inspection, we will issue a credit for your original purchase price less your original outbound freight cost.

Outlaw Audio Limited Warranty

This warranty protects the owner of the Outlaw Model 975 Preamp/Processor (the PRODUCT) for three (3) years from the date of purchase.

This warranty covers all defects in material and workmanship with the following specific exceptions. These are:

- Damage caused by improper installation or adjustment
- Damage caused by accident, unreasonable use, neglect, or acts of God
- Damage from failure to follow instructions contained in this Owner's Manual
- Damage from the performance of repairs by someone not authorized by Outlaw Audio
- Any unit on which the serial number has been effaced, modified, or removed
- Damage occurring during shipment
- Units which have been altered or modified in design, appearance or construction

This warranty covers only the actual defects within the PRODUCT itself. IT DOES NOT cover any installation or removal costs, normal setup costs, claims based on any misrepresentation by the seller, or performance variations resulting from installation related circumstances such as signal quality, AC power or incompatibilities with speakers and/or other system components.

During the warranty period, Outlaw Audio will, at its option, either repair the defect, or replace the defective product, or the defective parts, or components thereof at no charge to the owner for parts and labor covered by this warranty. If necessary repairs are not covered by this warranty, or if a unit is examined which is not in need of repair, you will be charged for the repairs and/or the examination. If non-warranted repairs are needed, we will notify you of the estimated cost and ask for your authorization to perform said repairs.

You must pay shipping charges incurred in getting your Product to Outlaw. We will pay the return shipping charges if the repairs are covered by the warranty. Please save the original shipping cartons as the unit MUST be returned in the original carton and packing. (Replacement cartons are available for purchase.)

If your product needs service, please call Outlaw Audio, LLC. at 866-OUTLAWS (688-5297).

You will need to present proof of purchase to establish warranty status. For warranty service, proof of purchase or proof of warranty transfer is required. In the event that such proof cannot be provided, non-warranty service is available, provided that the serial number label has not been altered in any manner.

In the event that you wish to return your Outlaw Product back to us, for any reason, please call to arrange for a Return Authorization Number. This will ensure that your problem is discussed with a service technician who will determine if there is a quick solution to your problem.

Outlaw Audio shall not be liable for, or in any way responsible for, any incidental or consequential damages of any kind. Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion of incidental or consequential damages, therefore, the limitations and exclusions stated herein may not apply to you. This warranty gives you specific legal rights; and you may also have other rights which vary from state to state.

THERE ARE NO WARRANTIES GIVEN BY OUTLAW AUDIO WHICH EXTEND BEYOND THE DESCRIPTION GIVEN HEREIN. ANY IMPLIED WARRANTIES OF FITNESS FOR PURPOSE SOLD, MERCHANTABILITY, DESCRIPTION, QUALITY OR ANY OTHER MATTERS ARE LIMITED TO THE TERMS OF THE EXPRESSED LIMITED WARRANTY STATED HEREIN.

Products are sold on the basis of specifications applicable at the time of sales. Outlaw Audio shall have no obligation to modify products once they have been sold.

This warranty is applicable only in North America.

For applicability in other countries, please call Outlaw Audio, LLC.

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