



**Life Sounds
Better than Ever**
Information and
Specifications

ZON[®]
Whole House
Digital Audio

ZAC-60

ZÖN Audio Controller/Amplifier



Features

- 60 Watt True Digital Super Efficiency Stereo Amplifier
- On-Board 4 or 8 ohm Loudspeaker Connection
- Super Quiet All Digital Design
- High Resolution Graphic Display
- Volume Control
- Source Selection
- EQ, Tone, Loudness and Balance Control
- On-Board IR Receiver
- Built-In Microphone
- User-Defined Display Names
- IR Credit Card Style Remote Included
- Connects to Router with CAT-5e or CAT-6 Wire
- Self-Mounting with Rough-In Kit Available
- Available in a Variety of Colors and Finishes

Control Where You Need It

The ZÖN Audio Controller makes a quantum leap in amplified remote volume control for whole house audio. The ZAC-60 provides in-room amplification through its super efficient 60 watt pulse width modulated digital stereo amplifier. The integrated jog wheel and high resolution dot matrix display create a stylish and intuitive user interface. The on-board Digital Signal Processor (DSP) provides EQ selection, tone and balance controls, and a loudness contour control to enhance the listening experience in each zone. Two separate microprocessors control and monitor operation.

The ZAC-60 has a built in infrared receiver that provides IR control of the ZÖN Controller and passes IR commands to source devices throughout the home. A built-in microphone enables system-wide paging as well as zone monitoring (ideal as a baby monitor).

Each ZAC-60 connects to a ZÖN Router via CAT-5e or CAT-6 wire using 8P8C modular jacks.

** See specifications page for details.*

ZIM-4 ZÖN Input Module



Features

- Analog Input (RCA) L+R
- Analog Loop Out (RCA) L+R
- Digital Audio Input (Coax)
- Optical Audio Input (TOSLink)
- IR Output with Talkback LED for Connection of IR Flashers (“Bugs”)
- On Board 24-bit A/D Converter
- No Rack Space Required
- No “Set Top” Clutter
- Single-Gang, Decora-Style Module
- Connects with CAT-5e or CAT-6 Wire
- Available in a Variety of Colors and Finishes

Inputs Where You Want Them

The ZÖN Input Module embodies leading edge multi-source input technology for whole house audio. The ZIM-4 provides input connections for analog, digital and optical audio sources and an IR output, all in one convenient single gang, Decora-sized module.

The ZIM-4 provides unprecedented system design flexibility. Its small size allows designers to discreetly locate inputs near sources without having to sacrifice rack space or interior style. Multiple modules can be located together where needed to create a multi-source connection point. The ZIM-4 uses an on-board 24-bit A/D converter, so source inputs can be located virtually anywhere without compromising signal quality and without the need to run specialty cables.

Ideal for structured wiring plans, two ZIM-4 modules can be looped on a single CAT-5e or CAT-6 cable.

** See specifications page for details.*

ZR-98 ZON Router



Advanced, All Digital Reliability

The ZON ZR-98 Router is the next generation of multi-source, multi-zone control systems for whole house audio. The ZR-98 is a nine source, four zone, four sub-zone control device that provides power, audio, control and communications to and from each remotely located ZON ZAC-60 Audio Controller. It features a 24-bit digital audio path for unsurpassed audio quality and performance.

Multiple ZR-98 units can be linked together for easy and efficient expansion. The built-in RS-232c port provides for setup and for interfacing to home control systems. Optional expansion modules provide even more capability. The ZR-98 features an optional on-board Web server module for fast and easy system setup. An optional event interface makes connecting such diverse sources as doorbells, telephone systems and driveway sensors to the ZON system a breeze. With this option, devices can trigger playback of on-board user-loadable audio files. An optional auto sensing external paging input allows connection of a weather radio or other external paging source to the on-board paging system.

The ZR-98 is ideal for structured wiring plans. ZON Audio Controllers and ZON Input Modules connect to the ZR-98 via CAT-5e or CAT-6 wire and 8P8C modular jacks. The Router is rack, wall, flange or structured wiring enclosure mountable.

Features

- Nine Independently Selectable Inputs
- Four Zones, Expandable to Hundreds
- Digital Quality and Reliability
- Integral RS-232 Port for Setup and for Control
- Dedicated IR Output
- Wide Variety of Mounting Options Available
- Connects with CAT-5e or CAT-6 Wire
- Web Server for Setup and Firmware Updates Using Ethernet/LAN Interface (Optional)
- Audio Files Play on External Event (Optional)
- External Event Interface (Optional)
- Numerous Expansion Modules Available



The latest in digital technology. And a powerful whole house audio system that can use existing or new audio sources. That's what you get from the Z \bar{O} N family of products.

Easy To Install

With an all digital architecture, Z \bar{O} N integrates fully with structured wiring, using standard CAT-5e or CAT-6 wire stock. Easy to rough-in and a breeze to wire. The ZR-98 Router fits neatly in a variety of structured wire distribution enclosures, using 8P8C modular jacks and plugs to complete installation and integration of input modules and audio controller/amplifiers.

Z \bar{O} N streamlines system setup with the on-board serial interface and an optional Ethernet/LAN server. Either interface provides access, setup and configuration options and can "flash" all controllers and routers in the system. Future firmware updates and upgrades can easily be applied to existing installations on-site or (with the LAN option) via an Internet connection.

Compatible with most audio sources, Z \bar{O} N accommodates both analog and digital inputs. IR signals can be routed and passed through the system using factory supplied and/or learning remote or IR commands activated from each ZAC-60 using the optional IR Generator Module.

Design Blends With Any Decor

Attractively designed, Z \bar{O} N's Controllers and Decora-sized input modules are unobtrusive and available in a wide choice of colors and custom finishes to blend with any decor, increasing customer acceptance and satisfaction.

Reliable and Simple To Use

Z \bar{O} N is designed to make everyday operation simple and reliable. The high resolution, integrated dot matrix display provides a highly legible readout during use, then dims to be unobtrusive. The display features an easy to use Graphical User Interface (GUI) that allows selections based on familiar names (like "Den CD Changer" or "Joey's Bedroom"). Controllers feature an intuitive, multi-function jog wheel. Source selection is as simple as pushing the jog wheel to view the available sources and then scrolling to make a selection. The jog wheel also controls EQ, loudness, tone, balance, and other system parameters. Unwanted functions can also be locked during setup.

Powerful Expandability for Long Term Flexibility

Designed with expansion capabilities in mind, additional zones are easily added to a system's architecture by cascading routers. Source inputs can be shared among routers, or inputs can be exclusive to a specific router. Paging inputs, control features, IR and other communications can be shared router to router, minimizing the need to add external distribution devices to supplement system expansion. Each Z \bar{O} N Audio Controller/Amplifier contains an "auxiliary" output for the addition of optional hardware to allow the creation of "sub-zones" and has output capabilities to support external amplification.

Simple and Reliable

Z \bar{O} N's simple installation, highly reliable operation, attractive design and crystal clear sound assure your satisfaction and enjoyment.

ZAC-60 Audio Controller/Amplifier Technical Specifications

Amplification

| | |
|-----------------------|---|
| Type | Digital Stereo Pulse Width Modulated - 8x Oversampling |
| Power | 60 watts (30 W per Channel) RMS @ 8 ohms* |
| Amplifier Efficiency | > 90% |
| Frequency Response | 20 Hz - 20 kHz |
| Noise Floor | < -102 dBFS @ 1 kHz 'A' Weighted |
| THD + N | 0.07% @ 1 kHz, Maximum Power 0.04% @ 1 watt |
| Loudspeaker Impedance | ≥ 4 ohms Nominal |
| Loudspeaker Output | Spring Loaded, Wire Trap, L & R x 2 |

Controller

| | |
|--------------------------------|---|
| Controller Input | Multi-Function (Shaft Encoder) with Jog Wheel Selector with Graphical Feedback |
| Graphical User Interface (GUI) | High Resolution Dot Matrix with Icons |
| Remote Control | Mini IR Remote (Included) |
| Zone Monitoring | On-Board Microphone for Paging and Zone (Baby) Monitoring |
| Volume Control | Virtual Pointer™ Level Indication |
| Source Selection | User Defined Labels Displayed on GUI |
| Digital Signal Processing | Integrated On-Board |
| Equalization | User-Selectable Presets |
| Tone Control | Bass, Treble and Loudness Contour |
| Balance Control | Included |
| IR Receiver | 38 kHz Pass Through to Selected Input |
| Paging | System Wide with Zone Exclusions |

Connections

| | |
|----------------------|---|
| Wiring Specification | CAT-5e or CAT-6 Class II, 4 Twisted Pair (100 ohm Impedance) |
| Connectors | 8P8C Modular Jacks x 2 (In from Router, Aux Out) 568A or 568B Termination Method |

Mounting

| | |
|------------------|---|
| Design Principle | In Wall, Self-Mounting or RIK-60 Rough-In Kit |
|------------------|---|

Other

| | |
|------------------|--|
| Agency Approvals | CE, FCC (Part 15, Class B) |
| Dimensions | Front Panel Measures 5" W x 5" H x 2.25" Mounting Depth. Mounting Details Packed with Unit. |
| Shipping Weight | 2 lbs. Nominal |
| Colors | Titanium, White, Ivory, Black, Paintable and Woodgrain Finishes |

* Test Conditions: ZAC-60 Controller connected to Router with 50' CAT-6 cable.

ZIM-4 Input Module Technical Specifications

General

| | |
|-------------------------|--|
| Method | Remotely Located, Near Audio Source |
| A/D Conversion | On-Board 24-Bit A/D Conversion (Multiple Bit Rates Supported) |
| Analog Input | 1 Stereo Pair (RCA) |
| Analog Loop Out | 1 Stereo Pair (RCA) |
| Analog Input Impedance | 10K ohms |
| Digital Input | 1 (Coax) |
| Digital Input Impedance | 75 ohms |
| Optical Input | 1 (TOSLink) |
| IR Support | Dedicated IR Output with Talkback LED |
| Operating Current | Supplied by ZON Router |

Connections

| | |
|-----------------------|---|
| Wiring Specifications | CAT-5e or CAT-6, 568A or 568B Termination Class II, 4 Twisted Pair (100 ohm Impedance) |
| Topology | DAISY Chain, Optional Adapters allow STAR |
| Connectors | 8P8C Modular Jack x 2 (To Router, To 2nd Module) |

Mounting

| | |
|--------|---|
| Method | Single Gang, Decora-Style Face Plate Size ZIM-4 Modules Can Also Be Used with Most Decora-Style Multi-Gang Boxes and Plates |
|--------|---|

Other

| | |
|----------------------------------|---|
| Agency Approvals | CE, FCC (Part 15, Class B) |
| Module Dimensions (Less Bracket) | 1.3" W x 2.6" H x 1.5" D |
| Shipping Weight | 1.8 lbs. Nominal (Quantity 2) |
| Colors | Titanium, White, Ivory, Black, Paintable and Woodgrain Finishes |

ZR-98 Router Technical Specifications

Router/Central Control

| | |
|-------------------------------|--|
| Design Technology | 24-bit Audio Path |
| Sampling Rates | 32 kHz, 44.1 kHz, 48 kHz |
| Source Inputs | 8 Remote Inputs, 1 Local Input on Each ZON Router |
| Zone Outputs | 4 ZON Audio Controller Outputs, 4 Additional Sub-Zone Outputs via ZAC-60 Aux Output |
| Expansion | Zones Expandable in Multiples of 4 via Cascading ZR-98 Units, Multiple Routers Can Share up to 8 Source Inputs |
| Power Distribution | Centralized Power Supply, Universal Power, 90-250 VAC Auto Ranging, 47-63 Hz Line Frequency, (300 watts) |
| Analog Inputs | 1 Stereo Pair (RCA) |
| Analog Loop Through | 1 Stereo Pair (RCA) |
| Digital Audio Input | Coax |
| Optical Input | TOSLink |
| Analog Input Impedance | 20K ohms |
| Digital Input Impedance | 75 ohms |
| IR Outputs | 1 |
| Controller Connectors | 8P8C Modular Jack |
| Home Control System Interface | Serial RS-232c |
| Source Input Connectors | 8P8C Modular Jack x 4 Plus Loop Out x 4 |
| Power Link Jack | 8P8C Modular Jack |

Connections

| | |
|----------------------|---|
| Wiring Specification | CAT-5e or CAT-6, Class II, 4 Twisted Pair (100 ohm Impedance) |
| Connectors | 8P8C Modular Jack |

Mounting

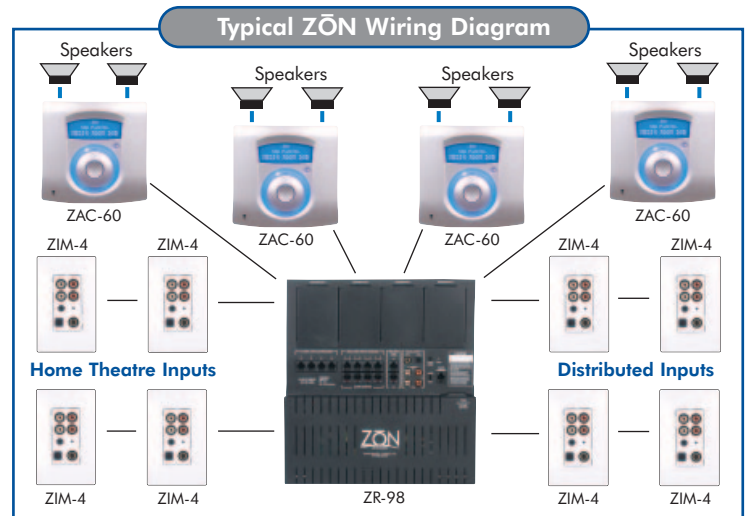
| | |
|--------|---|
| Method | Structured Wire Distribution Enclosure Mountable, 19" Rack Mountable, Flange Mountable - Flange Mount Included |
|--------|---|

Other

| | |
|------------------|---|
| Agency Approvals | UL, CE, FCC (Part 15, Class B) |
| Dimensions | 12.5" H x 11.5" W x 2.75" D (Vertical Mounting Dimensions Without Mounting Bracket) |
| Shipping Weight | Approximately 12 lbs. |

Options

See www.zonaudio.com for latest options



Wire Legend:

| | |
|-------------------------------------|-----------------|
| — | Speaker |
| — | CAT-5e or CAT-6 |



Klipsch Audio Technologies is the exclusive global distributor of ZON.
Questions? Call 866-781-7284 for customer service and technical support.

www.klipsch.com
www.zonaudio.com

Specifications subject to change without notice. ZON is a registered trademark of Oxmoor Corporation, LLC.
30M1104 193161