

INSTALLATION INSTRUCTIONS

MODE 3.1

Keypad



MODE FREE

RF Wireless Keypad



SAFETY INSTRUCTIONS

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
CAUTION: To reduce the risk of electric shock, do not remove cover, (or back). No user serviceable parts inside. Refer servicing to qualified service personnel.		



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



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

APPLICABLE FOR USA, CANADA OR WHERE APPROVED FOR USAGE
CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE PLUG TO WIDE SLOT, INSERT FULLY
ATTENTION: POUR EVITER LES CHOCS ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND

Read all of these instructions before operating and save instructions for later use.

1. **Read Instructions** – All the safety and operating instructions should be read before the appliance is operated.
2. **Retain Instructions** – The safety and operating instructions should be retained for future reference.
3. **Heed Warnings** – All warnings on the appliance and in the instructions should be adhered to.
4. **Follow Instructions** – All operating and use instructions should be followed.
5. **Water and Moisture** – The appliance should not be used near water – for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement or near a swimming pool.

PORTABLE CART WARNING



6. **Carts and Stands** – The appliance should be used only with a cart or stand that is recommended by the manufacturer. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.
7. **Wall or Ceiling Mounting** – The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
8. **Ventilation** – The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
9. **Heat** – The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
10. **Power Sources** – The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
11. **Grounding or Polarization** – Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.
12. **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 at plugs, convenience receptacles, and at the point where they exit from the appliance.
13. **Cleaning** – The appliance should be cleaned only as recommended by the manufacturer.
14. **Power Lines** – An outdoor antenna should be located away from the power lines.
15. **Nonuse Periods** – The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
16. **Object and Liquid Entry** – Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
17. **Damage Requiring Service** – The appliance should be serviced by qualified service personnel when:
 - A. The power-supply cord or the plug has been damaged; or
 - B. Objects have fallen, or liquid has spilled into the appliance; or
 - C. The appliance has been exposed to rain; or
 - D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
 - E. The appliance has been dropped or the enclosure damaged.
18. **Servicing** – The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

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INTRODUCTION

MODE is the Music On Demand Experience. The SpeakerCraft MODE 3.1 Keypad creates the ultimate media control experience by providing real-time system status, menu-driven control options and source metadata with its 3.1" vertically mounted high-resolution color LCD. Menu options include system source selection, MZC Internal Tuner Presets with frequency, iPod menus and metadata as well as a variety of Keypad Setup options.

MODE Free takes media control to a whole new level. MODE Free is a convertible wireless hand-held controller, an in-wall keypad and table-top controller in one very special package that features all of the capabilities of a wireless MODE 3.1. With its powerful and reliable Zigbee based technology and rechargeable lithium-ion battery, MODE Free is an RF hand-held controller that can move anywhere in the house or outdoors giving the user complete control, system status and source metadata from wherever they are. The MODE Free Table Dock turns the MODE Free into a convenient table-top controller while doubling as a battery charger. Table Docks can be placed anywhere MODE Free may want to travel such as night stands, end tables, garages, etc. When docked in the MODE Free Wall Dock, MODE Free is an in-wall keypad that takes on the specific profile of the programming for the zone in which it is connected. That is, if the MODE Free/Wall Dock is in the Dining Room, MODE Free will assume the control programming for the Dining Room. If the MODE Free is moved, it will retain the Dining Room profile and controls until it is docked in another Wall Dock, say the Master Bedroom, at which point it becomes the Master Bedroom Controller. In addition, MODE Free features a zone selection menu that allows the MODE Free to take control of any zone, as the user moves it around the house in wireless mode. No other control product allows this incredible flexibility, and when teamed up with a SpeakerCraft MZC Controller and SpeakerCraft Speakers, whole-house entertainment has just taken on a whole new meaning.

The real beauty of the MODE Keypads is that they are so easy to operate. A Scroll Wheel and Select Button allow navigation through and selection of the displayed menu options. Once a source has been selected, 8 back-lit programmable hard keys provide source control and on-screen menu navigation for sources such as DVD players, media servers, satellite receivers, cable boxes, etc. These buttons have all of the programmability expected of a SpeakerCraft Keypad, with each button being able to initiate single IR commands, RS232 commands, SpeakerCraft MZC Internal commands and macros in each of up to three tiers of functionality.

Volume is controlled with a back-lit control knob that features a series of LEDs that give a visual indication of the volume setting.

MODE 3.1 and MODE Free are designed specifically for use with SpeakerCraft MZC Series Multi-Zone A/V Amplifier Controllers. They can be mixed and matched with SpeakerCraft EZ-Pad Keypads and run on the same CAT5 used for EZ-Pads (MODE 3.1 can also run on 5-conductor wire). The MODE 3.1 includes a J-box Mounting Bracket that allows installation in most standard 2-gang low-voltage new construction and some retro-fit electrical boxes. MODE Free Table Docks can be placed anywhere and Wall Docks can be installed in any of the same locations that might be used by EZ-Pads or MODE 3.1's. This design philosophy allows MODE Keypads to be retrofit to upgrade existing MZC Systems when the user is incorporating an iPod or a media server or wants to add the flexibility of MODE Free...anywhere.

Though parts of this manual cover the SpeakerCraft MODE Adapter and MODE Base for incorporating iPod and additional sources, the MODE Keypads do not require these components for installation and operation. MODE 3.1 and MODE Free can be installed without the MODE Adapter and Base and used purely as an upgrade to EZ-Pads in MZC Systems.

MODE Keypads are programmed with SpeakerCraft's EZ-Tools Programming Software and follows procedures similar to those used with EZ-Pad Keypads. All MZC System commands, IR Library commands and RS232 commands previously saved in EZ-Tools can be used to program MODE 3.1 and MODE Free for what they are: The Music On Demand Experience.

WHAT'S INCLUDED

MODE 3.1 Keypad

- 1 - MODE 3.1 Keypad
- 1 - MODE 3.1 Keypad Mounting Bracket
- 1 - MODE 3.1 Keypad Bezel
- 1 - Bag of Replacement Buttons
- 1 - Wire Retainer
- 1 - Quick Reference Guide

MODE Free Keypad

- 1 - MODE Free Keypad
- 1 - Lithium Ion Rechargeable Battery
- 1 - Bag of Replacement Buttons
- 1 - Quick Reference Guide

MODE Free Coordinator

- 1 - MODE Free Coordinator
- 1 - Quick Reference Guide

MODE Free Wall Dock

- 1 - MODE Free Wall Dock
- 1 - MODE Free Wall Dock Back Box
- 1 - Quick Reference Guide

MODE Free Table Dock

- 1 - MODE Free Table Dock
- 1 - Power Supply
- 1 - Quick Reference Guide

MODE Adapter

- 1 - MODE Adapter
- 1 - 10' Stereo mini to RCA interconnect cable
- 1 - Quick Reference Guide

MODE Base

- 1 - MODE Base
- 7 - iPod inserts
- 1 - Quick Reference Guide

ACCESSORIES AND EXTRAS (not included)

PS-3.0 - 24V DC Power Supply for MODE Adapter. (One PS-3.0 can power up to 6 'stacked' MODE Adapters.)

BKT14331 - MODE 3.1 Retro Bracket Kit (Retro Install Bracket for MODE 3.1)

CTL14420 - MODE Free Wall Dock Installation Kit

CTL14421 - MODE Free Back Box 10 Pack. (Includes: Metal Back Boxes, Mounting Screws, Mounting Clips. **NOTE:** Does not include Wall Docks)

WHAT YOU WILL NEED

- Punch-Down Tool
- Screw Driver
- Wire Cutters
- CAT5 Crimp Tool
- RJ45 Connectors

MODE FEATURES

FRONT PANEL

1. **3.1" HIGH RESOLUTION COLOR LCD** - High Resolution color LCD displays 'Virtual Buttons' for Source Selection, menu navigation, control, metadata from iPods, MODE Juke-box, MZC Tuner Presets and MODE Setup Menu.
2. **VOLUME CONTROL KNOB** - Volume control knob adjusts volume when turned, mutes the local zone speakers when pushed and executes a keypad reset when pressed and held for 5 seconds. The knob can be programmed for any function, but should typically be programmed for volume and mute.
3. **VOLUME LEVEL LEDs** - 8 blue LEDs to provide visual confirmation of volume setting.
4. **CONFIGURABLE HARD KEYS** - 7 back-lit programmable and configurable hard keys allow control of common source components. These keys are programmed using SpeakerCraft EZ-Tools Programming Software and can be configured to send single IR commands, IR macros, RS232 commands and MZC internal commands. Three tiers of functionality per key provide a wide range of programming options for any system configuration or user demands. Each keypad also includes a variety of additional keycaps for added flexibility.

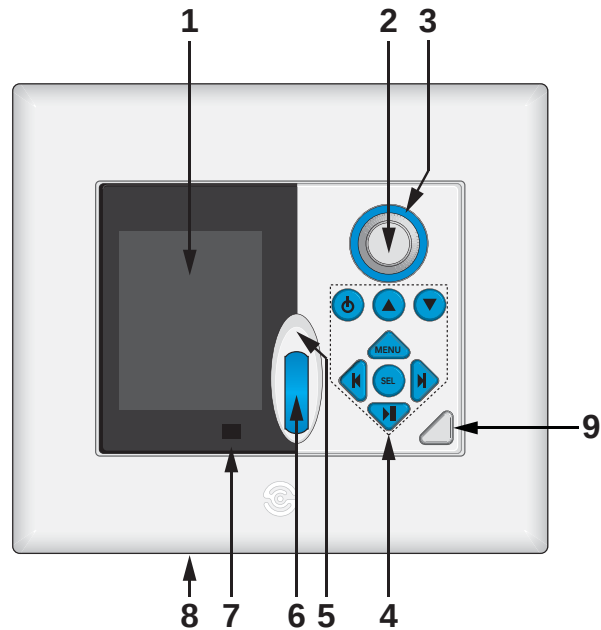


Figure 1
MODE 3.1 Front Panel Features

NOTE: The Arrow Up or “Menu Button” is not configurable or programmable. It only provides Menu navigation to return to the MODE Main Menu when using non iPod Sources and functions the same as the iPod Menu Button when iPod is selected, to navigate iPod Menus. A press and hold of the Menu Button in iPod mode will return the MODE to the MODE Main Menu.

5. **CLICK BUTTON** - The cosmetic trim surrounding the Scroll Wheel is actually a function select key. When a source, menu item or function has been highlighted on the LCD with the Scroll Wheel, a press of the Click Button will select the source or menu item or initiate an associated command. This button is not programmable.
6. **SCROLL WHEEL** - Provides easy and intuitive navigation of menus and 'Virtual Buttons' displayed on the LCD. This button is not programmable.
7. **IR SENSOR (MODE 3.1 Only)**- The MODE 3.1 includes SpeakerCraft's exclusive ANS (Ambient Noise Suppressor) IR Receiver. The IR receiver allows use of a handheld remote for control of the system and IR controlled source components.
8. **KEYPAD BEZEL (MODE 3.1 Only)**- The keypad bezel is a screwless trim plate made of a plyable material that conforms to the surrounding wall contour. The back of the bezel has form fitting tabs that friction fit to the MODE 3.1 Mounting Bracket to provide a clean finished look.
9. **KEYPAD RELEASE BUTTON (MODE FREE Only)** - This button releases the MODE FREE from a MODE FREE Wall Dock or Table Dock for use as a wireless hand-held controller.

MODE FEATURES

MODE 3.1 REAR PANEL

- 10. KEYPAD LOCKING TABS** - Fit into the upper Mounting Bracket Tab Slots to secure the keypad to the bracket.
- 11. SPEAKER RELAY MUTE TERMINAL** - Connects to a SpeakerCraft EPR-1.0 Relay Muting Module for individual room mute when using multi-channel amplifiers for sub-zone expansion.
- 12. KEYPAD PUNCH-DOWN BLOCK** - 110 style punch-down terminal connects to the Zone Keypad Terminals on a SpeakerCraft MZC-64, 66 or KCM-1.0 when using a MZC-88.
- 13. KEYPAD ANGLE TAB** - Fits into the channeled lower Mounting Bracket Tab Slots to allow flush installation (flat to wall surface) or with the lower portion of the keypad sloping away from the wall at about a 15° angle. The angle mount creates a special cosmetic appeal and provides an improved LCD viewing angle.
- 14. ADDRESS SWITCH** - A unique hex address must be set for each MODE Keypad when connected on a common bus within a single zone. Unique addresses are not required zone-to-zone (One keypad per zone). The switch provides up to 16 addresses (0 to F).
- 15. FACEPLATE RELEASE TABS** - Carefully push these recessed tabs to remove the MODE faceplate to change keycaps. It is typically only necessary to press the tabs on the bottom of the keypad and then carefully pull the bottom of the faceplate away from the MODE body.

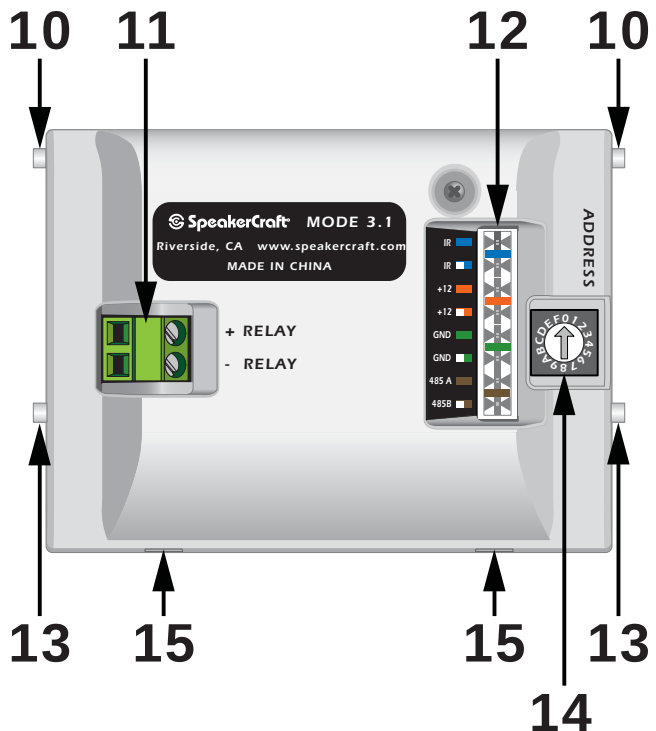


Figure 2
MODE 3.1 Rear Panel Features

MODE FREE REAR PANEL

- 16. WALL MOUNT/TABLE DOCK LOCK MECHANISM SLOTS** - Snap to Wall Dock or Table Dock Lock Mechanism Tabs to secure the keypad to a Wall Dock or Table Dock. Keypad releases when the Keypad Release Button is pressed.
- 17. KEYPAD RELEASE TAB SLOTS** - Fit over Keypad Release Tabs on MODE FREE Wall Dock or Table Dock. Releases Lock Mechanism Tabs and MODE Free when the Keypad Release Button is pressed.
- 18. LITHIUM-ION BATTERY COMPARTMENT** - Secure compartment for the rechargeable Lithium-Ion Battery. Battery automatically recharges when MODE FREE is docked to either a Wall Dock or Table Dock.
- 19. CONTACT TERMINAL** - 12 Point Contact Terminal provides connections for power/recharge, metadata and control when the MODE FREE is docked to a Wall Dock and power/recharge when docked to a Table Dock.
- 20. WALL DOCK/TABLE DOCK LOCK TAB SLOTS** - Two slots fit over the stationary Mounting Tabs on a Wall Dock or Table Dock to secure a MODE FREE Keypad.

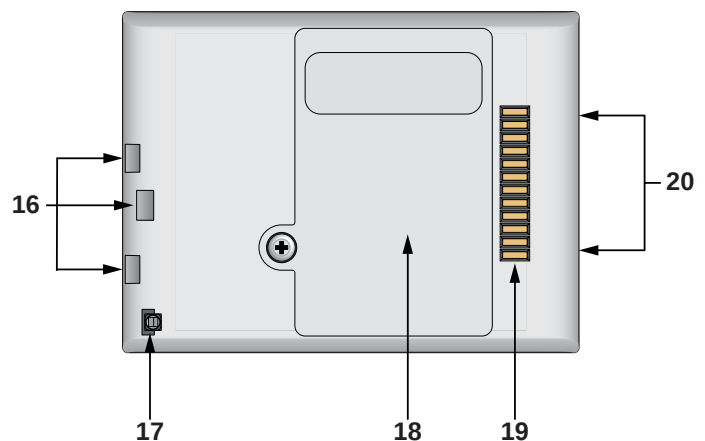


Figure 3
MODE Free Rear Panel Features

MODE FEATURES

MODE ADAPTER FEATURES

- 21. ADAPTER POST SOCKETS** - Four recessed sockets used to align Adapter Posts, to secure multiple Adapters and prevent damage to Adapter Bus Pins.
- 22. DIN RAIL SLOT AND CLIPS** - Allows the MODE Adapter to be wall mounted using standard DIN Rail (not included). Red clips slide over the rail section to hold the Adapter in place. 'Stacked' Adapters can also be mounted on DIN Rail.
- 23. WALL MOUNT SCREW HOLES** - These holes allow the MODE Adapter to be mounted flat against a wall or cabinet side.
- 24. 12 PIN INTERCONNECT** - Connect to the 12 pin socket on the bottom of a stacked Adapter. This connection creates a power, metadata and control bus that allows stacking multiple MODE Adapters.
- 25. LOCKING PIN SLOT** - Round opening on the top of the Adapter used to receive and lock Locking Pins when stacking multiple Adapters.
- 26. ADAPTER POSTS** - Four round posts on the bottom of the Adapter protect the 12 Pin Interconnect when single Adapters are used and fit into the Adapter Post Sockets when stacking multiple Adapters to hold Adapters in place and prevent damage to the interconnects.
- 27. LINE OUT** - 3.5mm stereo mini jack outputs stereo line level audio. Connects to MZC Source Input via the included 10 foot stereo mini-plug to RCA interconnect cable. When stacking multiple Adapters, each Adapter must be connected to a dedicated Source Input on the MZC.
- 28. EXPANSION PORT** - RJ45 Jack connects to the Expansion Port on the MZC Rear Panel to Rx/Tx control and metadata between the MZC and MODE Adapter.
- 29. AUX INPUT** - 3.5mm stereo mini jack provides a stereo line level input for an additional source. This could be anything from a cable/satellite receiver, to an XM or Sirius Tuner or a DVD player allowing up to 12 Sources on an MZC-64, 66 or 14 Sources on an MZC-88 (including on-board tuners). Switching to and controlling the sources connected to this input must be configured during setup in EZ-Tools. Only MODE Keypads have access and control of the devices connected to the Aux Inputs. EZ-Pads do not have access to or control of these devices.
- 30. 12 PIN INTERCONNECT SOCKET** - 12 pin socket connects to the 12 Pin Interconnect on the top of a stacked Adapter. This connection creates a power, metadata and control bus that allows stacking multiple MODE Adapters.
- 31. LOCKING PIN** - Metal post on the Adapter bottom fits into the Locking Pin Slot when stacking Adapters. Use a medium size flat head screwdriver to turn the post and lock the stacked Adapters together.
- 32. IPOD BASE RJ45 TERMINAL** - RJ45 jack connects to the Adapter Port on a MODE Base via CAT5. This connection provides power and control to the iPod/Base and receives digital audio data and metadata from a connected iPod.
- 33. 24V DC** - 2.1mm coaxial jack connects to a SpeakerCraft PS-3.0 24V Power Supply (Required/Not included). When stacking Adapters, one PS-3.0 will power up to 6 MODE Adapters.

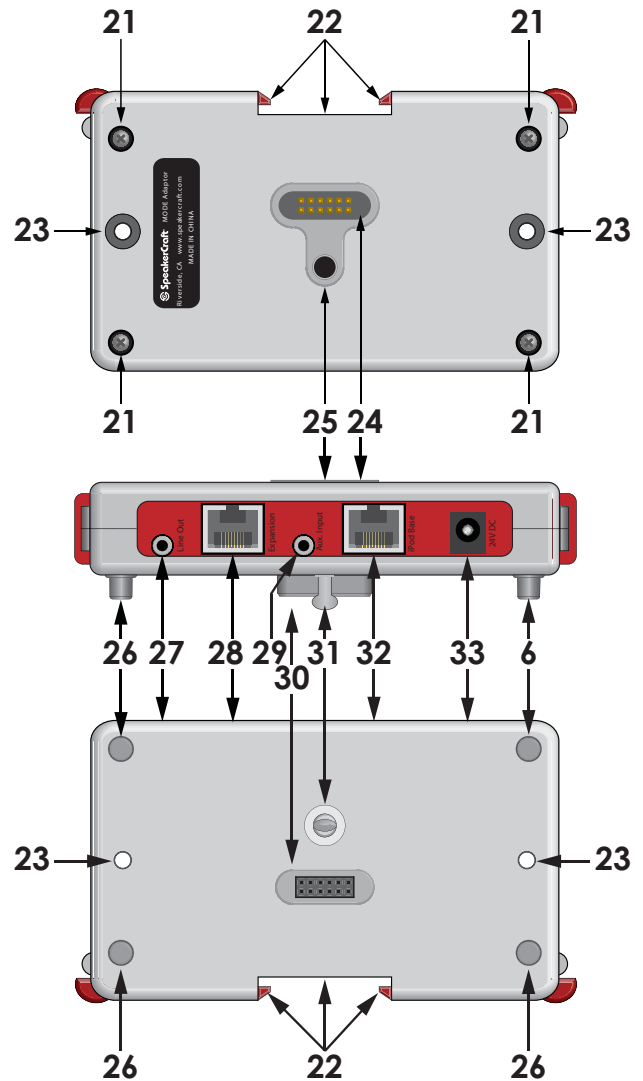


Figure 4
MODE Adapter Features

MODE FEATURES

MODE BASE FEATURES

- 34. BASE ALIGNMENT TAB** - Two small tabs on the right side of the Base fit into two small indents on the left side of an adjoining Base when using multiple Bases. The Bases are magnetically charged and lock together for convenience.

CAUTION: MODE Base magnets are fairly strong and should not be mounted directly on or near CRTs or Plasma displays. Care should also be taken to keep magnetic media such as audio and video tapes, credit cards, etc. away from the MODE Base units as important media may be lost!!!

- 35. POWER JACK** - 2.1mm coaxial jack. The MODE Base is powered directly from the MODE Adapter in applications where the Base is less than 250' from the Adapter. For wire runs over 250', the Base can be up to 500' from the Adapter with a SpeakerCraft PS-2.0 Power Supply connected directly to the Base.
- 36. ADAPTER PORT** - RJ45 jack connects to the iPod Base Terminal on the MODE Adapter via CAT5. This connection provides power and control to the iPod/Base and sends digital audio and metadata from the Base to the Adapter.
- 37. AUX INPUT** - 3.5mm mini jack provides a stereo line level input for an additional source. This could be anything from a cable/satellite receiver, to an XM or Sirius Tuner or a DVD player allowing up to 12 Sources on an MZC-64, 66 or 14 Sources on an MZC-88 (including on-board tuners). This connection will allow the local source audio to be played through the MZC amplifier and zone speakers. Switching to and controlling the sources connected to this input must be configured during setup in EZ-Tools.
- 38. USB PORT** - USB mini B jack allows connection directly to a computer for downloading content to an iPod seated in the MODE Base. Downloading content would follow normal procedures. See iPod instructions for additional information.
- 39. BASE DOCK** - This opening in the Base is where an iPod gets connected to an MZC system. Different sized inserts allow adapting the various different models of iPods to the Base. **NOTE:** Never connect an iPod without an insert in place. Without an insert, the iPod may not connect properly and there is potential for damage to the iPod, the Base or both.
- 40. INSERT CAPTURE SLOTS** - Each of the inserts has two T-shaped posts that slide into these slots to secure the insert for the specific iPod being used. If it becomes necessary to change inserts, carefully push the T-shaped posts of another insert up through the bottom of the Base and pull the seated insert out from the top.
- 41. IPOD CONNECTOR** - This multi-pin connector connects to the iPod Dock Connector on the bottom of an iPod. Carefully push the iPod down on this connector to send power and control to the iPod and have the iPod send digital audio and metadata to the system.
- 42. MZC SOURCE INDICATOR** - This blue LED displays the MZC Source Input for the MODE Base being used. An iPod can be moved from room to room and will identify to the system which room it is in. The Base will be dedicated to a specific MZC Source Input. The Source Indicator is configured by pressing the Source ID Button on the bottom of the Base to match the MZC Source Input.

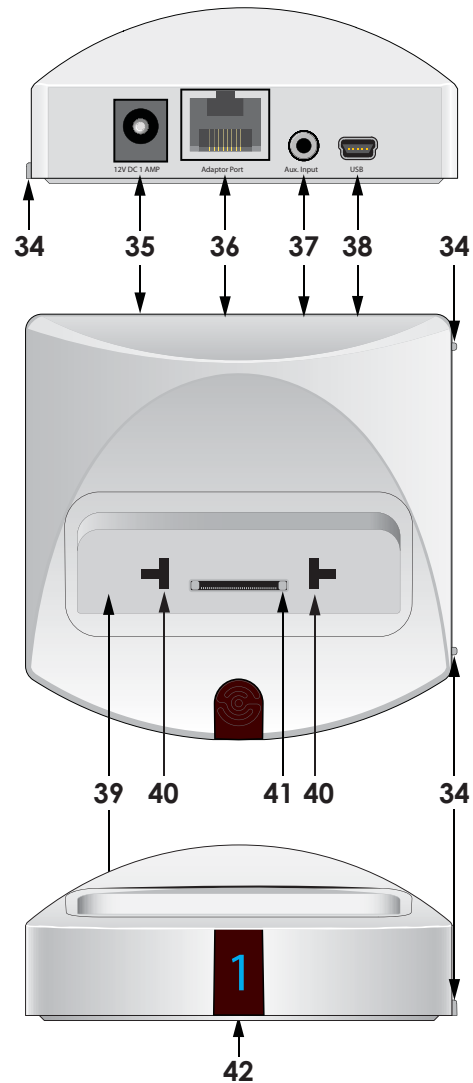


Figure 5
MODE Base Features

MODE FEATURES

MODE BASE FEATURES (cont)

- 43. SOURCE ID SWITCH** - Carefully press with a pencil or other non-conductive probe to set the MODE Base to match the MZC Source Input to which it will be connected. Source ID is displayed on the MODE Base LED.
- 44. ADDRESS SWITCH** - A unique hex address must be set for each MODE Base within a given system. The switch provides up to 16 addresses (0 to F).

IMPORTANT NOTICE REGARDING ESD (Electrostatic Discharge): The MODE Base can be susceptible to ESD. Under certain conditions when reaching for and just prior to touching the Base or the iPod connected to it, certain levels of ESD can cause the MODE Base to temporarily lose its communication link with the MZC. Typically no action is required by the user to restore communication and normal operation. This notice pertains only to the MODE Base. Please refer to iPod documentation or contact Apple for additional information regarding iPod and ESD.

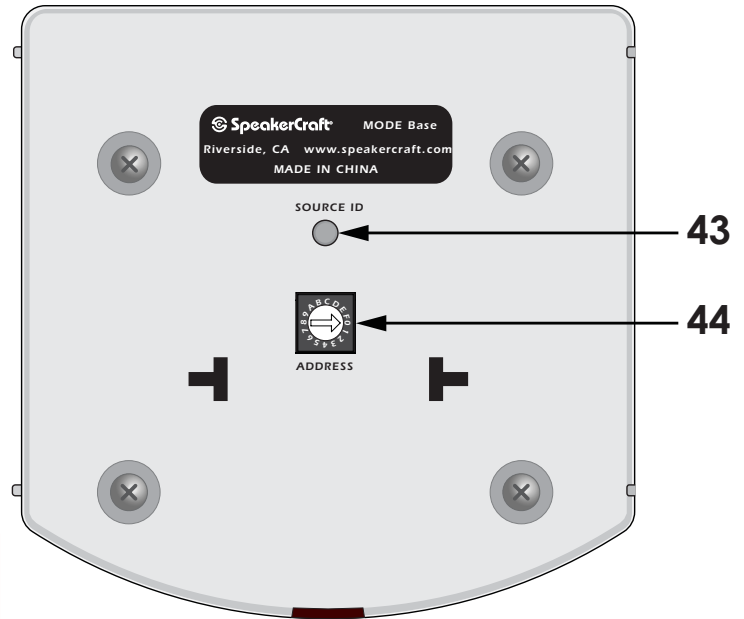


Figure 6
MODE Base Bottom Features

MODE FEATURES

MODE FREE COORDINATOR FEATURES

Performing a Network Reset is recommended before setting up a new wireless network.

45. ANTENNA - The antenna transmits/receives RF signals for control and metadata to/from the MODE Free. The antenna can be rotated and angled for optimum reception.

46. JOIN NETWORK SWITCH - One, recessed switch, is pressed to initiate wireless network communication between a Coordinator and MODE Free. This switch is used in conjunction with the 'Join Network' function in the MODE Free Network Settings Menu.

47. RESET NETWORK SWITCH - One, recessed switch, is pressed for 2 seconds to delete wireless network settings. Typically used when the Coordinator and MODE Free are experiencing communication problems, to reset the wireless network. Pressing this switch will break RF communication with all MODE Frees in the system. To remove a single MODE Free, use the 'Leave Network' function in the MODE Free Network Settings Menu.

48. RESET SWITCH - One, recessed switch, is pressed to perform a power or hardware reset.

A power/hardware reset will not remove the wireless network settings.

49. POWER LED - One, blue LED flashes when the Coordinator is receiving DC power from the MZC via one of the Expansion Ports (typical) or when connected to a SpeakerCraft PS-1.0 Power Supply.

50. ACTIVITY LED - One, blue LED flashes to indicate wireless network activity.

51. RESET NETWORK LED - One, blue LED flashes during network reset, until current settings have been deleted.

52. JOIN NETWORK LED - One, blue LED flashes during Network Join process until the MODE Free being joined has been added to the RF Network.

53. CONTROL PORT - One, 3.5mm three-circuit mini jack connects to a PC running EZ-Tools for upgrading Coordinator Firmware.

54. EXPANSION PORTS - Two, RJ45 jacks, are primarily used to connect the Coordinator to an Expansion Port on a SpeakerCraft MZC Controller. This connection powers the Coordinator and provides all communication between the MODE Free and the MZC for system and source control and transmission of source metadata to the MODE Free, when the MODE Free is in wireless mode. These jacks can also be used for connection of specialized RS485 controlled devices such as the SpeakerCraft MODE Base for adding iPods and additional sources (see sections: **Connections MODE Adapter** and **MODE Base**) and the SpeakerCraft RSA-1.0 for control of up to 16 additional RS232 devices. (See **RSA-1.0 Installation Instructions** for additional information.)

55. 12VDC JACK - One, 2.1mm coaxial jack, connects to a SpeakerCraft PS-1.0 Power Supply when the CAT5 cable between the Coordinator and MZC is longer than 500' (152m).

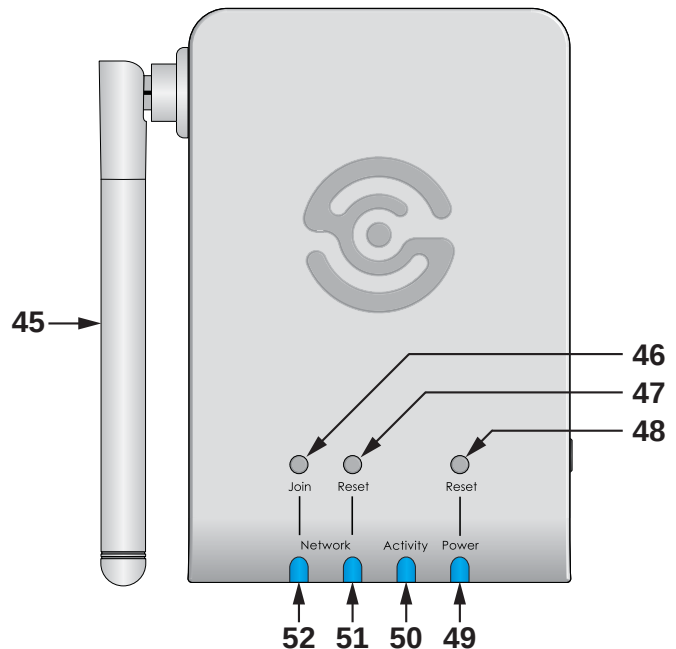


Figure 7
MODE Free Coordinator Communication Features

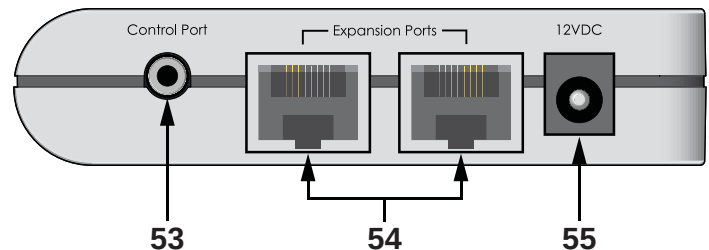


Figure 8
MODE Free Coordinator Connection Features

IMPORTANT NOTICE REGARDING ESD (Electrostatic Discharge): The MODE Free Coordinator can be susceptible to ESD. Under certain conditions when reaching for and just prior to touching the Coordinator, certain levels of ESD can cause the Coordinator to temporarily lose its communication link with the MZC. Typically no action is required by the user to restore communication and normal operation. If normal communication does not restore within 60 seconds, turn the main power on the MZC OFF then back ON. Normal communication should restore automatically.

MODE FEATURES

MODE FREE COORDINATOR FEATURES (cont)

- 56. ADDRESS SWITCH** - Reserved for additional features.
Leave in default '0' position.

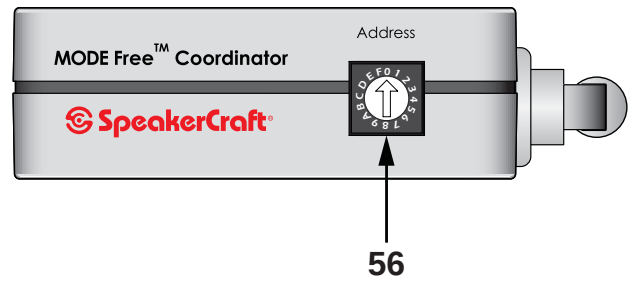


Figure 9
MODE Free Coordinator Address Switch

MODE FEATURES

MODE FREE WALL DOCK FEATURES

- 57. LOCK TABS** - Two non-moving tabs insert into matching slots on the MODE Free to secure the keypad to the Wall Dock. The Lock Tabs should be inserted into the MODE Free Lock Tab Slots before pressing the keypad down over the Locking Mechanism (Item 61).
- 58. CONTACT TERMINAL** - Twelve, spring loaded conductive pins convert a docked MODE Free to a hard wired keypad, connected to the MZC via a CAT5 cable connected between the Wall Dock and MZC. When docked, RF communication between the MODE Free and Coordinator is disabled, the MODE Free assumes the 'identity' of the programming configuration for the MZC Zone the Wall Dock is connected to and the keypad is powered from the Wall Dock while the battery automatically re-charges.
- 59. WALL DOCK MOUNTING SCREWS** - Two screws secure the Wall Dock to the MODE Free Back Box.
- 60. DOOR HANDLE** - Molded Tab allows opening and closing the Wall Dock Door. The door can be closed when the MODE Free is undocked. (Figure 10 shows in door open position; Figure 12 shows closed position.)
- 61. LOCK MECHANISM** - Four mechanical tabs insert into matching slots on the MODE Free to secure the keypad to the Wall Dock. The Lock Tabs (Item 57) should be inserted into the MODE Free Lock Tab Slots before pressing the keypad down over the Locking Mechanism. To release the MODE Free, press the Keypad Release Button (Item 9) on the front of the keypad.
- 62. CHARGING LED** - One, blue LED illuminates when the rechargeable lithium-ion battery in a docked MODE Free is charging. The LED turns off when the battery is fully charged.
- 63. ADDRESS SWITCH** - A unique HEX address must be set for each MODE Free (Wall Dock), MODE 3.1 Keypad or EZ-Pad when connected on a common bus within a single zone. Unique addresses are not required zone-to-zone (One Wall Dock or keypad per zone). The switch provides up to 16 HEX addresses (0 to F).
- 64. DOOR TRACK** - Slotted track protects the retracting door when rolled back into the wall cavity while in the open position.
- 65. RJ45 CONNECTION PORT** - One, RJ45 jack connects the Wall Dock/MODE Free to a Zone Keypad Port on a MZC Controller via CAT5 or better cable. (CAT5 should be configured in a pass-through, pin to pin, configuration.)

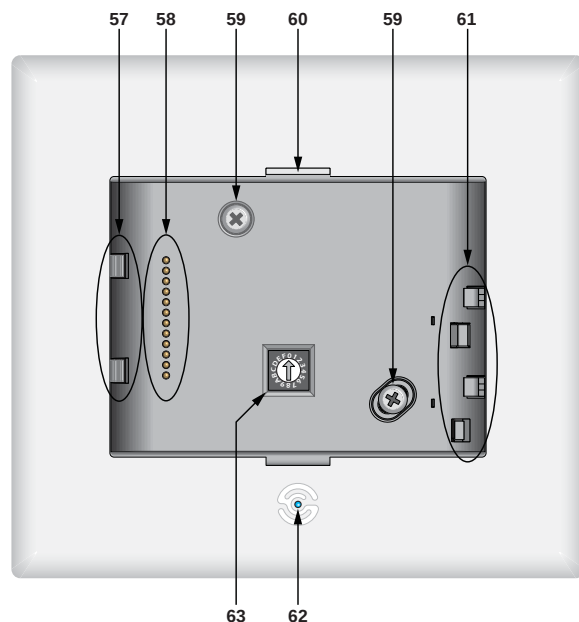


Figure 10
MODE Free Wall Dock (Door Open)

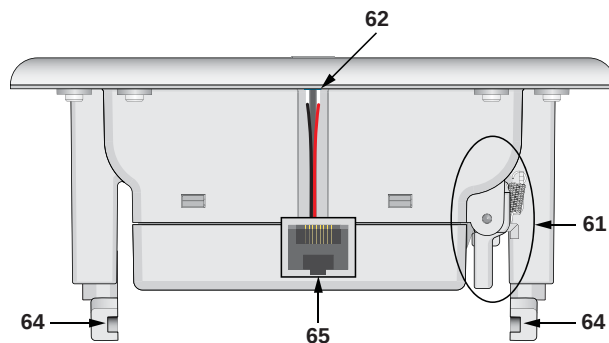


Figure 11
MODE Free Wall Dock (Side View)

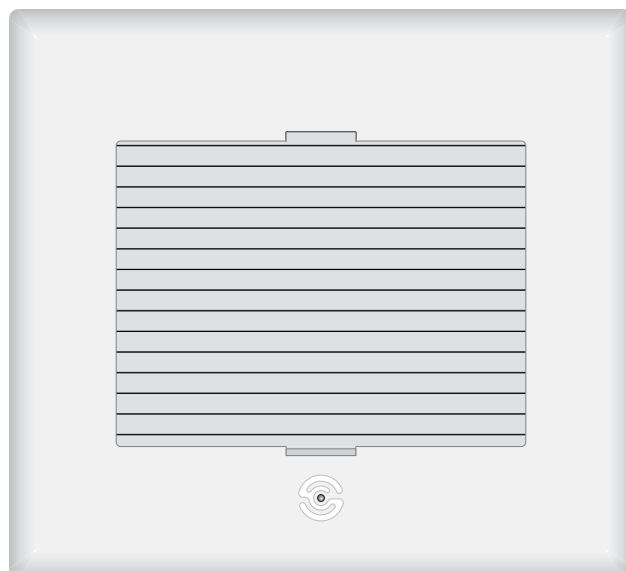


Figure 12
MODE Free Wall Dock (Door Closed)

MODE FEATURES

MODE FREE TABLE DOCK FEATURES

- 66. LOCK TABS** - Two non-moving tabs insert into matching slots on the MODE Free to secure the keypad to the Table Dock. The Lock Tabs should be inserted into the MODE Free Lock Tab Slots before pressing the keypad down over the Locking Mechanism (Item 69).
- 67. CONTACT TERMINAL** - Twelve, spring loaded conductive pins connect a docked MODE Free to the Table Dock Power Supply. When docked, the keypad is powered from the Table Dock while the battery automatically re-charges.
- 68. 12VDC JACK (rear)** - One, 2.1mm coaxial jack, connects to a SpeakerCraft PS-2.0 Power Supply to provide power to the MODE Free when docked and recharging the lithium-ion battery.
- 69. LOCK MECHANISM** - Four mechanical tabs insert into matching slots on a docked MODE Free to secure the keypad to the Table Dock. The Lock Tabs (Item 66) should be inserted into the MODE Free Lock Tab Slots before pressing the keypad down over the Locking Mechanism. To release the MODE Free, press the Keypad Release Button (Item 9) on the front of the keypad.
- 70. CHARGING LED (front)** - One, blue LED illuminates when the re-chargeable lithium-ion battery in a docked MODE Free is charging. The LED turns off when the battery is fully charged.

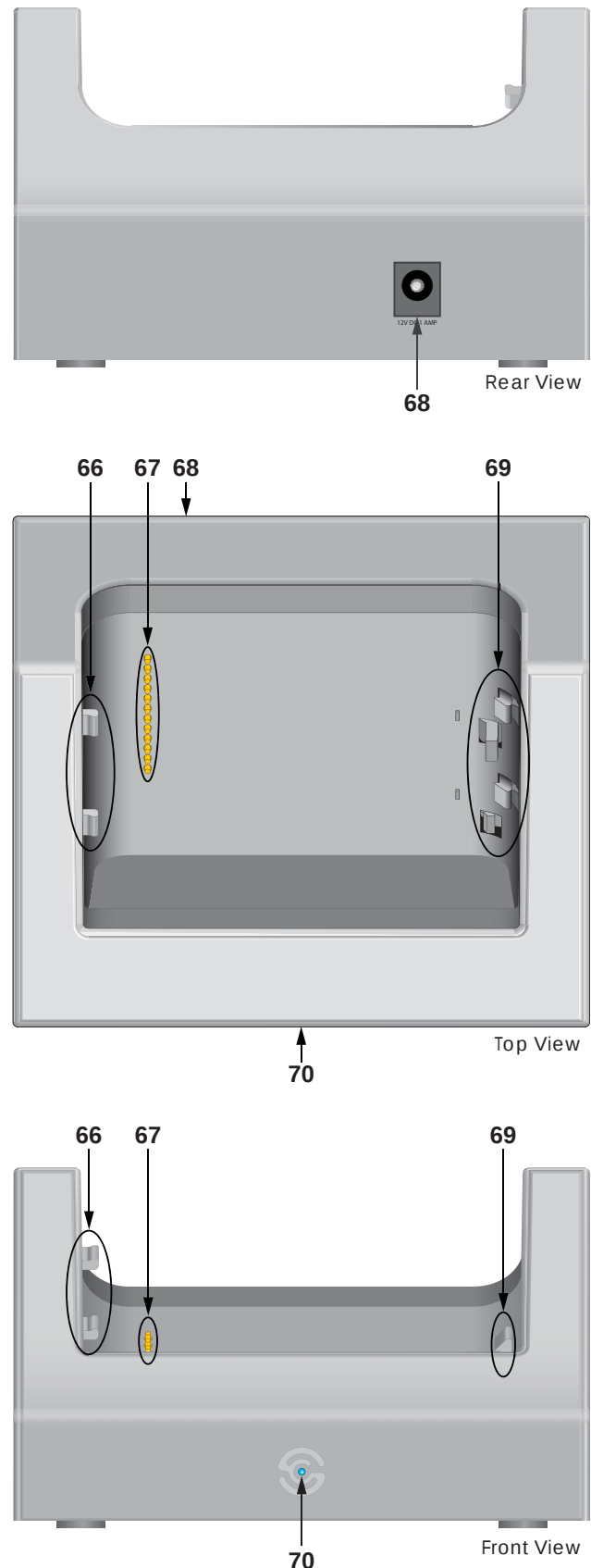
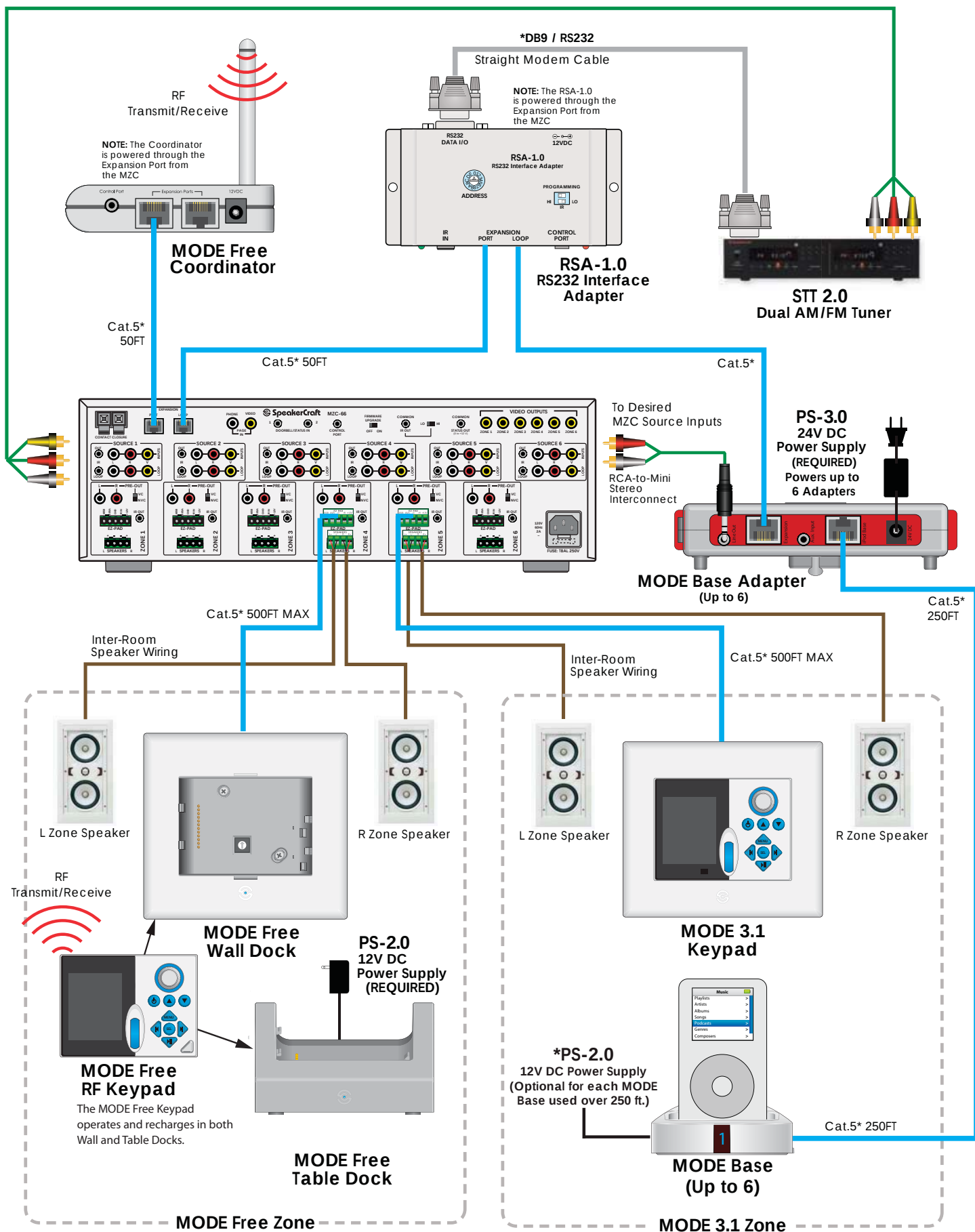


Figure 12
MODE Free Table Dock



*REFER TO RELATED SECTIONS IN THIS MANUAL

Figure 13
Typical System

WIRING (Pre-wire)

The MODE 3.1 Keypad requires connection to a SpeakerCraft MZC-64, 66 or 88 to operate. The MODE Free Keypad requires either a MODE Free Wall Dock (hardwire) or MODE Free Coordinator (RF), to communicate with a SpeakerCraft MZC-64, 66 or 88. All system wiring considerations for a MZC system should be followed as described in the MZC-64, 66 and 88 Installation Instructions. The information below will only detail those parts of a MZC System that pertain to the wiring requirements for connecting a MODE 3.1 or MODE Free Keypad, MODE Free Wall Dock, MODE Free Coordinator, MODE Adapter and MODE Base.

NOTE: The following wires should be installed during system pre-wire. Other connections will be made at the time of installation and are described in section: **Connections**.

MODE 3.1 KEYPAD

Control/Metadata

CAT5 - Pull home-runs of CAT5 from each MODE 3.1 location to the system head-end. **MAXIMUM LENGTH: 500'**

NOTE: All eight conductors of the CAT5 must be connected for proper signal strength on 500' of cable.

Speaker Relay Mute (MODE 3.1 only)

STANDARD WIRE - Pull two-conductor 24AWG or heavier, stranded, non-shielded wire from any MODE 3.1 location to where a SpeakerCraft EPR-1.0 Speaker Relay Muting Module will be installed. **MAXIMUM LENGTH: 1000'**

MODE ADAPTER

Expansion Port

CAT5 - Pull CAT5 from the MZC to where the MODE Adapter(s) will be installed. For installations where the Adapter will be at the system head-end, a CAT5 patch cable can be used at time of installation and hook-up. For installations where the Adapter will be in a remote location, pull CAT5 during pre-wire and terminate with a proper wall plate. **MAXIMUM LENGTH: 50'**

NOTE: When stacking Adapters, only one run of CAT5 is required between the Adapters and the MZC. See section: **Connections/MODE Adapter (Stacked)** for additional information.

iPod Base

CAT5 - Pull CAT5 from the MODE Adapter(s) to the MODE Base(s). For installations where the Base(s) will be at the system head-end, a CAT5 patch cable can be used at time of installation and hook-up. For installations where the Base will be in a remote location, pull CAT5 during pre-wire and terminate with a proper wall plate. The Base will then connect to the wall-plate during installation. **MAXIMUM LENGTH: 250'** when powered from Adapter; **500'** when Base is powered locally with a SpeakerCraft PS-2.0 power supply (not included).

MODE BASE

12V DC 1AMP

STANDARD WIRE - For installations where the Base will be connected to the MODE Adapter via a wall-plate, pull 16AWG two-conductor stranded non-shielded wire from the PS-2.0 power supply location, typically the head-end, to the Base location, as shown in **Figure 6**. **MAXIMUM LENGTH: 500' on 16AWG wire.**

Adapter Port

CAT5 - Pull CAT5 from the MODE Adapter(s) to the MODE Base(s). For installations where the Base(s) will be at the system head-end, a CAT5 patch cable can be used at time of installation and hook-up. For installations where the Base will be in a remote location, pull CAT5 during pre-wire and terminate with a proper wall plate. The Base will then connect to the wall-plate during installation. **MAXIMUM LENGTH: 250'** (When powered from Adapter); **500'** when Base is powered with a SpeakerCraft PS-2.0 power supply (not included).

WIRING (Pre-wire)

MODE FREE WALL DOCK

Control/Metadata

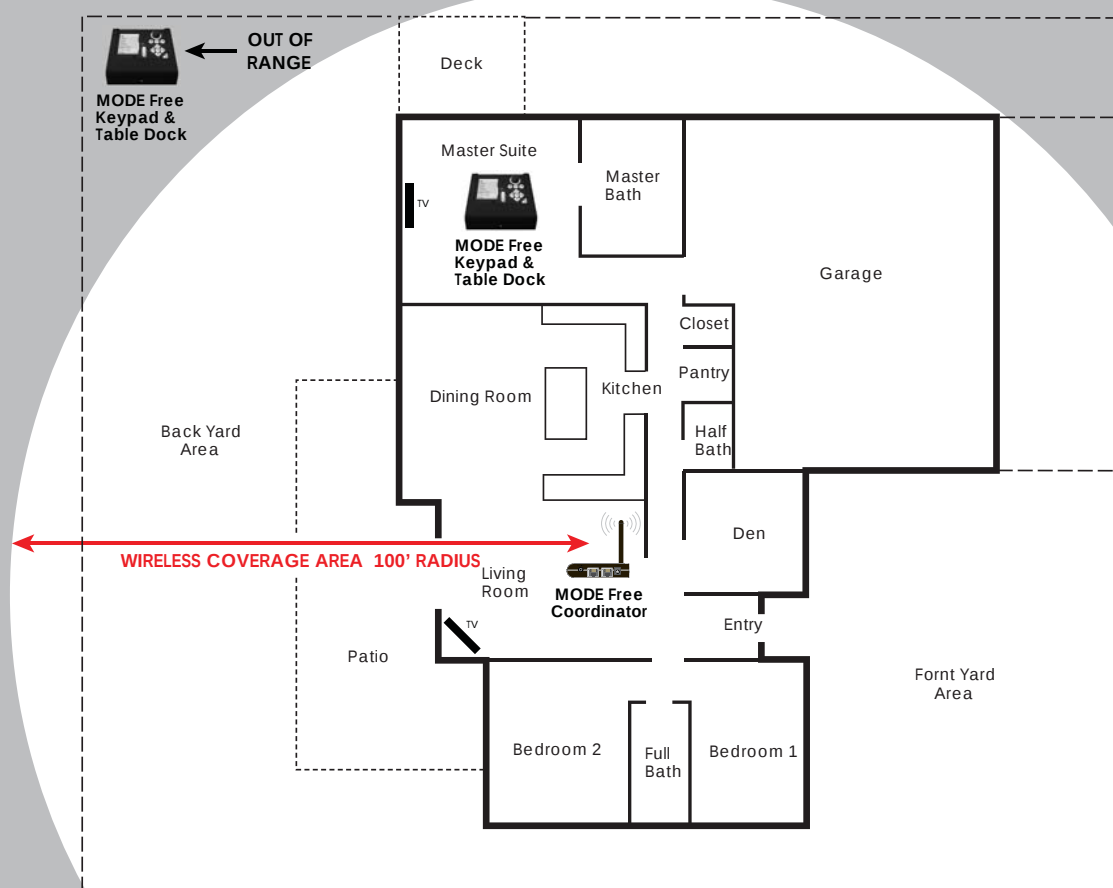
CAT5 - Pull home-runs of CAT5 from each MODE Free Wall Dock location to the system head-end. **MAXIMUM LENGTH: 500'**

NOTE: All eight conductors of the CAT5 must be connected for proper signal strength on 500' of cable.

MODE FREE COORDINATOR

Expansion Port

CAT5 - Pull CAT5 from the MZC to where the MODE Free Coordinator will be installed. For installations where the Coordinator will be at the system head-end, a CAT5 patch cable can be used at time of installation and hook-up. For installations where the Coordinator will be in a remote location, pull CAT5 during pre-wire and terminate with a proper wall plate. **MAXIMUM LENGTH: 50'**



WIRELESS COVERAGE AREA 100' RADIUS MAY VARY GIVEN RF ENVIRONMENT, BUILDING CONSTRUCTION MATERIALS AND THE PRESENCE OF LARGE METAL OBJECTS SUCH AS REFRIGERATORS.

MODE 3.1 HARD BUTTON CONFIGURATION

As received from the factory, MODE Keypads have a pre-installed set of buttons that match the default button configuration in EZ-Tools. This default may not match the system being installed. MODE Keypads come with a set of alternate buttons. The hard button keycaps can be changed on the keypads and in EZ-Tools to match the product being installed. To change the hard button keycaps:

1. With the keypad disconnected from the system, carefully insert a small flat head screwdriver into the Faceplate Release Tabs Slots (1) as shown in **Figure 14**.

With the screwdriver inserted, slowly twist the screwdriver and pull down in the direction shown (2) until the Faceplate Tabs release from the body.

2. With both tabs released, carefully pull the **bottom** of the faceplate up and away from the keypad as shown in **Figure 15** until it stops moving freely. Carefully pull the top of the faceplate clear of the keypad to remove. Do not touch, pinch, poke or otherwise contact the flex board circuit connected to the top of the LCD. Damage to the flex board will disable the LCD.
3. With the faceplate fully removed, the hard button keycaps can be changed. Carefully pinch the top of the keycap and slowly pull it straight up and off the rubber membrane as shown in **Figure 16**. Try not to pull the membrane off the green circuit board. If the membrane does come loose, be sure to replace it to its normal position, seated flat on the green circuit board. If the membrane is not properly seated, the keycaps will not fit properly through the openings in the faceplate and the keypad will not function.
4. Using the included alternate set of keycaps, make changes as needed.
5. With all keycaps in place, replace the faceplate in reverse process to step 2. Carefully align the top of the faceplate with the keypad body as they appear in **Figure 15**. Slowly press the bottom of the faceplate until the keycaps begin to push through their openings. Visually inspect the keycaps to confirm that they are properly centered in the faceplate openings. With the keycaps in place, press the bottom corners of the faceplate until it snaps into place.
6. Press all buttons to confirm free play.



Figure 14
Faceplate Release Tabs

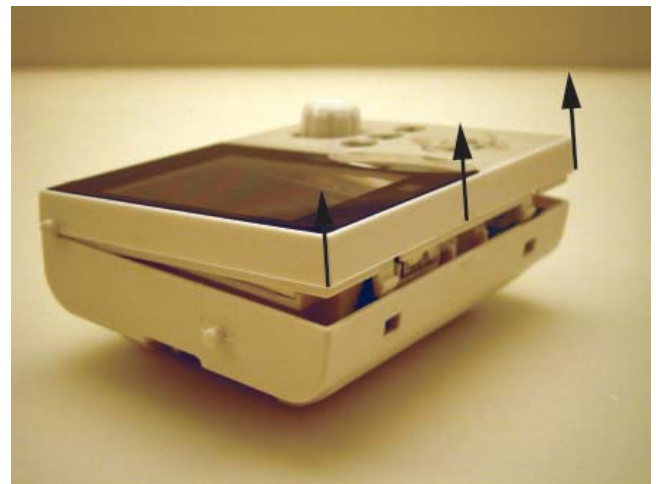


Figure 15
Removing The Faceplate

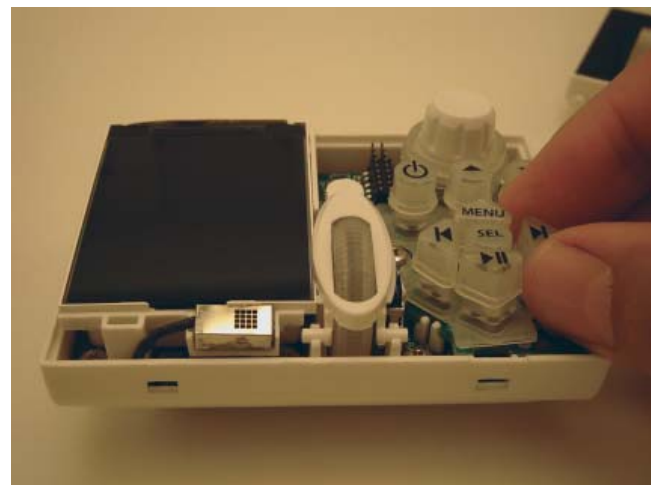


Figure 16
Changing Keycaps

INSTALLATION

MODE ADAPTER

Though the MODE Adapter is a small plastic box that can be set on a shelf and left free-standing, it is recommended that it be secured to a shelf, wall surface or DIN Rail to assure it will not be accidentally moved, in a way that could cause disconnections or damage to the unit.

Wall Mount

The MODE Adapter can be mounted directly to a wall surface using the Wall-Mount Screw Holes in the top of the Adapter Chassis. The Adapter should be mounted SpeakerCraft label side out.

1. Hold Adapter in mounting position.
2. Carefully, at slow speed, drill starter holes for mounting screws.
3. Using minimum 1.5" screws, secure Adapter to wall surface. Do not overtighten to avoid cracking the Adapter case.
4. If using multiple Adapters, printing a small adhesive label identifying the source number and sticking it on the Adapter is suggested to assist in making connections and troubleshooting.

Shelf Mount

Follow the instructions above for Wall Mount. When positioning the Adapter, set it on the shelf, with the SpeakerCraft label side up and the red connection panel facing out for convenience in making connections. If using multiple Adapters, printing a small adhesive label identifying the source number and sticking it on the Adapter is suggested to assist in making connections and troubleshooting.

DIN Rail

The MODE Adapter can also be mounted to a wall using standard 3.5mm DIN Rail. (DIN Rail can be found at Custom A/V Products Distributors, Electrical Distributors and better Hardware Stores.) Be sure to have a rail section long enough for the number of Adapters being mounted. A single Adapter can be mounted on a rail as short as 3 inches. A stack of six Adapters would require a rail approximately 10-12 inches long.

1. Hold DIN Rail in mounting position, with the 'U' channel facing away from the wall. Try to mount the rail over wall studs for added security.
2. Carefully, at slow speed, drill starter holes for mounting screws.
3. Using minimum 1" screws, secure DIN Rail to wall surface.
4. Slide the Adapter onto the DIN Rail, with the DIN Rail Clips on the Adapter holding the unit to the rail. If mounting multiple Adapters to the DIN Rail, it is recommended that the Adapters be slid on to the rail individually. (It's easier to slide the units onto the rail one at a time.)
5. Carefully press the Adapters together to secure the 12-Pin Interconnects. Secure the Locking Pin(s).
6. If using multiple Adapters printing a small adhesive label identifying the source and sticking it on each Adapter is suggested to assist in making connections and troubleshooting.

MODE BASE

If connecting iPod(s) as permanent sources, the MODE Base(s) can be installed at the head-end with the rest of the system components. The Base does not require any special installation, but the Base is magnetically charged so when multiple Bases are being installed, they will 'stick' to each other to help create a more solid footing and will be less likely to accidentally be moved or knocked over.

CAUTION: Because the MODE Base is magnetically charged, it should not be placed directly on top of or near CRTs or Plasma Displays. Magnetic fields will adversely affect the performance of these displays and could in time permanently damage the display. (LCD Displays are not affected by magnetic fields.) Additionally, care should be taken to avoid close encounters with magnetic media such as audio and video tapes or Credit Cards. The magnets in the Base could erase important information on these media.

MODE FREE COORDINATOR

Though the MODE Coordinator is a small plastic box that can be set on a shelf and left free-standing, it is recommended that it be secured to a shelf or wall surface to assure it will not be accidentally moved, in a way that could cause disconnections or damage to the unit.

Wall Mount

The MODE Coordinator can be mounted directly to a wall surface using the Keyhole on the bottom of the Coordinator Chassis. The Coordinator should be mounted in a position that allows free movement of the antenna and access for connecting CAT5 cables.

1. Drive a 1x6 screw, into the wall surface, leaving approximately 1/8" protruding from the wall surface.
2. Slide Coordinator keyhole over the protruding screwhead. Coordinator should fit firmly over the screwhead, if loose, remove Coordinator and slightly tighten screw until Coordinator fits so it will not easily fall off.
3. Check movement of antenna. (Antenna will be positioned in a later step.)

INSTALLATION

MODE 3.1 KEYPAD

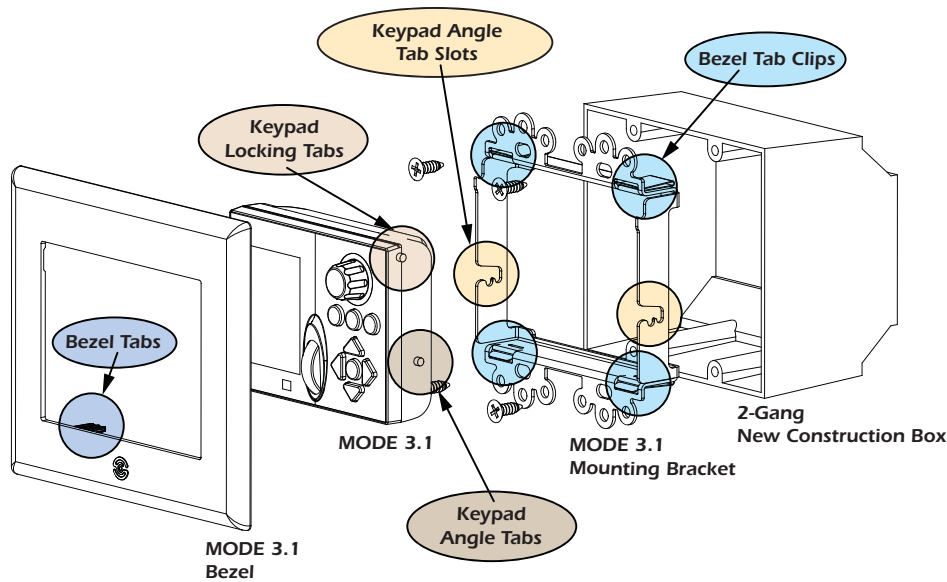


Figure 17
Mounting The MODE 3.1

J-BOX

NOTE: It is highly recommended that the MODE 3.1 Keypad be installed at a height of 56" on center. This provides the best overall position for optimum LCD viewing angle. This should be discussed with the homeowner prior to installation to avoid rework, should the homeowner find this undesirable.

New Construction

The MODE 3.1 Keypad should be mounted in a standard 2-gang **new construction** box whenever possible. The keypad itself has a thin profile, but the **Bezel Tabs** and the **Mounting Bracket Bezel Tab Clips** require some additional clearance. Some new construction and many retro-fit boxes do not provide adequate clearance. Checking the fit of an assembled keypad, (bezel, keypad and mounting bracket), is recommended prior to installation of the J-boxes to avoid problems after the wall board has been installed.

Retro-fit

SpeakerCraft provides a retro Bracket Kit (SpeakerCraft Part Number **BKT14331**) that is recommended for retro installations. Although use of retro boxes is not recommended, they can be used in some cases. If using a retro box, it will probably be necessary to hone out part of the box to provide height and depth clearance for the Mounting Bracket Bezel Tab Clips and Bezel Tabs. Do not modify the clips or the tabs as this may adversely affect how well the bezel stays in place.

Mounting Bracket

The MODE 3.1 Keypad cannot be installed without the Mounting Bracket. The keypad is held in place with the **Keypad Locking Tabs** and **Keypad Angle Tabs**. The Bracket should be mounted to a standard 2-gang new construction box as shown in **Figure 10**. When installing the Mounting Bracket, be sure the bracket is positioned as shown in **Figure 10**. The keypad cannot be mounted if the bracket is upside down. If using a retro box, see section: Retro-fit, above.

When necessary, and not recommended, the Mounting Bracket can be used without a J-box. When installing a keypad without a J-box, be sure to use drywall anchors to provide a more durable and secure mount for the bracket.

MODE 3.1 KEYPAD

Keypad Address

Before installing the MODE 3.1 Keypad, set the Keypad Address Switch. If only one keypad (MODE 3.1, MODE Free or EZ-Pad) is going to be installed in a zone, then any of the 16 addresses can be used as long as the same address is configured in EZ-Tools for that zone. For simplicity and to help avoid setup errors, if a zone only has one keypad, leave the address set to '0'. If a zone has multiple keypads, set each to a different address and configure the zone in EZ-Tools for the same number and type of keypads and addresses.

INSTALLATION

With the Mounting Bracket installed, and the address set, the MODE 3.1 can be mounted. (Make and secure wire connections as described in the section: **Connections**, prior to mounting the keypad.)

Keypad Angle

There are two options for mounting the MODE 3.1. One is a flush installation with the keypad flat to the wall surface, and the other is with the lower portion of the keypad sloping away from the wall at about a 15° angle. The angle mount creates a special cosmetic appeal and provides an improved LCD viewing angle.

Flush Mount

To install the MODE 3.1 Keypad flush (flat) to the wall surface:

1. Slide the lower part of the keypad into the **Mounting Bracket** and position the **Keypad Angle Tabs** into the **rear channel** of the **Keypad Angle Tab Slots**.
2. Carefully press the upper corners of the keypad with both thumbs until the **Keypad Locking Tabs** snap into place.

Angle Mount

To install the MODE 3.1 Keypad with lower portion angled away from the wall surface at approximately 15°:

1. Slide the lower part of the keypad into the **Mounting Bracket** and position the **Keypad Angle Tabs** into the **forward channel** of the **Keypad Angle Tab Slots**.
2. Carefully press the upper corners of the keypad with both thumbs until the **Keypad Locking Tabs** slide into place. (The keypad will 'lift' slightly in the bracket when positioning the Locking Tabs.

NOTE: In an angle mount, the keypad is not secure until the bezel has been installed. The bezel will hold the Locking Tabs in place and secure the keypad to the bracket. Prior to installing the bezel in an angle mount, be careful if operating the keypad and avoid incidental contact to prevent the keypad from falling out of the bracket and possibly damaging the keypad, the wires or the wall.

BEZEL

Installation

With the keypad in place, carefully align the **Bezel Tabs** with the **Bezel Tab Clips** on the **Mounting Bracket**. Apply even pressure around the bezel to slide it into place. The bezel is made of a pliable material that will 'form fit' to the wall surface for a clean finish.

Removal

Take care when removing the bezel to not scratch custom wall surfaces or tear wall paper. Use a very small, thin tool or fingernails, to carefully pull the sides of the bezel away from the wall surface.

Custom Wall Plates

Some lighting system companies manufacture special, custom wall plates that can be used with MODE 3.1 to trim out their low voltage lighting control switches and a MODE 3.1 with a single plate. Please contact specific lighting companies for additional information.

NOTE: Installing a MODE 3.1, or any low voltage device, in the same J-box with a high voltage device is a violation of electrical code in most places. Be aware of and comply with all local building and electrical codes.

INSTALLATION

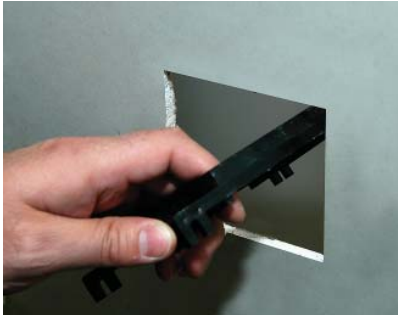
MODE 3.1 RETRO BRACKET INSTALLATION

SpeakerCraft provides a MODE 3.1 Retro Bracket, (SpeakerCraft Part Number **BKT14331**), for use when upgrading to MODE 3.1 and the existing mounting hardware is incompatible with the MODE Mounting Bracket and MODE 3.1.

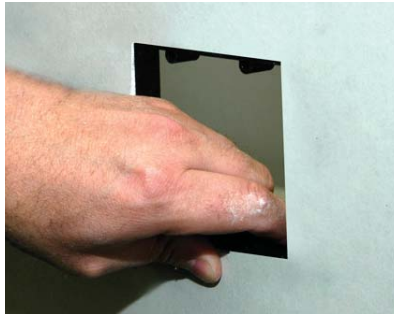
NOTE: It is highly recommended that the MODE 3.1 Keypad be installed at a height of 56" on center. This provides the best overall position for optimum LCD viewing angle. This should be discussed with the homeowner prior to installation to avoid rework, should the homeowner find this undesirable.

The Kit includes 1 Retro Bracket and 4 mounting screws.

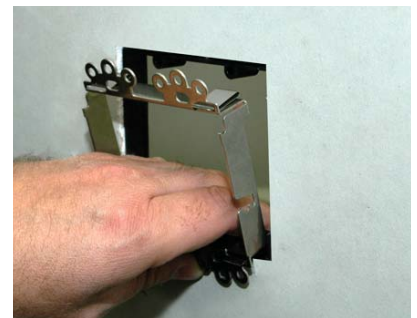
INSTALLATION



1. Cut drywall hole to 3 5/8" x W 3 7/8". Then place bracket through the opening with the FRONT/TOP on the left side as shown.



2. Pull the bracket back towards the drywall, make sure bracket flushes to back of drywall.



3. While holding the main retro bracket, add the MODE 3.1 Bracket.



4. While holding both brackets, Attached the MODE 3.1 bracket to the main retro bracket using the mounting screws provided.



5. The two brackets will sandwich the drywall between them, thus providing a sturdy mounting system for the MODE 3.1



6. Finished product, angle mount, front view.



7. Finished product, angle mount, rear view.

Cut-Out Size: 3 5/8" x 3 7/8" (168 mm x H 98 mm)

Note: Be sure to make the cut-out as tight as possible to insure a good fit.

INSTALLATION

MODE FREE WALL DOCK INSTALLATION

In-wall docking of the MODE Free requires installation of the MODE Free Wall Dock. The MODE Free Wall Dock can be purchased as a complete kit, (SpeakerCraft Part Number **CTL14420**), that includes all of the parts required for installation of the Wall Dock, (1 Wall Dock, 2 Wall Dock Mounting Screws, 1 Back Box, 1 Grounding Screw, 4 Position Tabs, 4 Position Tab Screws, 4 Mounting Clips and 2 Drywall Screws). The Wall Dock must be mounted in the special Back Box that is included in the kit for proper installation. Back Boxes can also be purchased in bulk, (Includes 10 each: Metal Back Boxes, Mounting Screws, Mounting Clips. **NOTE:** Does not include Wall Docks - SpeakerCraft Part Number **CTL 14421**).

NOTE: It is highly recommended that the MODE Free/Wall Dock be installed at a height of 56" on center. This provides the best overall position for optimum LCD viewing angle. This should be discussed with the homeowner prior to installation to avoid rework, should the homeowner find this undesirable.

PRE-CONSTRUCTION INSTALLATION



1. For Pre-Construction installation, remove the retro mounting tabs, (Top and bottom).



2. Place the Back Box against a wall stud (up arrow pointing up), use the metal tabs on either the right or left side of the enclosure to help place the enclosure against the stud evenly. Tabs are set for $\frac{1}{2}$ " dry wall. If thicker drywall is used, be sure to accommodate for the difference.



3. Use the drywall screws provided to secure the Back Box to the stud as shown.

RETRO INSTALLATION **Note: Be sure to make the cut-out as tight as possible to assure a good fit.**

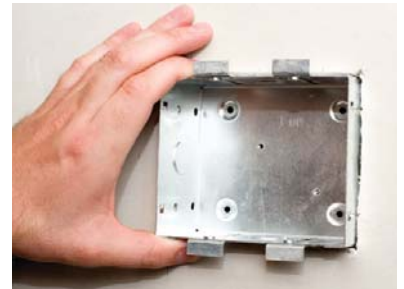


1. Using a level with a straight edge, mark the cut lines for the Back Box.

Cut-Out Size: $4\frac{7}{8}$ " W x $4\frac{1}{8}$ " H
(125 mm x 104 mm)



2. Using a drywall saw, cut the drywall, keeping the drywall blade on the outside of the line marked in Step 1. Do not to cut the hole too big or the mounting tabs will not catch the outside of the drywall.



3. The Back Box will come pre configured for retro installation; correctly orientate the Back Box by making sure the up arrow faces up. Place the Back Box flush into the hole.



4. While holding the Back Box in place, install the mounting clip(s) in as shown, do this for the top and bottom.



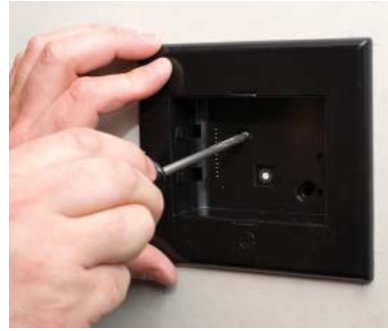
5. Finished Product.

INSTALLATION

WALL DOCK AND MODE FREE KEYPAD INSTALLATION



1. Run a CAT5 cable to the Back Box location; punch out one of the knock out tabs to pull the wire through. **NOTE:** It is recommended to run the wire up through the **bottom** knock out hole; this will give more room for the RJ45 connector, and will alleviate any issues of pinching the wire during installation.



2. Attach the Wall Dock to the Back Box with the two mounting screws provided.

Wall Dock Address

Before installing the MODE Free Keypad, set the Wall Dock Address Switch. If only one keypad (MODE 3.1, Wall Dock/MODE Free or EZ-Pad) is going to be installed in a zone, then any of the 16 addresses can be used as long as the same address is configured in EZ-Tools for the keypad in that zone. For simplicity and to help avoid setup errors, if a zone only has one keypad, leave the address set to '0'. If a zone has multiple keypads, set each to a different address (0, 1, 2, 3, etc) and configure the zone in EZ-Tools for the same number and types of keypads and addresses.



3. Starting from the left, insert the Wall Dock Lock Tabs into the Lock Tab Slots on the left side of the MODE Free, then click the right side down over the Locking Mechanism. Press the Keypad Release Button to remove the MODE Free from the Wall Dock.



4. Finished Product.

CONNECTIONS

HEAD-END

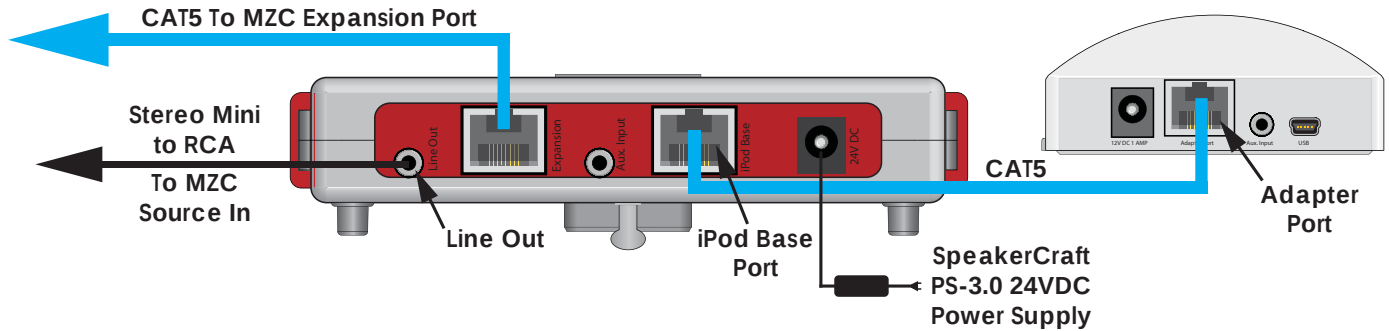


Figure 18
Single MODE Adapter/Base Connections

MODE ADAPTER (Single)

1. Using a CAT5 patch cable with a pass-through configuration, connect the **Expansion Port** on the **MODE Adapter** to the **Expansion Port** on a **MZC-64/66/88**.
2. Using the included **Stereo mini to RCA interconnect cable**, connect the 3.5mm **Line Out Jack** on the **MODE Adapter** to the appropriate **Source Input** on the **MZC-64/66/88**.
3. Using a CAT5 patch cable with a pass-through configuration, connect the **iPod Base Port** on the **MODE Adapter** to the **Adapter Port** on the **MODE Base**. If CAT5 cable was pulled during pre-wire and terminated with a wall plate in the remote zone, connect the cable to the iPod Base Port on the MODE Adapter. Connect the RJ45 jack on the wall plate to the Adapter Port on the MODE Base using a CAT5 cable with a pass-through configuration.
4. **Aux Input (optional)** - Using a stereo mini to RCA interconnect cable, connect the **L&R line level audio output** of a source to be added as an additional input such as a video game, XM or SIRIUS Tuner, Cable or Satellite receiver, etc. to the 3.5mm **AUX Input Jack**. This will allow adding a local source to a MZC Zone and being able to play the audio through the MZC amplifier and Zone speakers. This input must be configured in EZ-Tools and is only selectable from MODE Keypads.
5. When all connections have been made and confirmed and the system is ready for operation, connect a SpeakerCraft **PS-3.0 power supply** (sold separately) to the **24V DC jack** on the **MODE Adapter**. Plug the PS-3.0 into an unswitched 120VAC outlet.

CONNECTIONS

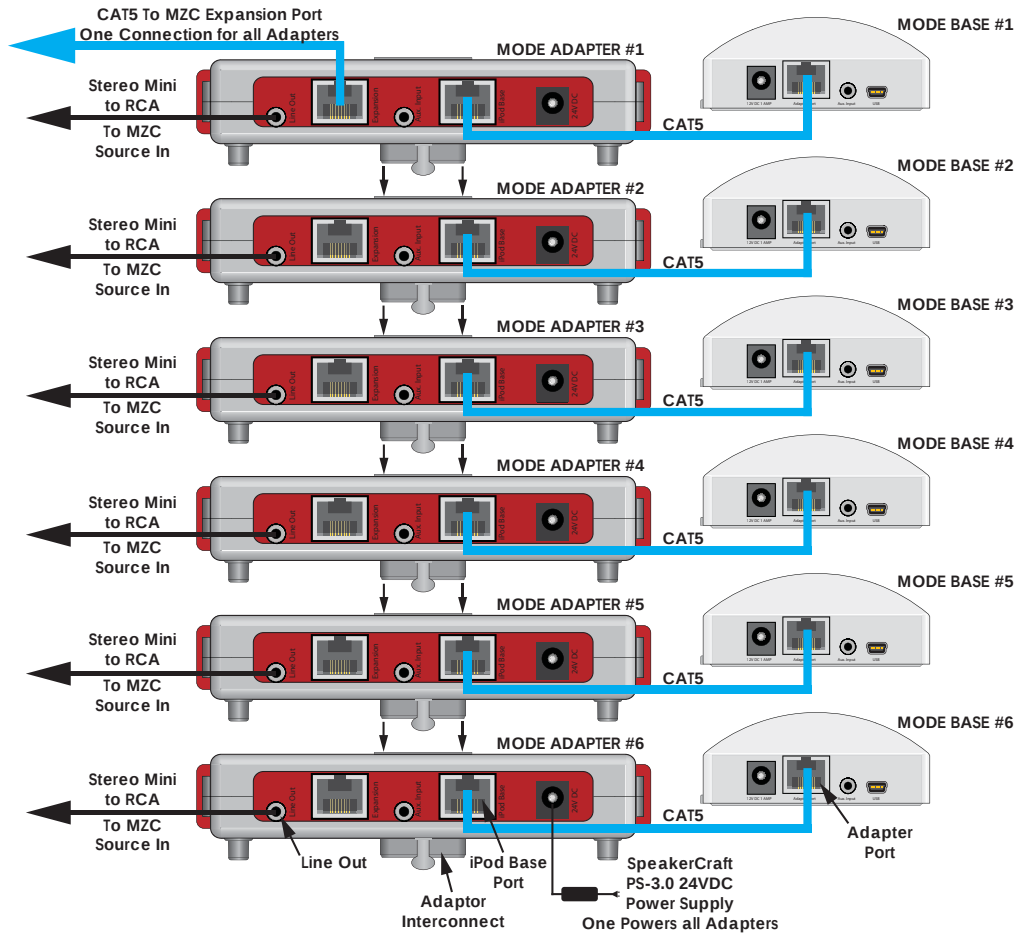


Figure 19
Multiple MODE Adapter/Base Connections

MODE ADAPTER (Stacked)

1. Stack the Adapters and confirm connection of the **12-Pin Interconnects** as described in section: **Installation**.
2. Using a CAT5 patch cable with a pass-through configuration, connect the **Expansion Port** on **one** of the **MODE Adapters** to the **Expansion Port** on a **MZC-64/66/88**. (The 12-Pin Interconnects create a bus for power, control and metadata to the additional units.)
3. Using the included **stereo mini to RCA interconnect cables**, connect the 3.5mm **Line Out Jack** on **each Adapter** to the appropriate **Source Input** on the **MZC-64/66/88**.
4. Using a CAT5 patch cable with a pass-through configuration, connect the **iPod Base Port** on **each MODE Adapter** to the **Adapter Port** on its **specifically matched MODE Base**. Repeat until all Adapters and Bases are connected. If CAT5 cable was pulled during pre-wire and terminated with a wall plate in the remote zone, connect the cable to the iPod Base Port on the MODE Adapter. Connect the RJ45 jack on the wall plate to the Adapter Port on the MODE Base using a CAT5 patch cable with a pass-through configuration.
5. **Aux Input (optional)** - Using a **stereo mini to RCA interconnect cable**, connect the **L&R line level audio output** of a **source** to be added as an additional input such as an XM or Sirius Tuner, Cable or Satellite receiver, etc. to the **Aux Input** on the appropriate Adapter as configured in **Source Setup** in **EZ-Tools**. This will allow adding up to six additional sources to the MZC. These inputs must be configured in EZ-Tools and are only selectable from MODE Keypads.
6. When all connections have been made and confirmed and the system is ready for operation, connect a **Speaker-Craft PS-3.0 Power Supply** to the **24V DC Jack** on **one MODE Adapter**. This will provide power for up to six MODE Adapters. Plug the PS-3.0 into an unswitched 120VAC outlet.

CONNECTIONS

MODE BASE

Adapter Port

1. Using a CAT5 patch cable with a pass-through configuration, connect the **Adapter Port** on the **MODE Base** to the **iPod Base Jack** on the **MODE Adapter**. When using multiple Bases and Adapters, be sure to properly match Bases to Adapters to MZC Inputs.
2. Set each **Base Source ID** to the matching **Source Input number** on the **MZC** using the **Source ID Button** on the bottom of the **Base** and the **Source ID LED**.
3. Set each **Base** to a different **Address** using the **Address Switch** on the bottom of the Base and set each Base to the proper Address when configuring **Source Setup** in **EZ-Tools**.

Aux Input (optional)

1. Using a **stereo mini to RCA interconnect cable**, connect the **L&R line level audio output** of a source to be added as an additional input such as a video game, XM or SIRIUS Tuner, Cable or Satellite receiver, etc. to the **Aux Input** on the appropriate **Base** as configured in **Source Setup** in **EZ-Tools**. This will allow adding a local source to an MZC Zone and being able to play the audio through the MZC amplifier and Zone speakers. These inputs must be configured in EZ-Tools and are only selectable from MODE Keypads.

USB (optional)

1. Using an appropriate USB mini B cable, connect the USB port on the MODE Base to a USB port on a computer to enable updating a connected iPod. See iPod instructions for additional information.

12V DC 1 AMP

1. When all connections have been made and confirmed, connect a SpeakerCraft **PS-2.0 Power Supply** and plug it into an unswitched 120VAC outlet.

MODE 3.1 KEYPAD

Punch-Down Block

The MODE 3.1 features a four pair punch-down block that allows flexibility in wire options. CAT5 is recommended for typical use. The punch-down is color coded for CAT5 to assist in making connections. When making direct connections to the MZC, be sure to confirm color coding of each wire before making connections. (Refer to **Table 1** and **Figures 20 & 21**)

For convenience, SpeakerCraft **RJA-1.1 RJ45 to MZC Adapters** can be used. The RJA-1.1 will convert the Zone screw-down terminals on the MZC-66, (or KCM-1.0 if using MZC-88) to RJ45 for ease of installation. Refer to **Table 1** and **Figure 21** below for the RJ45 pin-out and configuration. **Do not use pre-configured 110 plug to RJ45 patch cables wired for T-568A Standard.** They do not have the proper pin-out on the RJ45 connector and will cause serious damage to the MODE 3.1.

NOTE: The pin-out must be followed as shown to prevent serious damage to the MODE System:

RJ45 PIN (MZC-64 Zone Terminal, RJA-1.1, Wall Dock)	CAT5 Wire Color	MODE 3.1, MZC-66 Zone Terminal or KCM-1.0 Zone Terminal
1	Green	GND
2	Orange	12V
3	Brown	485A
4	Blue	IR
5	Blue/White	IR
6	Brown/White	485B
7	Orange/White	12V
8	Green/White	GND

Table 1
MODE/MZC Zone Connection Pin-Outs

CONNECTIONS

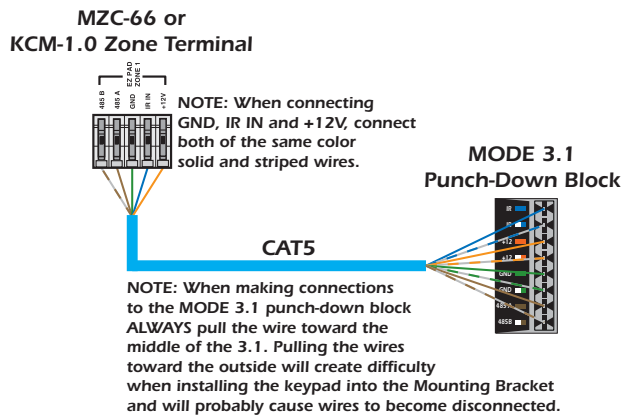


Figure 20
MODE to MZC Connections

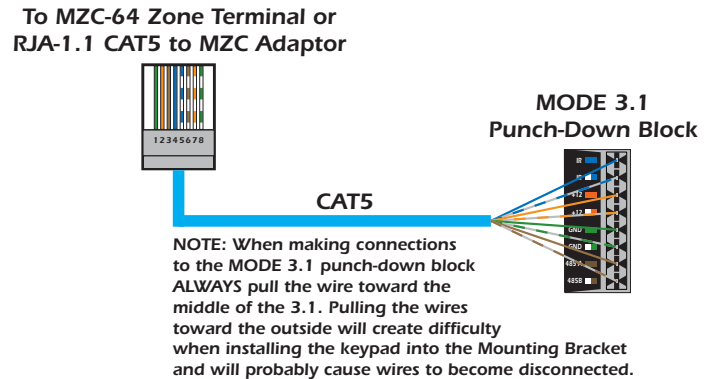


Figure 21
MODE to RJ4-1.1 Connections

MODE 3.1 Connections

1. Strip approximately 1" to 1.5" from the outer jacket of the cable being connected to the MODE 3.1. DO NOT strip the individual conductors.
2. Using a proper **punch-down tool**, connect each of the wires to the matching color terminals on the MODE 3.1 **punch-down block**. When making connections to the MODE 3.1 punch-down block ALWAYS pull the wire toward the middle of the 3.1. Pulling the wires toward the outside will create difficulty when installing the keypad into the Mounting Bracket and will probably cause wires to become disconnected.
3. Prior to installing the keypad, attach the included **Wire Retainer** to the back of the MODE 3.1 as shown in **Figure 22**. Remove the adhesive backing from the wire retainer and attach with the wire tie oriented vertically as shown, with the retainer lock at the bottom. Pull the retainer over the wire and down through the lock as shown. This will help prevent the wires from becoming disconnected during installation.

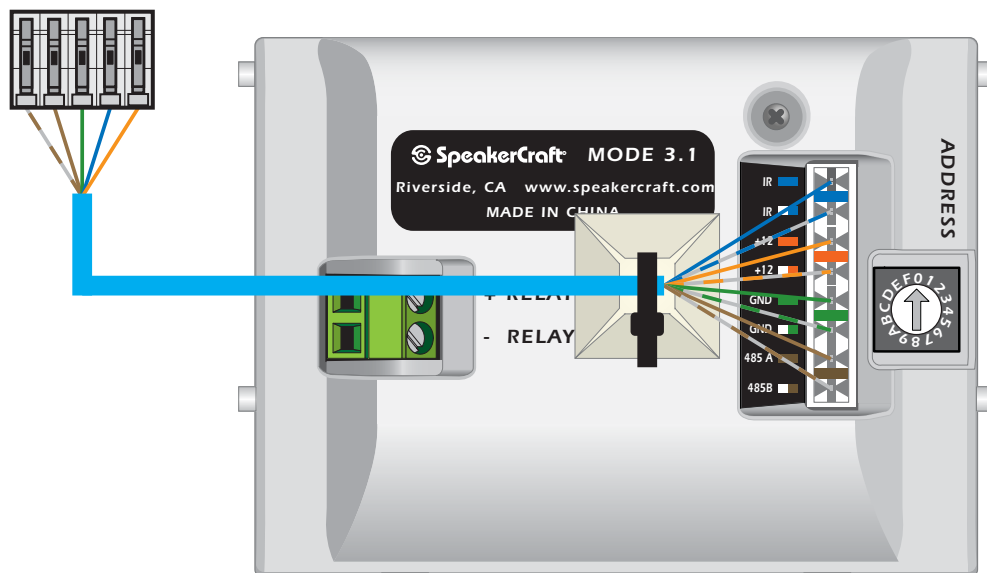


Figure 22
MODE Wire Retainer

3. Terminate and connect the head-end connection as appropriate. If connecting **directly** to an MZC-66 or KCM-1.0, Refer to **Figure 20**. If terminating in **RJ45 Connectors** and connecting to a MZC-64 or using **RJA-1.1s** Refer to **Figure 21**. Confirm all connections prior to powering up the system.

CONNECTIONS

Speaker Mute Relay (MODE 3.1 Only)

The **Speaker Mute Relay** is typically used in situations where a multi-channel amplifier has been added to an MZC Zone Pre-out for additional rooms or 'sub-zone expansion'. The MODE 3.1 Speaker Mute Relay gets connected to a SpeakerCraft **EPR-1.0 Speaker Muting Relay**. This allows the individual room keypads to mute their corresponding speaker pairs and not the zone, which would mute all of the rooms in the 'sub-zones'. The following describes the connections for the Speaker Relay Mute and sub-zone speaker connections.

1. Connect **ZONE SPEAKERS L+,L-/R-,R+ OUTPUTS** from the MZC or an external amplifier to the **EPR-1.0 AMPLIFIER Terminal L+,L-/R-,R+ INPUTS**.
2. Strip approximately $\frac{1}{4}$ inch of each lead and twist the stripped ends so there are no loose strands that can cause shorts.
3. Connect the **EPR-1.0 SPEAKERS L+,L-/R-,R+ OUTPUTS** to the **L+,L-/R-,R+ terminals** on each speaker pair as appropriate.
4. Connect the **WHITE STRIPE LEAD** from the **EPR-1.0** to the **+RELAY Terminal** on the **MODE 3.1**.
5. Connect the **BLACK LEAD** from the **EPR-1.0** to the **-RELAY Terminal** on the **MODE 3.1**.
6. Visually check for loose ends. Lightly pull the wire to confirm connection.
7. Install speakers into dry-wall cut-outs or SpeakerCraft InstaLock™ New Construction Brackets (if used) as appropriate.

NOTE: EPR-1.0 Relay mute will not function without proper configuration in EZ-Tools.

MODE FREE WALL DOCK

1. Terminate the CAT5 pulled in pre-wire on the **Wall Dock** end with a **RJ45** connector, using the pin-outs detailed in **Table 1** in this section.
2. Connect terminated CAT5 to the RJ45 Connection Port on the bottom of the Wall Dock prior to installing the Wall Dock. **NOTE:** It is recommended to run the wire up through the bottom knock out hole in the Back Box to give more room for the RJ45 connector, to help alleviate any issues of pinching the wire during installation. Removing the bottom knock out is recommended even if the wire has been pulled into the box through another hole, to help alleviate any issues of pinching the wire when mounting the Wall Dock. See Section: Wall Dock and MODE Free Keypad Installation for additional information.
3. Terminate the **MZC** end **as appropriate** for the model MZC used and connection method, (RJ45 for MZC-64 or RJA-1.1; plug-in connector for MZC-66, KCM-1.0/MZC-88), using the pin-outs detailed in **Table 1** in this section.
4. Connect the terminated CAT5 to the appropriate MZC or KCM-1.0 Terminal.

MODE FREE COORDINATOR

1. If the **Coordinator** is located at the system **head-end**, using a **CAT5 cable** terminated with **RJ45** connectors on both ends in a **pin-pin (passthrough) configuration**, connect one of the **Expansion Ports** on the **Coordinator** to one of the **Expansion Ports** on the **MZC**.
NOTE: In this application, The Coordinator will receive power from the MZC and it is **not** necessary to connect a Power Supply to the Coordinator.
2. If the **Coordinator** is located in a **remote location**, (up to 500' from the MZC), terminate the **CAT5** pulled during pre-wire with **RJ45 connectors** on **both** ends in a **pin-pin (passthrough) configuration** and connect one of the **Expansion Ports** on the **Coordinator** to one of the **Expansion Ports** on the **MZC**.
NOTE: If the **Coordinator** is **more than 500'** from the **MZC**, connect a **SpeakerCraft PS-1.0 Power Supply** to the **12V Jack** on the **Coordinator**.

PROGRAMMING WITH EZ-TOOLS

The EZ-Tools programming instructions provided with MODE 3.1/MODE Free are intended to provide direction for adding a MODE 3.1/MODE Free Keypad, multiple MODE 3.1/MODE Free Keypads, MODE Base(s) and MODE Adapter(s), to SpeakerCraft MZC Systems. If configuring a new system, start with the **Programming With EZ-Tools** section of the **MZC Installation Instructions** for system configuration, source setup, power management, etc. Use this manual for configuration and programming zones using MODE 3.1/MODE Free Keypads. All programming for MODE 3.1 and MODE Free is identical. Program any zone that may be controlled with a MODE Free as a wireless controller, or will have a Wall Dock installed, using the same instructions as MODE 3.1. For simplicity, MODE 3.1 and MODE Free/Wall Dock will be referred to as MODE 3.1 or MODE Keypad unless specifically noted otherwise.

NOTE: If only changing EZ-Pads to MODE Keypads, and not adding iPod/MODE Base/MODE Adapter, follow the directions in **Download EZ-Tools** and proceed to section: **Adding a MODE Keypad to an Existing MZC Project**.

With the system installed at the job site or set up for test at the shop, the system is ready for programming. Connect the “3.5mm Plug Transfer Cable” between the COM port on a PC running EZ-Tools (or the USB port with the USB/Serial Adapter) and the CONTROL PORT on the MZC. Power up the MZC and proceed as follows:

DOWNLOAD EZ-TOOLS

Before programming with EZ-Tools, always check the SpeakerCraft web site (www.speakercraft.com) to verify that the version of EZ-Tools being used is the latest rev.

FIRMWARE UPDATES

After downloading EZ-Tools, before installing, configuring or programming any SpeakerCraft Control Product, download the latest firmware for that product from the SpeakerCraft web site. This will ensure that each product has the latest functionality and fixes. See: EZ-Tools MZC Programming Instructions/Firmware & EZ-Tools Upgrades for additional information.

Also note in order to update firmware to a MODE Free, the MODE Free must be docked to a Wall Dock. A FIRMWARE UPDATE CANNOT BE PERFORMED ON A MODE FREE IN SLEEP MODE. If the MODE Free was in Sleep Mode when docked, it will remain in Sleep Mode until a button is pressed on the MODE Free. Press any button on the MODE Free to ‘wake it up’ and proceed with the Firmware Update. (Sleep Mode will be disabled as long as the MODE Free remains docked.)

QUICK START GUIDE FOR SIMPLE MODE KEYPAD EZ-TOOLS PROGRAMMING

Follow the instructions in this section if **no source or zone changes** other than replacing an EZ-Pad with a MODE Keypad are required.

1. **Open** an existing MZC Project.
2. Under **Project Content/Zone Setup**, left click the zone the MODE is going to be added to.
3. In the **Zone Setup Window**, left click **Name/Sources**. If the **Available Sources** are checked and not going to change, left click **Apply**. Check or uncheck any boxes to make changes as needed.
4. In the **Zone Setup Window**, left click **Keypad**.
5. Under **Graphic Keypad**, left click to place a check mark in the box next to MODE 3.1. If removing the EZ-Pad left click the MKP-1x box to uncheck the box and remove the EZ-Pad from the zone. Left click **Apply**.
6. In the Zone Setup Window, left click **Whole House /Mute**.
7. If the **Whole House/Party Mode** and **Mute Key Functionality** settings are not going to change, left click **Apply**, otherwise make desired changes and then left click **Apply**. See section: **Whole House/Mute** for additional information.
8. Right click the **MODE icon** in the zone being configured. In the **Zone MODE 3.1 Window**, left click the appropriate **Address Box** to set Keypad address. If there is no more than one keypad per zone, all keypads can have the same address. If there is more than one keypad in a zone (EZ-Pads and/or MODE Keypads) the keypads in that zone must all have different Addresses. Left click **Apply**. The Address will appear after the MODE icon.
9. Under **Project Content/Zone Setup**, right click the zone icon for the zone being configured. In the pop-up window, highlight and left click **Place Default A/V Routing Commands**.
10. Left click the **MODE 3.1 icon** for the keypad being configured. The **Virtual MODE 3.1, Button Properties** and **Virtual Button Windows** will appear.
11. Left click the first source in the **Source List**.

PROGRAMMING

12. Left click the **Volume Up Arrow** on the **Virtual Keypad**. Left click the **CMD MZC Cmds Tab**, expand the **Audio Level Commands Tab** and double left click the **Volume Up Command** for the **Zone** being programmed.
13. Right click the **Volume Up Arrow** and then **highlight** and **left click Punch Key's Commands** to make the Volume Up Command available to all sources. Left click **Yes** in the pop-up. Repeat for Volume down.
14. To program mute, right click the inside section of the Volume Knob. In the pop-up, highlight and left click the **Mute (Preamp) Key**. This will program **Zone** and **Whole House Mute** for all Sources.
15. Right click the **MODE Power Button**. In the pop-up highlight and left click **Zone Power Off Key**. This will program **Zone** and **Whole House Off** for all Sources.
16. To program **Hard Keys** by **Source**, left click a source in the **Source List**. Left click the **CMD Library Tab**, select a **Brand** and **Device** from the pull downs and double left click the appropriate commands for the Hard Keys being programmed. Repeat for all sources.
17. To create and program **Virtual Buttons**, left click a source in the Source List. Right click inside the **Virtual Button List Window**. Highlight and left click **Add Multiple New Menu Items**. Type the names of the Virtual Buttons to be created in the **Enter Item Name** block and add them to **Item Names** by left clicking the **>> Button**. When finished, left click **OK**.
18. Left click the **Virtual Button** in the **Virtual Button List**. Left click the **CMD Library Tab**, select a **Brand** and **Device** from the pull downs and double left click the appropriate commands for the Virtual Buttons being programmed. Repeat for all sources.
19. Download the project to the MZC and test all functions. Make changes as needed using the previous steps.

For more in-depth description of MODE programming, see the following sections.

ADDING AN IPOD, MODE BASE AND MODE ADAPTER TO AN EXISTING PROJECT

With EZ-Tools running, open the project that the MODE is going to be added to.

Open Project

1. In the **Menu Bar**, select **File**.
2. In the pull-down, highlight and left click **Open**.
3. In the **Open Window**, highlight and left click the project to be modified. The project will open to the default screen as shown in **Figure 23**.

Source Setup

4. If adding iPod(s) using **MODE Base(s)** and **MODE Adapter(s)**, with the **Project Content Tab** selected, left click **Source Setup**. The **MZC Setup Window** will appear.
5. Left click the **pull-down arrow** for the **source** that is to change to iPod. (For the example Source 5 will be used.) The **MZC Source List** will open. Highlight and left click iPod. **Source 5** will change to iPod. The **Source Assignments Tab** will also change, now featuring additional options for Source 5. (Refer to **Figure 24**)
6. In the **Description** block, Type in a name for the iPod, such as NANO, 30G VIDEO, etc.
7. In the **Address** block, if the iPod being added to Source 5 is the only iPod being added using MODE Base and Adapter, leave the Address set to '0'. If adding additional iPods, Bases and Adapters, set each to a different Address.

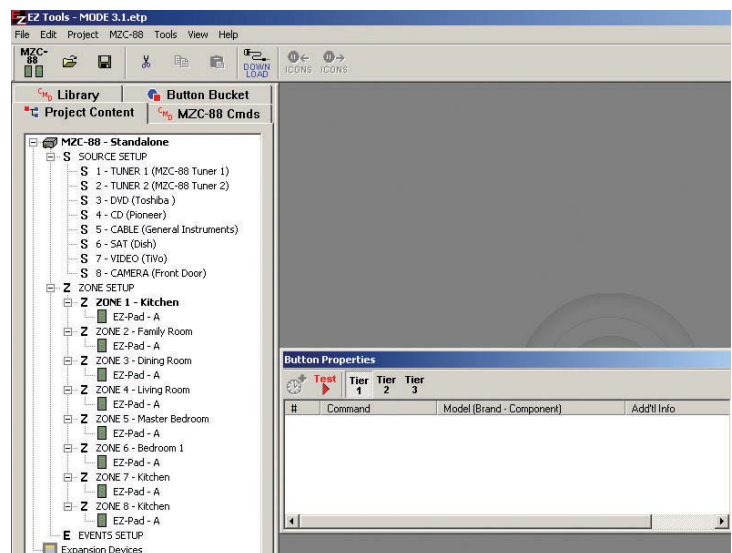


Figure 23
Opening an Existing Project

PROGRAMMING

8. Under **Option**, if no additional source is going to be added, use the default setting: **None**. If adding an additional source, left click the pull-down arrow and select: **Base Aux In** or **Adapter Aux In**. **Base Aux In** allows stereo audio to be connected from a source at the Base location. That is, if the Base is in a remote zone, a device such as a Video Game, XM or SIRIUS Tuner, Cable Box, etc. can be added so the audio can be played through the MZC amplifier and zone speakers. **Adapter Aux In** provides the same flexibility for a source connected to the Adapter. There can only be one Aux In connected per source, but this allows the input capability of a MZC-64/66 to expand to 12 sources and the MZC-88 to 14!

IMPORTANT NOTE: The sources connected to the Base and Adapter Aux Inputs are only selectable via **MODE 3.1 Keypads**. They are not available to EZ-Pads and cannot be selected by IR remote commands. For the purpose of the example, the **cable box** that was connected to **Source 5** on the MZC has now been **replaced** by an **iPod**, making the iPod available to **all zones**. The **cable box** is actually **dedicated** to the **Family Room**, where coincidentally, the **MODE 3.1** is being installed. The **cable box** will be **configured** as the **Source 5 Sub Source Input** in **EZ-Tools (Figure 24)** and **connected** to the **Base Aux In** in the **Family Room**. **All zones** will have **access and control** of the iPod (**Source 5**). **Only zones with MODE 3.1 Keypads** will have **access and control** of the **cable box (Source 5a)** which will appear in the **MODE 3.1 Main Menu** as a regular **Source**. Further, as an **option**, the cable box can be **unchecked** in **Zone Setup**, for any **zones other than the Family Room** that get **MODE 3.1 Keypads**, to keep the cable box **dedicated** to the **Family Room**. In addition to dedicated control, this will allow the cable box audio to feed through the MZC amp and zone speakers for the Family Room. See section: **Connections** for additional information.

9. In the **Name** block, type in the source name for the device being connected to the Aux In. This name will appear in the Source List on the MODE Display, so be sure to use a name that will not confuse the user. If there is a Cable Box already available as a source through the MZC, name the cable box connected to the Aux In: Cable 2.
10. If no other changes are to be made, left click **Apply** in the MZC Setup Window. This will 'save' the new configuration. If additional Bases and Adapters are being added, repeat steps 5-9 above for each new Base/Adapter pair. Left click Apply to 'save' each.

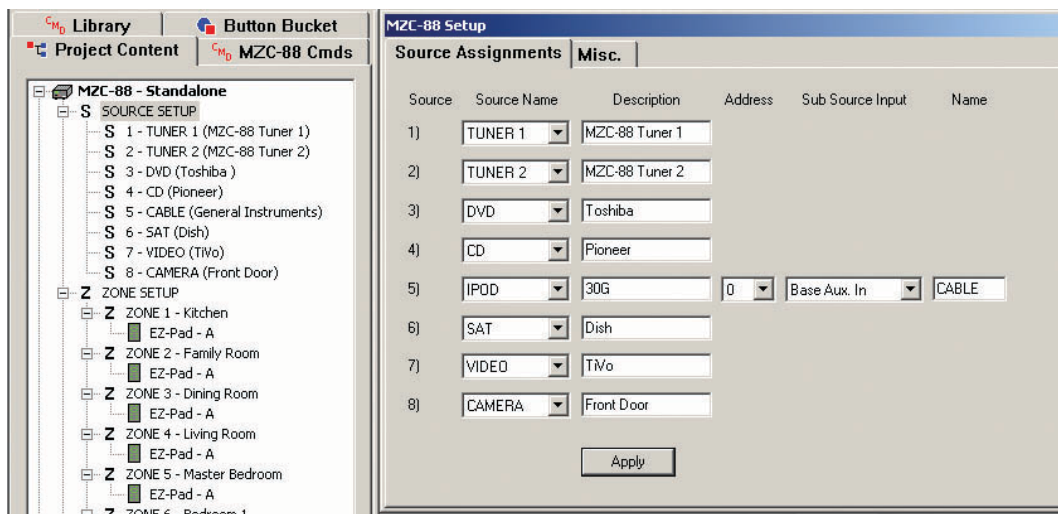


Figure 24
Changing Source Setup

11. A **Warning Window** will appear advising: **'The Cable Source has been changed to a IPOD Source...Do you still want to continue?'** Left click **YES**. If multiple source changes have been implemented, a warning for each change will come up. Review each of these as it is possible that an undesirable change has been made.
12. After the Warning(s) have been cleared, the **Source Setup** under the **Project Content Tab** will update to show the new source configuration. (Refer to **Figure 25**) Source 5 will have changed to iPod and a new source, **5a** will show **Cable**. Source 5a is the **Sub Source Input** (Base or Adapter Aux In) configured in the previous steps. (Refer to **Figure 24**)

PROGRAMMING

- At this point the EZ-Pad Source Buttons will have also changed to indicate the new source configuration. In the example, the Cable Button has now changed to iPod as shown in **Figure 25**. All programming associated with Source 5 will need to be changed from Cable commands to iPod commands for all keypads in all zones. Left click the **CMD Library Tab** to open the IR Command Library. Left click the pull-down arrow next to the **Brands** block and scroll the list until **SpeakerCraft** appears. Highlight and left click **SpeakerCraft**. Expand the **MODE Folder** by left clicking the '+' sign or double left clicking the folder icon. Next, expand the **MODE Base Folder** by left clicking the '+' sign or double left clicking the folder icon.

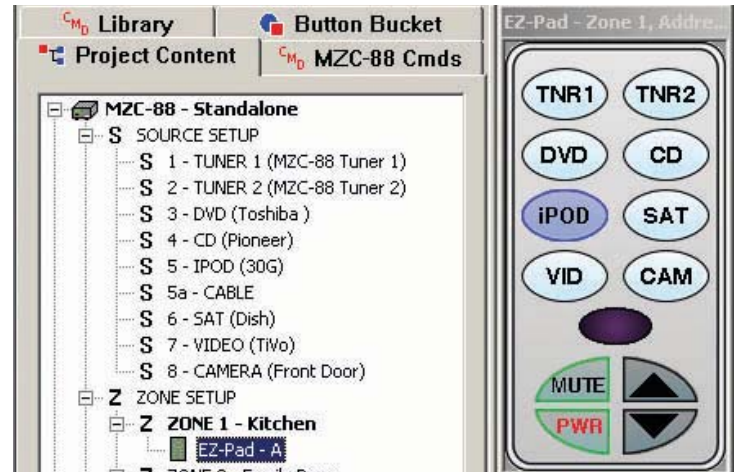


Figure 25
Updated Source Setup and EZ-Pad Configuration

Zone Setup

- Select the EZ-Pad in Zone 1 by left clicking the green EZ-Pad icon under: **Project Content/Zone Setup**. The virtual EZ-Pad for Zone 1 will appear. Left click the **iPod Source Button** to select the iPod 'bank' of commands. The iPod Source Button will highlight blue and all commands programmed to that button will appear in the **Button Properties Window**.
- Right click any commands in the **Button Properties Command List** that were programmed for the Cable Box (or other now replaced source) then highlight and left click **Delete Command** in the pop-up. The command will be deleted.
- Double left click any desired command(s) in the **CMD Library/SpeakerCraft/MODE/MODE Base Command Library** for EZ-Pad iPod control programming.
- Repeat **Steps 15-16** for all buttons within the iPod 'bank'.
- If all zones are identical in keypad configuration, (all use MKP-8.1 or the same double or triple-gang configuration), the new programming for the EZ-Pad in Zone 1 can be 'cloned' to the other EZ-Pads. Right click the **Zone 1 EZ-Pad iPod Source Button**. Highlight and left click **Copy All Source Bank Commands** in the pop-up. Left click the EZ-Pad icon in any other zone with an identical EZ-Pad setup to Zone 1. Right click the **iPod Source Button**. Highlight and left click **Paste Source Bank Commands** to duplicate the EZ-Pad programming for iPod to the selected zone. Repeat for all Zones with identical EZ-Pad configuration. Zones with different EZ-Pad configurations will need to be programmed individually.

Download and Test

- At this point it is suggested that the project be downloaded to the MZC to confirm the changes to the EZ-Pads and communication with the iPod/Base/Adapter. With the PC running EZ-Tools connected to the MZC with a **SpeakerCraft 3.5mm Plug Transfer Cable** or **Transfer Cable with USB/Serial Adapter**, either select **MZC-64/66/88** from the **Menu Bar**, then highlight and left click **Download** or left click the **Download Icon** in the **Tool Bar** to transfer the updated project to the MZC.
- When Download is complete check EZ-Pads for proper iPod control. Make programming changes as needed by repeating previous steps.
- At this point, existing system functionality for EZ-Pads is updated and complete and MODE 3.1 programming begins.

PROGRAMMING

ADDING A MODE KEYPAD TO AN EXISTING MZC PROJECT

The EZ-Tools programming instructions provided with the MODE 3.1 are intended to provide direction for adding a MODE Keypad, multiple MODE Keypads, MODE Base(s) and MODE Adapter(s), to existing MZC Systems. If configuring a new system, start with the **Programming With EZ-Tools** section of the **MZC Installation Instructions** for system configuration, source setup, power management, etc. Use this manual for configuration and programming zones using MODE Keypads.

If adding iPod(s), MODE Base(s) and MODE Adapter(s), be sure to have followed all instructions in the previous sections for incorporating those components, updating the Source Setup and Zone Setup for proper system configuration and performance. If only adding MODEs or upgrading EZ-Pads to MODE Keypads, be sure to have followed all instructions for connections and installation in the previous sections.

When adding a MODE 3.1 Keypad to an existing project, EZ-Tools does some of the work automatically in identifying sources and placing them in the MODE Main Menu. This helps assure that proper control commands will be associated with the right source. To add a MODE Keypad:

Open Project

1. If not already open, Open the MZC Project to be modified.
2. Under the **Project Content Tab**, confirm the source configuration for the system under **Source Setup**. If the source configuration is correct, proceed to **Step 3**. If not, return to section: **Adding An iPod, Mode Base And Mode Adapter To An Existing Project**, and follow all instructions.

Zone Setup

3. Under **Project Content/Zone Setup**, left click the Zone that the MODE Keypad is going to be added to - for this example, Zone 2. The **Zone 2 Setup Window** will appear as shown in **Figure 26**.

Name/Sources

4. If the **Available Sources** options are checked and not going to change, left click **Apply**. (The Cable Box now connected as Source 5a or any other sources connected to the Adapter or Base Aux Inputs will not show in this list, but will automatically be available to the MODE Keypad and any other MODE Keypads that get added to the system). If the Available Sources options are to be changed, check or uncheck the sources as appropriate. Left click **Apply**.

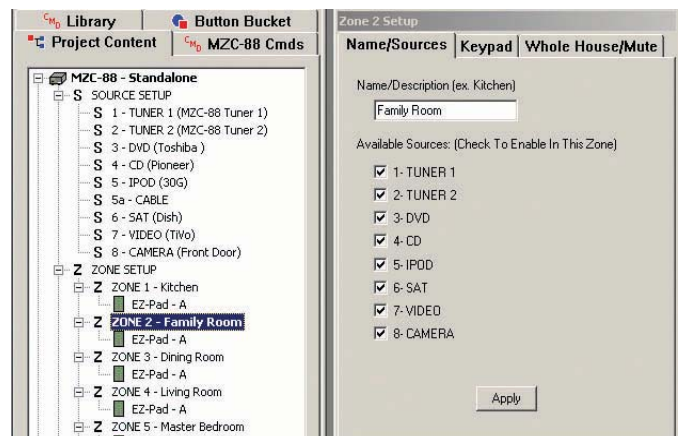


Figure 26
Zone Setup Window

Keypad

5. To add a MODE Keypad to the zone, left click the **Keypad Tab**. MKP-1x(NKP, FKP) should be checked. Under **Graphic Keypad**, left click in the **MODE 3.1 Box** to place a **check** mark in the box. This will place a MODE 3.1 in the Zone Setup. If the EZ-Pad is being replaced with a MODE Keypad, left click the **MKP-1.x Box** to **uncheck** the MKP. This will remove the EZ-Pad from the Zone Setup. If the EZ-Pad is to remain installed, leave the MKP-1.x Box checked. Left click **Apply**. For the example system, the EZ-Pad has been removed and replaced with a MODE 3.1. As soon as Apply is clicked, the EZ-Pad is removed from the Zone Setup under Project Content.

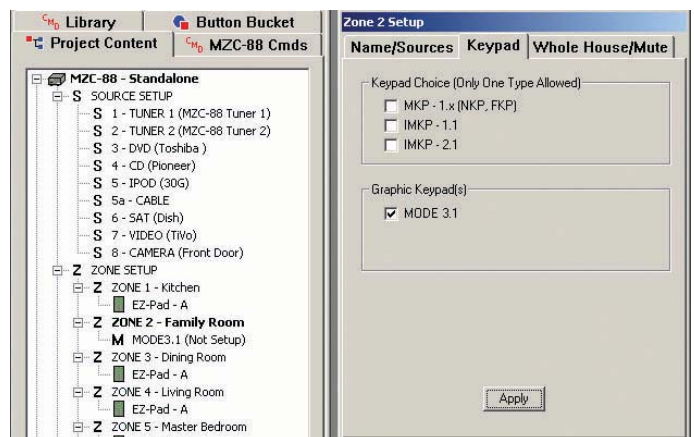


Figure 27
Zone Setup Keypad Tab

PROGRAMMING

Whole House/Mute

- Left click the **Whole House/Mute Tab** to confirm Whole House and Mute Key Functionality. These functions should have already been configured in the existing project. Under **Whole House/Party Mode**, “**This Zone Initiates**” should be checked to enable Party Mode from a press and hold of the **Click Button** when selecting a source on the MODE. “**This Zone Ignores...**” should be checked to lock out Party Mode commands from other zones. Under **Mute Key Functionality**, “**Internal Preamp Muting**” should be checked to use the MZC zone preamp muting function. “**EZ-Pad Relay Speaker Muting**” should be checked when using EPR-1.0 EZ-Pad Relay Muting Module for muting individual rooms in sub-zone expansion applications (multiple rooms in a single zone). When Zone Whole House/Mute functions are set, left click **Apply**. (Refer to **Figure 28**)

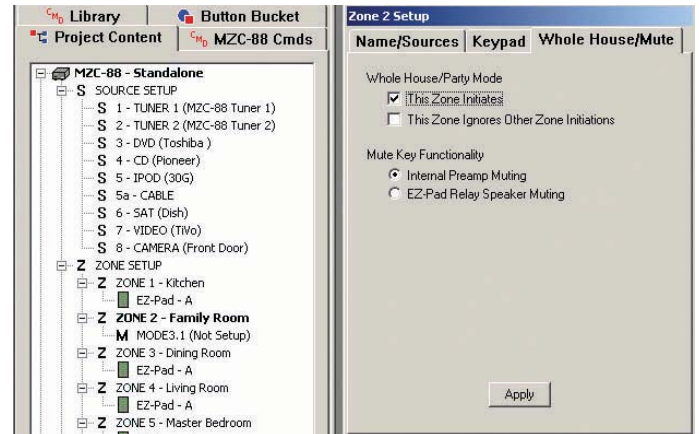


Figure 28
Zone Setup Whole House/Mute Tab

Keypad Address

- Any keypad whether an EZ-Pad or MODE must have its Address configured in EZ-Tools. If there is only one keypad per zone, all keypads can be set to the same Address. Any time there is more than one keypad in a zone, each of the keypads within that zone must be set to a different Address. Right click the EZ-Pad or MODE 3.1 icon in a particular zone. Left click the **EZ-Pad** or **MODE 3.1 Setup** pop-up. Left click the desired box to set keypad Address. For the example, '0'. Left click **Apply**. The Keypad Address will appear next to the Keypad Icon in Zone Setup. (Refer to **Figure 29**)

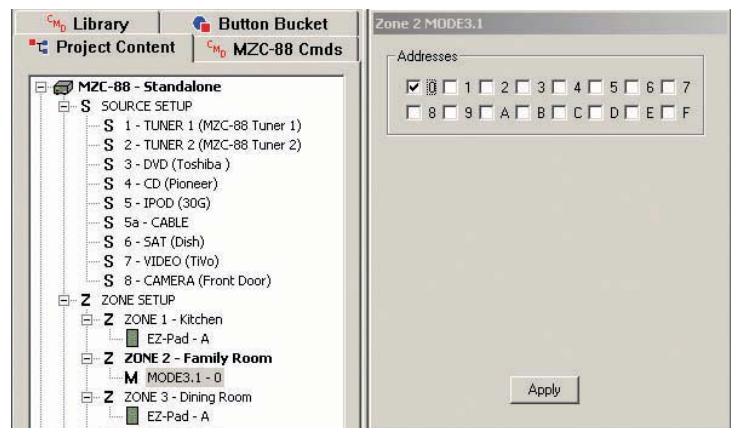


Figure 29
Zone Setup Keypad Address

Default AV Routing Commands

- To assure that the sources connected to the MZC will be properly routed to the local zone, a set of default A/V routing commands can be assigned to the source icons on the MODE 3.1. Under **Project Content/Zone Setup**, right click the Zone 2 icon. Highlight and left click **Place Default A/V Routing Commands**. The MZC Internal Commands for all source A/V signal routing will be automatically assigned to all sources available to the MODE in Zone 2. (Refer to **Figure 30**)

This completes Zone Setup for integrating the MODE into Zone 2. Left click the MODE 3.1 icon under **Project Content/Zone Setup/Zone 2**. The **virtual MODE 3.1** will appear along with the **Button Properties Window** and the **Virtual Button Window**. (Refer to **Figure 31**)

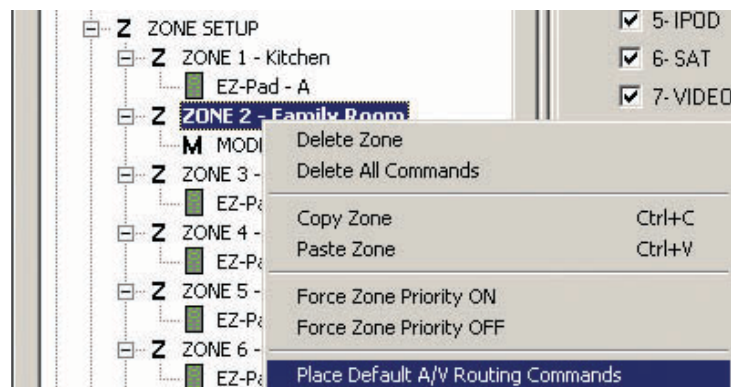


Figure 30
Place Default A/V Commands

PROGRAMMING

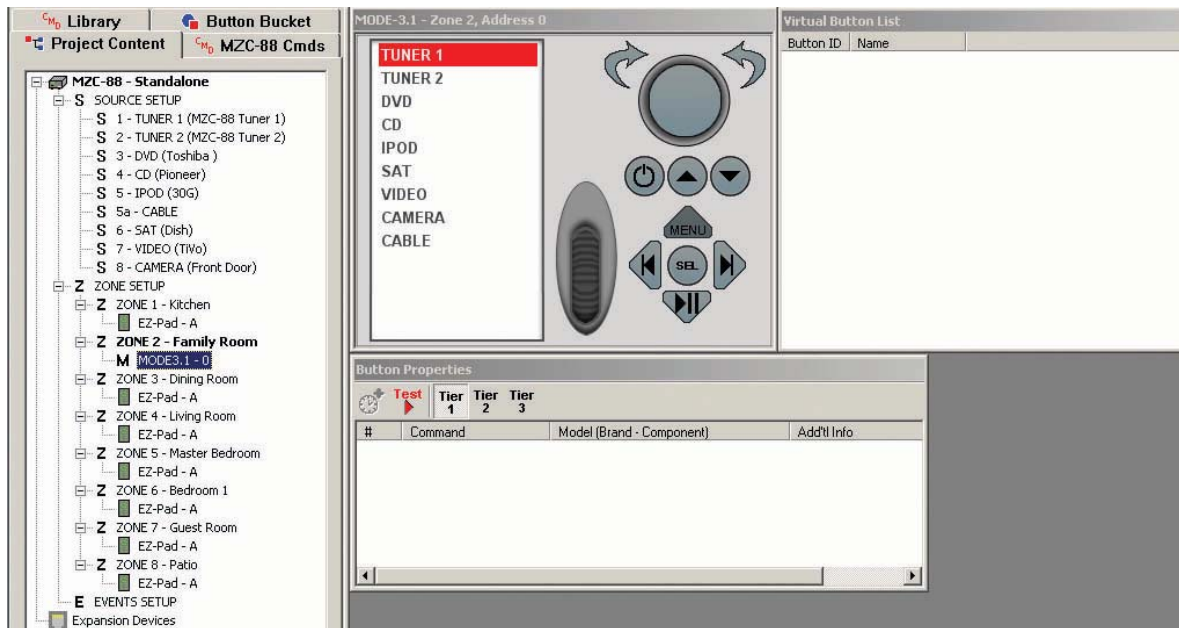


Figure 31
Virtual MODE 3.1

Virtual MODE 3.1 Window

When an unprogrammed MODE appears on screen, EZ-Tools has already loaded the MZC Source icons, to assist in keypad programming. By doing so, EZ-Tools reduces the possibility of accidental omission of sources or associating sources with the wrong input. The **Virtual MODE Window** displays the **Zone Number** and **Keypad Address** for reference. The Source Icons in the Source List have the same programming and performance capabilities as Source Keys on EZ-Pads. The difference being, EZ-Pad Source Keys are hard buttons that are pressed, the MODE Source Keys are **Virtual Buttons** on the **MODE LCD** that are selected with the **Scroll Wheel** and **Click Button**. The Source Icons are programmed the same as any other key, by selecting the icon and double clicking commands under the **CMD MZC Cmds Tab** or **CMD Library Tab**. Programmed commands appear in the **Button Properties Window**, consistent with EZ-Tools programming.

NOTE: The Scroll Wheel, Click Button and Menu Key are not programmable. They have un-removable factory programmed functions for: scrolling lists and menus on the LCD (Scroll Wheel), selecting items from those lists and menus (Click Button) and returning to either the MODE Main Menu or selecting iPod Menus depending upon current MODE function. When a source other than iPod is selected, a press of the Menu Key returns the display to MODE Main Menu. When iPod is selected, and the iPod is playing, a press of the Menu Key returns the display to the previous iPod Main Menu level. In any iPod mode, a press & hold of the Menu Button will return the display to MODE Main Menu.

Virtual Button List Window

When any source is selected on a MODE Keypad, the information in the LCD will change to the Virtual Buttons associated with that source. Any menu or list of commands associated with controlling a particular device, or the system, can be configured for display.

The **Virtual Button List Window** is where these menus and lists of commands are created. Virtually any command for any device that will be connected to a MZC System can be programmed to a MODE Virtual Button. A pop-up tool allows creation of the Virtual Buttons by simply typing in the name of the function, i.e. Play, Stop, Menu, Aspect Ratio, etc. Once the Virtual Button has been created, any command from the EZ-Tools Command Library whether a MZC Internal Command, IR command or RS232 command can be associated with these Virtual Buttons. If the required IR or RS232 commands are not already in the Library, they can be added by either learning the IR commands with the **SpeakerCraft LTM-1.0 Learn/Test Module** or by using the **RS232 Command Properties Tool** for creating and editing RS232 commands. Refer to **MZC Installation Instructions** sections: **Learning IR Commands** and **RS232 Commands** (M2C-88) for additional information.

As when programming any other key in EZ-Tools, the commands associated with the Virtual Buttons are displayed in the **Button Properties Window**. Virtual Buttons have the same properties as EZ-Pad keys in that they can execute single commands, or macros and for truly advanced applications access tiered commands as well.

PROGRAMMING

To program the Virtual MODE shown in **Figure 31**:

1. Left click the **Tuner 1 Source Icon** on the **Virtual Keypad**. It will highlight blue. This indicates the Tuner 1 'bank' has been selected.
- Volume**
2. Left Click the **Volume Knob Up Arrow**. The Tuner 1 icon will turn red indicating which source is being programmed and the Up Arrow will highlight blue to indicate which button is being programmed.
 3. Left click the **CMD MZC Cmds Tab** and expand the **Audio Level Commands Tab** by left clicking the '+' sign or double left clicking 'Audio Level Commands'. The list of all MZC audio commands will open.
 4. Scroll down the list to find the **Zone 2 Commands**. Double left click **Zone 2 Volume Up**. The Zone 2 Volume Up Command will appear in the **Button Properties Window**. Right click the **Volume Up Arrow**. In the pop-up, highlight and left click **Punch Key's Commands** to make the volume up command available to all sources.
 5. Next, left click the **Volume Knob Down Arrow**. Double left click **Zone 2 Volume Down** in the **CMD MZC Cmds List**. The Zone 2 Volume Down Command will appear in the **Button Properties Window**. Right click the **Volume Down Arrow**. In the pop-up, highlight and left click **Punch Key's Commands** to make the volume up command available to all sources.

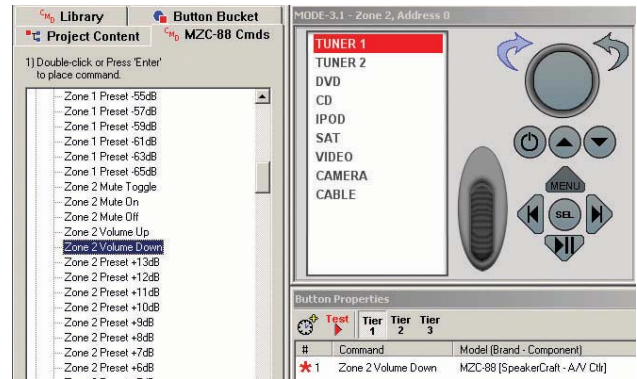


Figure 32
Placing The Volume Up Command



Figure 33
Placing The Zone/Whole/House Mute Command

Mute

6. Next is the Mute Button. The Volume Knob can be pushed in to execute a programmed command or macro. It is recommended that the Knob press function be used for Zone Mute. For this example, MZC pre-amp zone mute will be used.

Right click the inside section of the **Volume Knob**. In the pop-up, highlight and left click the **Mute (Preamp) Key** as shown in **Figure 33**. This will configure the key for **Zone** and **Whole House Mute** and punch the commands to all banks. The key will highlight green to indicate special whole-house functionality.

When this button is pressed for less than 2 seconds, the zone will mute. When it is pressed again for less than 2 seconds, it will unmute. When the Mute Key is pressed for longer than 2 seconds, this initiates whole-house muting (all zones mute). When pressed again for longer than 2 seconds, all zones are unmuted.

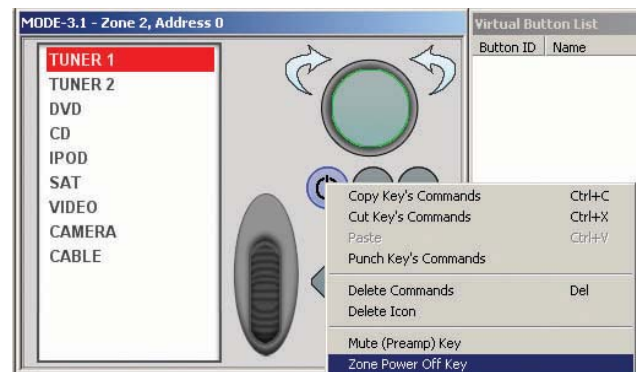


Figure 34
Placing the Zone/Whole-House Power Command

Power

7. Right click the **MODE Power Button**. In the pop-up, highlight and left click **Zone Power Off Key** as shown in **Figure 34**. This will configure the key for **Zone** and **Whole House Off** and punch the commands to all banks. The key will highlight green to indicate special whole-house functionality.

When the **Power Key** is pressed for less than 2 seconds, the local zone will turn off, and typically, the common sources will stay on until the last zone is turned off. Additionally, when the Power Key is pressed for longer than 2 seconds, this initiates whole house power off (all zones will turn off) and this action will typically also turn off the common sources.

PROGRAMMING

PROGRAMMING SOURCE CONTROL

The MODE Keypads can be programmed to control any of the sources connected to a MZC 64/66/88 System by using either the Hard Keys or Virtual Buttons. Programming is consistent with standard EZ-Tools procedures. Hard Key programming should be for the most commonly used commands, Play, Skip, Channel Up/Down, etc. Virtual Buttons can be programmed for control of any source function for which an IR or RS232 command is available in the Command Library. For example, if programming control of a DVD player, the various menu options for anything from aspect ratio to zoom can be setup as a Virtual Button.

Since the process is essentially the same for all sources, a general example using a DVD Changer will be used. Use the following instructions for other sources, by programming appropriate commands by source.

NOTE: When used with a MZC-88, MODE shows its powerful simplicity. The Preset channel frequencies and control commands for the MZC-88 Internal Tuners are automatically displayed on the MODE LCD. This is a default function of the MZC-88 and MODE Keypad. No programming is necessary for control of the MZC-88 Internal Tuners when controlled with MODE.

PROGRAMMING HARD KEYS

1. If not already open, left click the **CMD Library Tab**. From the **Brands Pull-Down** either left click the pull-down arrow and scroll the list for the DVD Player Brand being used or left click the Brands Box and type in the name of the DVD Player Brand. Expand the **DVD Tab** by left clicking the '+' sign or double left clicking the DVD Icon. In some cases, a sub-directory of DVD commands will appear. Some manufacturers have multiple code groups for certain devices. A bit of trial and error may be necessary to determine which code group is correct. Typically, testing commands such as power, play and stop will indicate the proper code group. Sometimes a visual inspection of the list can be helpful to see if certain special commands are available in one list or another. If any commands are not available, they can be learned into EZ-Tools. If it is necessary to learn commands, refer to **MZC Installation Instructions** section: **Learning IR Commands**.
2. Left click the **DVD Source Icon** on the Virtual Keypad to select DVD. It will highlight.
3. Left click the **Arrow Up Button**. Under **CMD Library**, double left click the **Next Disc Command**. (Program for next disc if using a DVD Changer otherwise select another function such as Fast Forward or other appropriate command.)
4. Left Click the **Arrow Down Button**. Under CMD Library, double left click **Previous Disc**. (Program for previous disc if using a DVD Changer otherwise select another function such as Reverse Play or other appropriate command.)
5. Left click the **Previous Track Button**. Under CMD Library, double left click **Chapter/Skip Down**.
6. Left click the **Next Track Button**. Under CMD Library, double left click **Chapter/Skip Up**.
7. Left click the **Play/Pause Button**. Under CMD Library, double left click **Play or Play/Pause** depending upon code availability.

This programming will provide basic transport control using the Hard Keys. To program additional commands, Virtual Buttons can be added as needed.

PROGRAMMING VIRTUAL BUTTONS

NOTE: The default functionality of MODE when used with iPod, replicates the genius of the iPod Menu system on the MODE LCD. Therefore, no Virtual Buttons can be configured for use with iPod.

8. With **DVD** selected on the Virtual Keypad, right click inside the **Virtual Button List Window**.
9. If only adding **one Virtual Button**, highlight and left click **Add New Menu Item**. In the **New Item Window**, type in the function and left click **OK**. Skip to **Step 11**.

PROGRAMMING

10. If adding **multiple Virtual Buttons**, right click inside the Virtual Button List Window, highlight and left click **Add Multiple New Menu Items**. In the New Source Menu Items Window, type in the first function name in the **Enter Item Name Block**. Either left click the **>> Button** or press the return key on the PC keyboard to add the function to the **Item Names List**. (Refer to **Figure 35**) To remove items from the 'Add New' list, highlight the entry and left click the **<< Button**. When all functions have been added to the Item Names List, left click **OK**. To remove items from the Virtual Button List, right click the item, then highlight and left click **Delete Item**.
11. To associate **IR or RS232 commands** to the **Virtual Buttons**, if not already open, left click the **CMD Library Tab**. Select the **Brand** and **Device** being programmed as described in **Step 1** above.

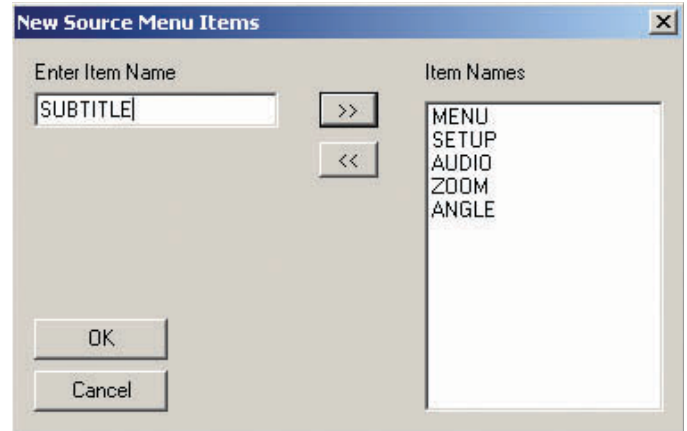


Figure 35
Creating DVD/CD Virtual Buttons

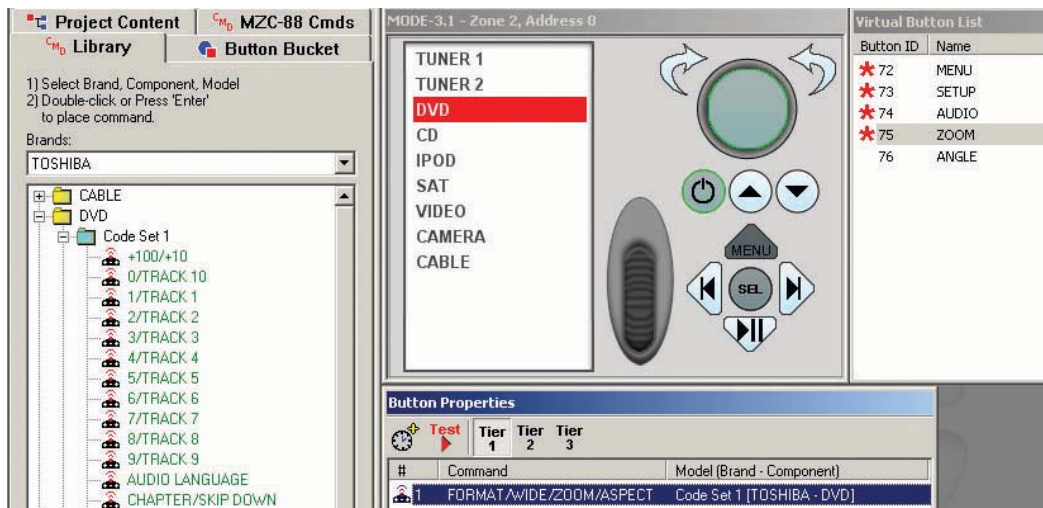


Figure 36
Placing IR Commands On Virtual Buttons

12. Left click the Virtual Button to be programmed. Double left click the IR or RS232 command in the CMD Library. A **red asterisk** will appear next to the function in the **Virtual Button List** to indicate an associated command or macro. The command will appear in the **Button Properties Window**. (Refer to **Figure 36**) Repeat for all Virtual Buttons.

Macros

13. Virtual Buttons can be programmed to execute **macros** using standard EZ-Tools programming method. Left click the **Virtual Button** to be configured as a macro. Double left click a command from the **CMD Library**. It will appear in the **Button Properties Window**. Navigate the **CMD Library** to find the next command to be added to the macro. Double left click the command. Repeat until all commands for the macro have been programmed.

Delays

14. Delays can be added between commands in a macro by left clicking the **Clock Icon** in the **Button Properties Window**. If adding a delay to an existing macro, it will appear at the bottom of the **Command List** in the Button Properties Window. Left click and drag the delay to the desired location between commands. A **red line** will appear between commands to act as a guide as to where the delay will be placed. To adjust the duration of the delay, double left click the delay in the Command List. The **Delay Properties Window** will appear. Either type in the duration from 0.1 to 20.0 seconds or use the arrow up/down buttons to set. Left click **OK** to enter.
15. **Repeat** the previous steps to program **MODE** for **all other sources** using the appropriate **Brand/Device** commands for each source from the **CMD Library**. For commands not found in the Library, refer to **MZC Installation Instructions**, sections: **Learning IR Commands**, and **RS232 Commands (MZC-88)**.

OPERATING MODE 3.1

The following describes basic source, zone and system control in a typical MODE/MZC installation. Functions may vary given the programming options for the Hard keys and Virtual Buttons. The **Operating MODE** section applies to both MODE 3.1 and MODE Free. Other than the Battery and the RF Signal Strength Icon (MODE Free only) in the Display Header and the Network Settings and Sleep Timeout Setting in Keypad Settings (MODE Free, wireless mode only), the menus and screens are identical. For operational features unique to MODE Free, see: **Operating MODE Free** at the end of this section.



The icons in the Keypad Headers indicate System, Keypad and Zone Status and are detailed in the following sections. The main differences between MODE 3.1 and MODE Free are both indicate Zone ON Status with the green ON Icon and both display the Source Selected. After four seconds MODE Free will change from Source Selected to the Zone for which it is currently configured (MODE Free will change identities as it is docked and undocked from different Wall Docks in different zones). MODE Free also indicates RF Signal Strength, (four bars indicates best reception). The Battery Icon will turn red with an empty battery capacity icon to indicate low charge or a drained battery.

POWER ON

1. **Roll the Scroll Wheel to highlight a Source** on the LCD. (If the Keypad is in 'Standby' rolling the Scroll Wheel or pressing any button will wake up the Keypad.)
2. **Press the Click Button to select the Source.** The Zone will turn ON. The Source selected will be displayed at the top of the LCD. (Refer to **Figure 38**)

POWER OFF

Zone

1. **Press the Zone Power Off Key** for less than 2 seconds. A red **OFF** (red SpeakerCraft Logo off/MODE Free) and the message: **"Source Not Selected"** will appear at the top of the LCD. (Refer to **Figure 37**) Unless the local zone is the last zone to be turned off, the zone will turn off and the common sources will stay on. If the local zone is the last zone to be turned off the common sources will turn off as well. On MODE Free the current zone will appear after a four second display of the System Status.

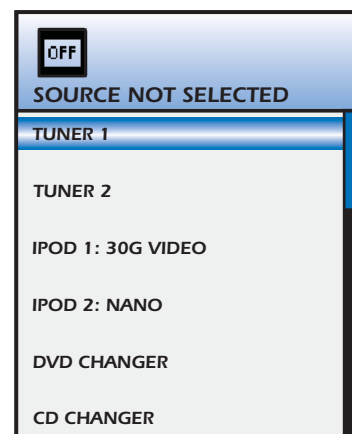


Figure 37
MODE Main Menu

Whole House

1. **Press and Hold the Power Off Key** for longer than 2 seconds. All zones and sources will turn off, unless **"This Zone Ignores Other Zone Initiations"** is selected under **Zone Setup/Whole House/Mute** in **EZ-Tools** for a given zone. If selected, that zone will ignore the Whole House Power Off Command and the common sources will stay on until the last zone is turned off. The LCD on all MODE Keypads (3.1 & Free) controlling zones that have turned OFF will display the MODE Source Menu. MODE Free will also display the current zone.

SELECT A SOURCE

1. **Roll the Scroll Wheel to highlight a Source** on the LCD. (If the Keypad is in 'Standby' rolling the Scroll Wheel or pressing any button will wake up the Keypad.)
2. **Press the Click Button to select the Source.** The Zone will turn ON. The Source selected will be displayed at the top of the LCD. (Refer to **Figure 38**)

ADJUST VOLUME

1. **Rotate the Volume Knob clockwise** to turn **volume up**. (The blue LEDs surrounding the knob will provide a visual reference to the volume setting.)
2. **Rotate Volume Knob counter-clockwise** to turn **volume down**. The blue LEDs surrounding the knob will provide a visual reference to the volume setting.

OPERATING MODE 3.1

MUTE

Local Room or Zone Mute

A local room or zone can be muted/un-muted by pressing the Volume Knob for less than 2 seconds.

1. Press the **Volume Knob** to **mute** the zone preamp or local speakers controlled with Speaker Relay Mutes. A purple **MUTE Icon** will appear at the top of the LCD. (Figure 38)
2. Press the **Volume Knob** to **un-mute** the zone preamp or local speakers. The purple **MUTE Icon** at the top of the LCD will turn off.

Whole House Mute

Pressing the Volume Knob for longer than 2 seconds will mute/un-mute the entire system, (all zones, speaker relay mutes) unless “**This Zone Ignores Other Zone Initiations**” is selected under **Zone Setup/Whole House/Mute** in **EZ-Tools** for a given zone. If selected, that zone will ignore the Whole House Mute Commands.

1. Press and Hold the **Volume Knob** until the purple **Mute Icon** appears in the header of the initiating keypad to **mute all** zone preamps and speakers controlled with Speaker Relay Mutes. A purple **MUTE Icon** will appear at the top of the LCDs of all MODE Keypads in the system and the selected Source Button will blink about once per second in zones controlled with EZ-Pads.
2. Press and Hold the **Volume Knob** until the purple **Mute Icon** turns off in the header of the initiating keypad to **un-mute all** zone preamps and speakers controlled with Speaker Relay Mutes. The purple **MUTE Icon** will turn off at the top of the LCDs of all MODE Keypads in the system and the selected Source Button will resume constant illumination in zones controlled with EZ-Pads.

SOURCE CONTROL

DVD, CD, Cable, Sat, DVR, Servers, etc.

1. From the **MODE Main Menu**, roll the **Scroll Wheel** to **highlight a Source** and then press the **Click Button** to **select the Source**. The selected source name will appear at the top of the LCD. (MODE Free will first display the selected source name and then the current zone name after a few seconds.) Any Virtual Buttons programmed for that source will appear in the LCD. (Refer to Figure 38)
2. Press the **Hard Keys** for basic device controls as programmed such as **Play, Pause, Skip**, etc.
3. Roll the **Scroll Wheel** to highlight **Virtual Button** functions as programmed.
4. Press the **Click Button** to **execute** the Virtual Button function highlighted in step 3.

MZC Tuners

All MZC Tuner Preset Frequencies and Controls will default to the Virtual Buttons. Additional controls may have been programmed to the Hard Keys.

1. Roll the **Scroll Wheel** to **highlight Tuner 1** or **2**.
2. Press the **Click Button** to **select the highlighted Tuner**. The selected tuner will appear at the top of the LCD with the Presets and functions displayed in the LCD. (Refer to Figure 39)
3. Roll the **Scroll Wheel** to **highlight a desired Preset**.
4. Press the **Click Button** to **select the Preset highlighted in Step 2**.
5. Use the **Scroll Wheel** and **Click Button** to **highlight and execute Tuner functions** such as **AM/FM, Tune Up/Down**, etc.

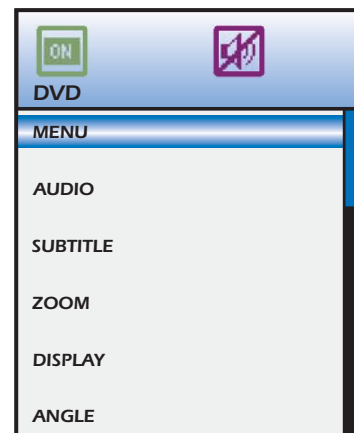


Figure 38
DVD Virtual Buttons

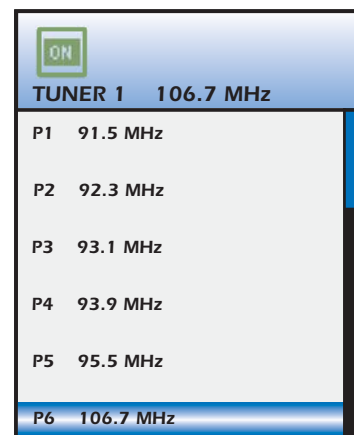


Figure 39
MZC Tuner Virtual Buttons

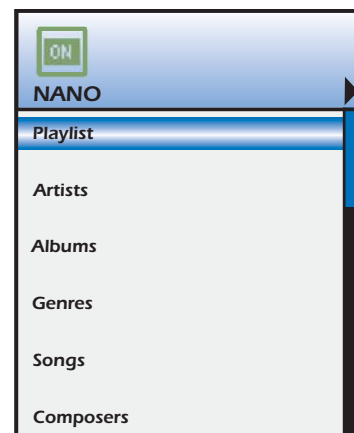


Figure 40
iPod Main Menu

OPERATING MODE 3.1

iPod

All iPod functions (typical iPod Menus) will default to the Virtual Buttons. Additional controls may have been programmed to the Hard Keys.

1. Roll the **Scroll Wheel** to **highlight** an iPod.
2. Press the **Click Button** to **select** the **highlighted iPod**. The selected iPod will appear at the top of the LCD and the iPod Main Menu will open in the LCD. (Refer to **Figure 40**)
3. Roll the **Scroll Wheel** to **highlight** an iPod Menu Option: **Playlists, Artists, Albums, etc.**
4. Press the **Click Button** to **select** the **Menu Option** highlighted in **Step 2**. The selected menu will appear at the top of the LCD.
5. Repeat steps 3-4 until the **Now Playing Screen** appears. (Refer to **Figure 41**)
6. Press the **Hard Keys** for basic iPod functions such as **Play/Pause** and **Next/Prev Song** if programmed
7. Press the **Menu Button** to return to the **previous iPod Menu level**.
8. Press and Hold the **Menu Button** for **longer than 1 second** to return to the **MODE Main Menu**.

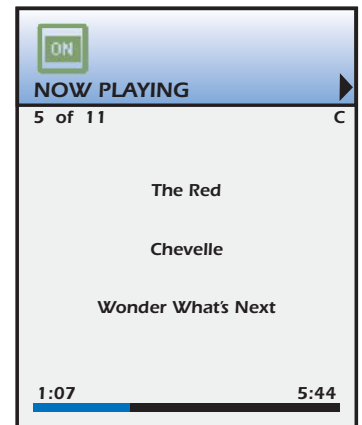


Figure 41
iPod Now Playing Screen

PARTY MODE

Party Mode allows playing a selected source in all zones from a simple Press and Hold of the Click Button.

1. Roll the **Scroll Wheel** to **highlight** the desired **Source**. (If the Keypad is in 'Standby' rolling the Scroll Wheel or pressing any button will wake up the Keypad.)
2. Press and Hold the **Click Button** for longer than 2 seconds. All zones will turn ON to the selected source, unless "This Zone Ignores Other Zone Initiations" is selected under **Zone Setup/Whole House/Mute** in **EZ-Tools** for a given zone. If selected, that zone will ignore the Party Mode Command and will continue in its current state (OFF or playing a different source). The LCD on all Party MODE Keypads will display the selected Source and the Party Mode Icon. (**Figure 42**) If an iPod is selected the LCD will also display the iPod Main Menu. If an external source is selected, the Virtual Buttons are displayed.

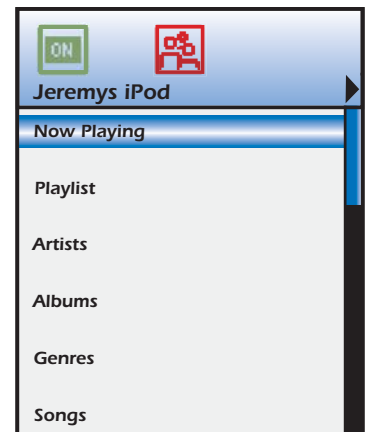


Figure 42
Party Mode Screen

ZONE SETTINGS (Treble and Bass)

From the MODE Main Menu:

1. Roll the **Scroll Wheel** and **highlight Zone Settings**.
2. Press the **Click Button**. The **Zone Settings Menu** will appear.
3. Roll the **Scroll Wheel** to **highlight Treble or Bass**.
4. Press the **Click Button**. The selected parameter will appear at the top of the LCD.
5. Roll the **Scroll Wheel** to adjust **Treble or Bass Up/Down**.
6. When the desired change has been made, press the **Click Button** to '**Save**' the setting.
7. Press the **Menu Button** to return to the **MODE Main Menu**.

OPERATING MODE 3.1

KEYPAD SETTINGS

In the MODE Main Menu is an option called Keypad Settings. These settings are user definable preferences for keypad performance and appearance including: Firmware Version, Button Intensity, LCD Intensity, Button Standby, LCD Standby, Beeper and Theme. These settings are adjustable only at the keypad and can be changed at any time. Adjustments are made using the Scroll Wheel and Click Buttons.

Firmware Version

Indicates the version of firmware loaded to the MODE 3.1/MODE Free. The Firmware version defines the functionality of the MODE 3.1/MODE Free.

Button Intensity

This setting adjusts the Hard Key and Scroll Wheel back-light level in increments of 1% from 0-100%.

LCD Intensity

This setting adjusts the LCD back-light level in increments of 25% from 25-100%.

Button Standby

This setting adjusts the intensity of the Hard Key standby backlight in increments of 1% from 0-100%.

LCD Standby

This setting adjusts the intensity of the LCD standby backlight in increments of 25% from OFF-100%.

Beeper

This setting turns an audible click that confirms button presses click On and Off.

Theme

This setting selects different color schemes for the information displayed on the LCD.

Standby Timeout

This setting adjusts the duration of the Hard Key and LCD Backlighting in increments of 10, 20, 30, 40, 50, 60, 90, 120, 180, 240 seconds or Always ON. The maximum Standby Timeout for an undocked MODE Free is 240 seconds.

NOTE: Standby Timeout on MODE Free must be set for both the docked and undocked configurations. The value shown for Standby Timeout when docked will be the docked setting. The value shown for Standby Timeout when undocked will be the undocked setting.

Sleep Timeout (MODE Free - wireless mode only)

This setting adjusts the duration of the MODE Free functionality in increments of 30, 60, 120, 180 and 240 seconds. This is a battery saving feature. By putting MODE Free to sleep, all functions, from RF transmit/receive to LCD and Button backlighting are turned off to save battery power. The MODE Free will wake up and reconnect to the RF wireless network when any button or the Scroll Wheel is pressed or turned. Sleep Timeout is disabled when the MODE Free is docked to a Wall Dock or Table Dock. Sleep Timeout duration starts after any duration that has been set for Standby Timeout has elapsed.

SLEEP TIMEOUT - DOCKED CONFIGURATION

If the MODE Free was in Sleep Mode when docked, it will remain in Sleep Mode until a button is pressed on the MODE Free. Press any button on the MODE Free to 'wake it up'. Sleep Mode will be disabled as long as the MODE Free remains docked.

FIRMWARE UPDATES

Also note in order to update firmware to a MODE Free, the MODE Free must be docked to a Wall Dock. A FIRMWARE UPDATE CANNOT BE PERFORMED ON A MODE FREE IN SLEEP MODE. If the MODE Free was in Sleep Mode when docked, it will remain in Sleep Mode until a button is pressed on the MODE Free. Press any button on the MODE Free to 'wake it up'. Sleep Mode will be disabled as long as the MODE Free remains docked.

OPERATING MODE 3.1

To adjust keypad settings:

1. In the **MODE Main Menu**, highlight and select **Keypad Settings** using the **Scroll Wheel** and **Click Button**.
2. Using the **Scroll Wheel**, highlight the setting to be adjusted.
3. Press the **Click Button** to select. The selected Setting will appear at the top of the LCD.
4. Using the **Scroll Wheel**, adjust the selected setting to the desired value.
5. Press the **Click Button** to set.
6. Repeat **Steps 2-5** for all settings and values.
7. When finished, press the **Menu Button**. The message: **Zone Setup** will appear. **Done** will flash for a second and the keypad will return to the last selected source.

KEYPAD RESET

Though highly unlikely, a MODE 3.1/MODE Free can lock up under certain circumstances. The Keypad Reset procedure will unlock the keypad without affecting any of the EZ-Tools programming or local Zone or Keypad Settings. To unlock the keypad:

1. **Press and Hold the Volume Knob for 5 seconds.** The keypad should return to normal operation.

BATTERY INSTALLATION GUIDE



1. To replace the battery in the MODE Free you will need a small Phillips screwdriver and four and a half minutes. Flip the keypad over, ensuring the battery door is facing you.



2. With your screwdriver in hand, remove the battery door screw by turning the screw driver counter clockwise (left) until the screw is fully loose. Use your fingers to remove the screw, set the screw down for now.



3. As shown, flip the keypad over and let the battery door fall into your hand. Set the door next to the screw you just removed, you will need both of them later in the installation.



4. Flip the keypad back over. Using a fingernail or small screwdriver, GENTLY lift the battery out of the keypad, lifting from bottom to top.



5. Remove the battery and replace with a new one.



6. Once the battery is firmly in place, find the battery door where ever you set it down and reinstall it by angling the battery door at 36 degrees and inserting the battery door tabs into the MODEFree battery door opening. Once tabs are firmly in place, gently set the battery door cover down into the battery door opening. Once the battery door is fully installed, pick up the battery door screw and place it in the screw hole that you removed it from. Using your trusty screw driver, turn the screw clockwise to tighten the screw. Make sure to just snug the screw and not over tighten. Now you are ready to use your MODE Free.



NOTE: With any new battery, it is always good practice to charge the battery fully before use. This will help ensure longevity of the battery's life.

IMPORTANT NOTICE REGARDING EFT (Electrical Fast Transient): Under environment with electrical fast transient, the unit may malfunction and require user to reset the unit. Removing and then replacing the battery will automatically reset the unit.

OPERATING MODE FREE

This section covers the operating features unique to MODE Free. All other operating functions are identical to MODE 3.1 and are covered in the section: **Operating MODE**.

NETWORK SETTINGS

Performing a Reset Network is recommended before setting up a new wireless network.

Reset Network

1. On the **MODE Free Coordinator**, press the **Reset Network Button**. The **Reset Network LED** will flash for about 20 seconds and stop. Any existing wireless network settings in the Coordinator will be cleared.

Join Network

In order for the MODE Free to function properly as a two-way wireless controller, it must first be configured for communication with the Coordinator. (Join Network) The MODE Free will join the MODE Free wireless network using a combination of buttons on the MODE Free and the Coordinator.

1. A brand new MODE Free or a MODE Free that has been removed from the wireless network will default to the **Network Settings Screen**. (Figure 43)
2. Press the **Join Network Switch** on the **Coordinator**. The **Join Network LED** will begin to flash and the **Activity LED** will turn on solid blue.
3. With **Join Network** highlighted in the **Network Settings Screen**, press the **Click Button**. A red Hourglass will appear in the header.
4. When the MODE Free has joined the network, the **Join Network LED** on the **Coordinator** will turn **OFF** and the **Activity LED** will **flicker** to indicate wireless network activity. The Hard key backlight and LCD will flash once and the SpeakerCraft Logo will appear on the LCD. After a few seconds, the **Select A Zone Screen** will open. (Figure 44)
5. In the **Select A Zone Screen**, use the **Scroll Wheel** to highlight the desired **zone**. (Figure 44) Press the **Click Button** to select the **zone**. The MODE Free will assume the control configuration for **that zone** as setup and programmed in EZ-Tools.
NOTE: In normal operating mode, in the **MODE Main Menu Screen (Source Select Screen)** a press of the **Menu Button** will open the **Select a Zone Screen**, allowing the MODE Free to selectively control any zone.
6. The **MODE Free Main Menu** as configured for the selected zone will open as shown in Figure 45. The MODE Free is ready for normal operation as described in Section: **Operating MODE**.

DOCKING THE MODE FREE (WALL DOCK AND TABLE DOCK)

The MODE Free can operate wireless or dock with the Wall Dock for hard wire communica-

SELECTING A ZONE

When undocked or docked to a Table Dock, the MODE Free can be configured to control any zone in the system. To select a zone:

1. In the **MODE Main Menu Screen (Source Select Screen)**, press the **Menu Button**. The **Select a Zone Screen** will open. (Figure 44)
2. In the **Select A Zone Screen**, use the **Scroll Wheel** to highlight the desired **zone**. (Figure 44) Press the **Click Button** to select the **zone**. The MODE Free will assume the control configuration for **that zone** as setup and programmed in EZ-Tools.

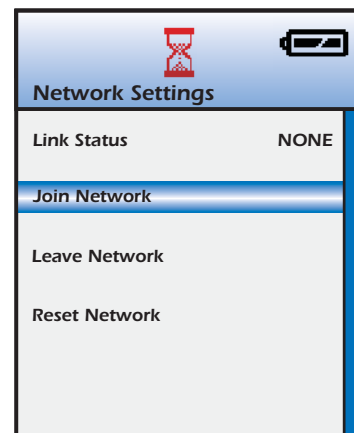


Figure 43
Network Settings Screen

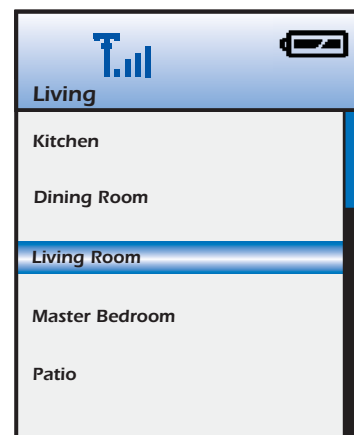


Figure 44
Select a Zone Screen

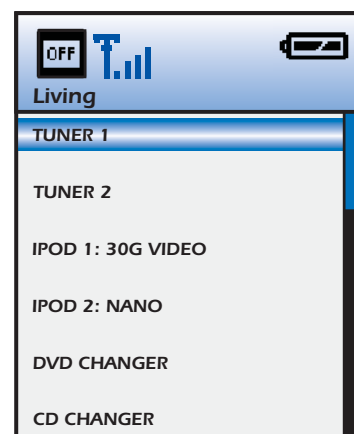


Figure 45
MODE Free Main Menu

OPERATING MODE FREE

tion and battery charge or with the Table Dock for wireless communication and battery charge. When docked, the Battery Icon turns off in the LCD header, and if docked to a Wall Dock, the RF Signal Strength Icon will turn off (**Figure 46**). To dock/release a MODE Free: (Wall Dock shown for example, Table Dock uses the same technique.)

MODE Free/Wall Dock Functionality

When the MODE Free is docked to a Wall Dock:



1. Starting from the left, insert the Wall Dock Lock Tabs into the Lock Tab Slots on the left side of the MODE Free, then click the right side down over the Locking Mechanism.



2. Docked MODE Free. Press the Keypad Release Button to remove the MODE Free from the Wall Dock.



Figure 46
MODE Free Docked Icon

- MODE Free wireless communication is disabled and all communication with the MZC and other system components is transmitted/received via CAT5 cable connected between the Wall Dock and the MZC Controller (MODE Free RF Signal Strength Icon turns OFF).
- Network Settings are not available when the MODE Free is docked to a Wall Dock.
- When docked, the MODE Free assumes the 'identity' of the MZC Zone to which the Wall Dock is connected and automatically synchronizes the zone configuration from the MZC for that zone. The MODE Free will retain the new identity until docked to a Wall Dock in another zone or when a Select Zone function is executed.
- When docked, the MODE Free no longer runs on battery power and is powered via the Wall Dock/CAT5 connection to the MZC. The MODE Free battery automatically charges anytime it is docked to either a Wall Dock or Table Dock. The blue LED on the front of the Wall Dock indicates charge. The LED turns off when the battery is fully charged.
- Given the MODE Free is being powered from the Wall Dock, the Sleep Timeout function is turned off. Sleep Timeout is a battery charge saving function that puts the MODE Free to sleep after a designated timeout. The MODE Free must wake up and reconnect to the wireless network after a sleep timeout. Sleep Timeout is disabled when connected to a Wall or Table Dock also which serves to speed up system response with the MODE Free not having to wake up and reconnect to the system as it does in wireless mode with the Sleep Timeout set.

MODE Free/Table Dock Functionality

When a MODE Free is docked to a Table Dock, it continues to function as a wireless controller, unlike when docked to a Wall Dock. It does not change identities, but does switch to Table Dock power and charges the battery.

- When docked to a Table Dock, the MODE Free no longer runs on battery power and is powered via the Table Dock Power Supply. The MODE Free battery automatically charges anytime it is docked to either a Wall Dock or Table Dock. The blue LED on the front of the Table Dock indicates charge. The LED turns off when the battery is fully charged.
- When docked to a Table Dock, MODE Free continues functioning as a wireless controller.
- When docked to a Table Dock, the MODE Free does not assume a new 'identity'. It continues with the identity assumed with the last Wall Dock or Join Network/Select Zone function.
- When docked to a Table Dock, the MODE Free Sleep Timeout function is turned off. Sleep Timeout is a battery charge saving function that puts the MODE Free to sleep after a designated timeout. The MODE Free must wake up and reconnect to the wireless network after a sleep timeout. Overriding this feature when connected to a Wall or Table Dock also serves to speed up system response with the MODE Free not having to wake up and reconnect to the system as it does in wireless mode with the Sleep Timeout set.

OPERATING MODE FREE

Leave Network

The Leave Network Function will remove a Mode Free from the wireless network. The leave Network function removes the wireless network settings from both the MODE Free and the Coordinator. To Leave the RF Network:

The MODE Free must be within the RF range of the Coordinator to execute a Leave Network Function. The Coordinator 'authorizes' both Join Network and Leave Network Functions.

1. In the **MODE Free Main Menu**, using the **Scroll Wheel**, highlight **MODE Settings** and press the **Click Button** to select. The **MODE Settings Screen** will open.
2. In the **MODE Settings Screen**, using the **Scroll Wheel**, highlight **Network Settings** and press the **Click Button** to select. The **Network Settings Screen** will open. Only Link Status will be visible. Sequentially press the **OFF**, **Arrow Up** then **Arrow Down Buttons** to access the **Network Settings Menu. (Figure 47)**
NOTE: Figure 47 shows the default keycaps for these three buttons. Depending upon individual MODE Free Hard Key configuration, the keycaps for these three buttons may have been changed. Please refer to **Figure 1** in this Guide for the location of these three buttons.



Figure 47
Network Settings Access Buttons

3. In the **Network Settings Menu**, using the **Scroll Wheel**, highlight **Leave Network** and press the **Click Button** to select. The Hard key backlight and LCD will flash once and the SpeakerCraft Logo will appear on the LCD. After a few seconds, the **Network Settings Screen** will open. Also note that at this point the **RF Signal Strength Icon** in the LCD Header will be **OFF**, and **Link Status** will indicate **NONE**, because the MODE Free has been removed from the RF Network.
4. To **re-join** the **RF Network**, follow the instructions in Section: **Join Network**.

Link Status

Link Status indicates the quality of the RF Network connection and is not an indication of RF signal strength. The presence or lack of RF noise will affect the quality of the wireless connection. There are four levels: BEST, GOOD, POOR and NONE. If Link Status is POOR or NONE, try to identify sources of RF interference such as microprocessors in computers or media devices or wireless telephone systems. In some cases, moving the Coordinator or the MODE Free away from the source of RF Noise will improve the Link Status.

NOTE: When a MODE Free has not joined the RF Network or has been removed from the RF Network, Link Status will indicate: NONE.

Reset Network

The Reset Network Function is similar to a Leave Network Function with the following differences:

- The Reset Network Function can be performed outside the RF range of the Coordinator.
- The Reset Network Function only removes the wireless network settings from the MODE Free. The wireless network settings for the given MODE Free will remain in the Coordinator's Wireless Settings Table.
- **It is recommended that Reset Network only be performed for troubleshooting purposes after contacting SpeakerCraft technical Support.**

SPECIFICATIONS

MODE 3.1 Keypad

3.5" High Resolution Display With 64K Color (16 bit)
Unique Scroll Wheel For easy Menu Navigation
Volume Control Knob With Back Lit Level Indicators
8 Back Lit Hard Key Configuration Buttons
Built in IR Receiver
Requires MZC Controller
Fits most standard dual gang boxes
Dimensions: 2 5/8"H x 3 5/8"W x 1 5/8"D (67mm x 92mm x 41mm)

MODE Free Keypad

Robust 2.4GHz Wireless Connection
Built-in Antenna With Up To 100 ft Range
Rechargeable Li-ion Battery Provides up to 2 Weeks of Operation Between Charges
Provides a 2-way metadata/control link with MZC System through the MODE Free Coordinator
2 Docking Options (MODE Free Wall Dock, MODE Free Table Dock)
Dimensions: 2 5/8"H x 3 5/8"W x 1 1/2"D (67mm x 92mm x 38mm)

MODE Free Coordinator

Robust 2.4GHz Wireless Connection
External 3 1/2" Antenna With Up To 100 ft Range
Provides a 2-way metadata/control link with MZC System and MODE Free Keypad
Supports up to 16 MODE Free Keypads
Powered over CAT5 cable from the MZC System
Auxiliary power jack
Power, activity, network join and reset status indicators
Dimensions: 7/8"H x 2 1/2"W x 3 3/4"D (22mm x 64mm x 95mm)

MODE Adapter

RJ45 jack for connection to MODE Base
RJ45 jack for connection to the MZC-64/66/88
QuickLock system for stacking multiple Base Adapters
One PS-3 Power Supply supports up to 6 Adapters and 6 MODE Bases
PS-3 Power Supply not included
Dimensions: 1 1/4"H x 5 3/8"W x 3"D (32mm x 137mm x 76mm)

MODE Base

Interface between an Apple iPod and MZC-64/66/88
Converts iPod audio into a balanced audio signal
Converts iPod serial data to RS485 data
RJ45 jack for CAT5 connection to MODE Base Adapter
USB port for syncing iPod to computer for file updating
Includes various iPod sized adapters
Dimensions: 1 7/16"H x 3 1/4"W x 3 1/4"D (37mm x 83mm x 83mm)

MODE Free Wall Dock

Provides a hard wired connection for MODE Free Keypad
Closeable door when MODE Free is undocked
6 hour standard charge
Charge indicator
Powered over CAT5 cable from MZC System
Dimensions: 5"H x 5 15/32"W x 2 15/32"D (127mm x 139mm x 63mm)

MODE Free Table Dock

Provides a convenient, elegant charging dock for the MODE Free Keypad
Positions the MODE Free Keypad at an angle for easy operation when docked
2 hour quick charge
Charge indicator
Includes 12V DC power supply
Dimensions: 3"H x 4 3/4"W x 4 3/16"D (76mm x 121mm x 106mm)

CE COMPLIANCE

We SpeakerCraft Inc. declare under our sole responsibility that the products,

Applicable Models: MODE Free Keypad and MODE Free Coordinator

To which this declaration relates is in conformity with the following standard(s) or other normative documents.

- Council Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE);
- Council Directive 1999/5/EC on Radio Equipment and Telecommunications Terminal Equipment and the mutual recognition of their conformity;
- Council Directive 89/336/EEC on electromagnetic compatibility;
- EN 300 328 V1.7.1 (2006-10) Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using wide band modulation techniques;
- Harmonized EN covering essential requirements under Article 3.2 of the R&TTE Directive;
- EN 301 489-1 V1.6.1 (2005-09) Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services;
- EN 301 489-17 V1.3.2 (2008-04) Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment;
- EN 55022:1998 Information Technology Equipment - Immunity Characteristics - Limits and Methods of Measurement; Amendment A1:2000/A2:2003;
- EN 61000-3-2:2006 - Electromagnetic Compatibility (EMC) - Part 3-2: Limits - Limits for Harmonic Current Emissions (Equipment Input Current Up to and including 16A Per Phase);
- EN 61000-3-3:1995 - Electromagnetic Compatibility (EMC) - Part 3-3: Limits - Limitation of Voltage Fluctuations and Flicker in Low-Voltage Supply Systems for Equipment with Rated Current Less than or Equal to 16A Per Phase and not Subject to Conditional Connection; Amendment A1:2001/A2:2005;
- EN 61000-6-1:2001 - Electromagnetic compatibility (EMC) – Part 6-1: Generic standards – Immunity for residential, commercial, and light-industrial environments;
- EN 61000-6-3:2001 - Electromagnetic compatibility (EMC) – Part 6-3: Generic standards – Emission standard for residential, commercial, and light-industrial environments

Applicable Models: MODE Free Wall Dock and MODE Free Table Dock

To which this declaration relates is in conformity with the following standard(s) or other normative documents.

- Council Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE);
- EN 61000-3-2:2006 - Electromagnetic Compatibility (EMC) - Part 3-2: Limits - Limits for Harmonic Current Emissions (Equipment Input Current Up to and including 16A Per Phase);
- EN 61000-3-3:1995 - Electromagnetic Compatibility (EMC) - Part 3-3: Limits - Limitation of Voltage Fluctuations and Flicker in Low-Voltage Supply Systems for Equipment with Rated Current Less than or Equal to 16A Per Phase and not Subject to Conditional Connection; Amendment A1:2001/A2:2005;
- EN 61000-6-1:2001 - Electromagnetic compatibility (EMC) – Part 6-1: Generic standards – Immunity for residential, commercial, and light-industrial environments;
- EN 61000-6-3:2001 - Electromagnetic compatibility (EMC) – Part 6-3: Generic standards – Emission standard for residential, commercial, and light-industrial environments

FCC COMPLIANCE

FCC ID : V7W001F40RFMODULE

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

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: 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.
- Consult the dealer or an experienced radio/TV technician for help.

INDUSTRY CANADA (IC) COMPLIANCE

IC NUMBER: 7660A-001F40RF

Industry Canada ICES-003 Spectrum Management and Telecommunications Policy
Interference-Causing Equipment Standard

The unit may malfunction when there is strong radio interference or a power line nearby. The unit will revert to normal operation when the interference stops.

Please retain this information for future reference.

FAQ

MODE 3.1/FREE KEYPAD

1. Select Button (Click Button)

Q: Where is the **Select Button**?

A: See **Figure 1, Page 6, Item 5.**

Q: Beside select, does the **Click Button** have any other function?

A: Press and hold for **Party Mode** at **Main Menu Screen.**

2. Menu Button

Q: What is the basic function of the **Menu Button**?

A: Press once to move one menu level up. (Similar to iPod Menu Button function.)

Q: Other function?

A: Press and hold to return to **Main Menu.**

3. Keypad Release Button

Q: What is the **Keypad Release Button** for?

A: To release **MODE FREE Keypad** from both **Wall** and **Table Docks.**

4. Zone Power OFF Button

Q: What is the basic function?

A: Press to turn the **local zone** OFF.

Q: Other function?

A: Press and hold to turn **all zones** OFF.

5. System Info/Status

Q: On a **MODE FREE Keypad**, how does the user know what zone are they in?

A: The **zone name** will appear in the **Keypad Header** after 4 seconds of the system info/status.

6. Default Functions – Play, Pause, Prev, Next, FF and RW

Q: Is it necessary to program the keypad before use? Any other default functions?

A: If programming a **MODE/MODE FREE** for use with **iPod**, there are several default functions such as play, pause, previous song, next song, fast forward (UP) and rewind (DOWN) that will program by default when selecting iPod as a source in **EZ-Tools**. For **any other device**, the play, stop, tuner, etc **functions must be programmed in EZ-Tools**. The **UP/DOWN** and **Click Buttons** operate **MODE/MODE FREE** menu up and down and selected by default.

7. Address Switch

Q: How is a **MODE Free Keypad** installed without an **Address Switch**?

A: There is **no Address Switch** on **MODE Free Keypad**, the **Address Switch** is located on the **Wall Dock**.

8. Standby Timeout

Q: The **Standby Timeout** was set when keypad was **docked**, but the timer is not working correctly when **undocked**.

A: There are **two types of standby timeout: docked** and **undocked**. Each must be set individually for the **Standby Timeout** to function properly in both conditions.

9. Sleep Timeout

Q: Will **MODE FREE** go to sleep when it is docked?

A: **MODE FREE** will **not** go to sleep when it is docked. **Sleep Timeout** ONLY applies to an undocked keypad.

Q: Why does the **MODE FREE** reset after wake up?

A: There is **no communication** when keypad is in **Sleep Mode**, so the keypad must synchronize with the **MZC System** when it wakes up.

FAQ

10. Link Status

Q: Why does the keypad show “????” for **Link Status**?

A: “????” indicates the keypad is **not connected** to a **wireless network**, or it is brand new keypad.

11. Join Network

Q: Why doesn't **Join Network** appear in **Network Settings**?

A: **Join Network** ONLY appears when a keypad is **not connected** to a wireless network.

Q: Why is **MODE Free** not joining the network?

A: The **Join Network** process has to be initiated by pressing the **Join Network Button** on the **Coordinator** first. Please refer to **Join Network Section, Page 46**, for additional information.

12. Leave Network

Q: Why doesn't **MODE Free** leave the network?

A: The **Leave Network** function requires that the keypad is within the **wireless coverage area**. See **Page 17**.

Q: What is the difference between **Leave Network** and **Reset Network**?

A: **MODE Free** wireless network allows 16 wireless keypads or 'seats'. **Leave Network** will free up one seat (remove a keypad from the network) so another keypad can **Join** the network. The keypad must be within the **wireless coverage area** to perform a **Leave Network** function.

13. Reset Network (MODE Free Function)

Q: Must **Reset Network** be performed within the **wireless coverage area**?

A: No, that is not a required condition.

Q: Does **Reset Network** affect the **number of seats** (keypads on the network) in the **Coordinator**?

A: While the keypad is removed from the **wireless network**, the **seat** is still occupied in the **Coordinator**. That is, say there are **16 wireless keypads** on the **wireless network**. A **Reset Network** function will remove the **specific keypad** from which the function was executed from the **wireless network**, but the **Coordinator** will still have **sixteen occupied seats**, so a new keypad would not be able to **Join** the network. **To free up a seat in the Coordinator, a Leave Network function must be performed. See Item 12, Leave Network, previous.**

14. Slow Response

Q: What is the cause of **slow response** from the keypad?

A: There are several possible reasons such as **another keypad** is in use, **system is in process** (executing macros) or **RF interference** from other **wireless devices**.

Q: What can be done to speed up response time?

A: If the slow response is **not** caused by **another keypad** or the **system** (MZC executing macros), **reset the whole wireless network** and **setup a new network**.

15. MODE Free Is Not Responding To IR Control

Q: Why does my 3rd party **IR remote** control **not** work with **MODE Free**?

A: There is **no IR receiver** on the **MODE Free**, it is **ONLY** available on **MODE 3.1 keypad**.

16. Zone Menu Control

Q: How can the **MODE Free** be changed to control a **different zone**?

A: **Press and hold** the **Menu Button** in the **Main Menu Screen** to access the **Zone Select Screen**.

Q: Can the **MODE 3.1 keypad** be changed to control **another zone**?

A: No, **MODE 3.1 cannot** be changed to control another zone. **MODE 3.1** It is a hard-wired single zone keypad.

17. Mute Relay

Q: Where is the **Mute Relay Terminal** on the **MODE Free**?

A: There is no **Mute Relay Terminal** on the **MODE Free keypad**, it is obsolete.

FAQ

18. Reset

Q: How is a **MODE 3.1/MODE Free** reset?

A: Press and hold the **Volume Knob** for **5 seconds**.

Q: Does **Keypad Reset** work for both **MODE 3.1/MODE Free Keypads**?

A: Yes, they work the same.

Q: What situation will require a **Keypad Reset**?

A: A **Keypad Reset** may be required after **system updates** or **upgrade**, the **system** or **Coordinator** is reset, or when **MODE Free** is changed from **docked** to **undocked** configuration.

19. Secret Access For Network Settings

Q: What is **Secret Access**?

A: **Secret Access** is a special access that **bypasses normal operation**, it also provides a backdoor for a user when a keypad is not operating correctly.

Q: How is it accessed?

A: Press the **Power OFF**, **ARROW UP** and **ARROW DOWN** Buttons in sequence with the **SpeakerCraft Logo** on the keypad display. Press these three buttons in rapid sequence to access the **Network Settings Menu**.

20. Keypad Freeze

Q: Why does the **MODE Free** freeze after it is **docked**?

A: If the keypad freezes during **System Setup**, a possible reason is data connection error. Please try to **release** and **re-dock** the **MODE FREE**. If that fails, check the **CAT5 cable** and **12-Pin Interconnect**.

Q: Why does the **MODE Free** freeze when it is **undocked**?

A: A possible cause is data connection error, with the wireless network. Confirm that the **Coordinator** is functioning properly first. If so, try a **Keypad Reset**. If still frozen, **reset** the **MZC System**.

MODE FREE COORDINATOR

1. Address Switch

Q: When is this **Address Switch** used?

A: The **Address Switch** is **not in use** at this time and is reserved for future additional features.

2. Power Supply

Q: Does the **Coordinator** require a power supply?

A: No. The **Coordinator** will power up through CAT5 cable. **CAT5 cable** runs **over 500'** require a **dedicated power supply**.

Q: If needed, what power supply should be used?

A: Please use **SpeakerCraft PS-1.0 Power Supply**.

3. Expansion Ports

Q: Which **Expansion Port** should be used for connections?

A: The ports are parallel so either will work for all appropriate connections.

4. Network Reset (Coordinator Function)

Q: What is **Network Reset**?

A: **Network Reset** is a reset function for the **entire wireless network**. **IT WILL ERASE ALL EXISTING NETWORK INFORMATION**. Once this function is performed, a whole wireless network setup is required.

Q: How is **Network Reset** executed?

A: Press and hold the **Network Reset Button** for **2 seconds**. The **Reset Network LED** will flash until the reset process is finished.

FAQ

5. Power Reset

Q: What is **Power Reset**?

A: **Power Reset** is simply a **restart** for the **Coordinator**. **Power Reset** acts like the startup process. The LEDs will switch from one to another and then back and forth a few times. All **MODE Free Keypads** will also **reset** after a **Coordinator Power Reset**.

6. Activity Led Indicator

Q: Why does the **Activity LED** flash even when the **keypad** is not in use?

A: The **Coordinator** is broadcasting the latest **MZC System information** wirelessly to all **MODE Free Keypads**, so message broadcasting is ongoing whether or not there is any activity on the keypad.

MODE FREE WALL DOCK

1. Address Switch

Q: Why does the **Wall Dock** have an **Address Switch**?

A: **MODE Free** does not have an **Address Switch**, so the **Address Switch** on the **Wall Dock** helps the keypad identify the **local zone** when keypad is **docked**.

2. Charging LED Indicator

Q: What does Charging LED Indicator ON/OFF mean?

A: The **Charging LED** is **ON** when the **MODE Free** battery is **charging** and is **OFF** when the battery is **fully charged**.

3. Charging Time

Q: How long is the charging time?

A: **Wall Dock** is a **regular charger** and takes **6 to 8 hours** to fully charge the battery.

MODE FREE TABLE DOCK

1. Power Supply

Q: What **power supply** should be used with the **Table Dock**?

A: Please use **SpeakerCraft PS-2.0 Power Supply** and make sure the rating is 12VDC, minimum 800mA.

2. Charging LED Indicator

Q: What does Charging LED Indicator ON/OFF mean?

A: The **Charging LED** is **ON** when the **MODE Free** battery is **charging** and is **OFF** when the battery is **fully charged**.

3. Charging Time

Q: How long is the charging time?

A: **Table Dock** is a **fast charger** and it takes around **2 hours** to fully charge the battery.

4. Faceplate

Q: Is the faceplate changeable?

A: Yes, it is changeable.

Q: How is the faceplate changed?

A: Slide out the faceplate downward, then slide in the other one followed the guiding path.

5. Keypad Usage

Q: Can **MODE Free** be operated when it is docked to the **Table Dock**?

A: Yes, **MODE Free** can be used while it is charging.

LIMITED 2-YEAR WARRANTY

SpeakerCraft Inc. warrants to the original retail purchaser only that this SpeakerCraft product will be free from defects in materials and workmanship for a period of two years, provided the product was purchased from a SpeakerCraft Authorized Dealer.

Defective products must be shipped, together with proof of purchase, prepaid insured to the SpeakerCraft Authorized Dealer from whom they were purchased, or to the SpeakerCraft factory at the address listed on this installation instruction manual. Freight collect shipments will be refused. It is preferable to ship this product in the original shipping container to lessen the chance of transit damage. In any case, the risk or loss or damage in transit is to be borne by the purchaser. If, upon examination at the Factory or SpeakerCraft Authorized Dealer, it is determined that the unit was defective in materials or workmanship at any time during this warranty period, SpeakerCraft or the SpeakerCraft Authorized Dealer will, at its option, repair or replace this product at no additional charge, except as set forth below. If this model is no longer available and cannot be repaired effectively, SpeakerCraft, at its sole option, may replace the unit with a current model of equal or greater value. In some cases where a new model is substituted, a modification to the mounting surface may be required. If mounting surface modification is required, SpeakerCraft assumes no responsibility or liability for such modification. All replaced parts and product become the property of SpeakerCraft Inc. Products replaced or repaired under this Warranty will be returned to the original retail purchaser, within a reasonable time, freight prepaid.

This Warranty does not include service or parts to repair damage caused by accident, disaster, misuse, abuse, negligence, inadequate packing or shipping procedures, commercial use, voltage inputs in excess of the rated maximum of the unit, or service, repair or modification of the product which has not been authorized or approved by SpeakerCraft. This Warranty also excludes normal cosmetic deterioration caused by environmental conditions. This Warranty will be void if the Serial Number on the product has been removed, tampered with or defaced.

This Warranty is in lieu of all other expressed warranties. If the product is defective in materials or workmanship as warranted above, the purchaser's sole remedy shall be repair or replacement as provided above. In no event will SpeakerCraft be liable for any incidental or consequential damages arising out of the use or inability to use the product, even if SpeakerCraft Inc. or a SpeakerCraft Inc. Authorized Dealer has been advised of the possibility of such damages, or for any claim by any other party. Some states do not allow the exclusion or limitation of consequential damages, so the above limitation and exclusion may not apply.

All implied warranties on the product are limited to the duration of this expressed Warranty. Some states do not allow limitation on the length of an implied warranty. If the original retail purchaser resides in such a state, this limitation does not apply.



SpeakerCraft offers a variety of accessories to make your installation of this and other SpeakerCraft products easy, economical, and professional. Contact your authorized SpeakerCraft Dealer for more information.

For technical inquiries, please call 1-800-448-0976 or e-mail us at techsupport@speakercraft.com. We are available to assist you every weekday, except holidays, between the hours of 7:00 a.m. and 5:00 p.m. PST.

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LIT14331 REV.1