

Entertainment System



The Adagio AES Entertainment System delivers a complete, cost-effective solution for high-performance multi-room audio distribution. Right out of the box, the AES provides sophisticated audio signal routing, processing, and amplification for up to 6 rooms, with extensive control from an enhanced LCD-driven front panel and a choice of room controllers.

Multi-Room Audio—The AES supports up to 6 sets of stereo room speakers, allowing listeners in each room to listen selectively to any of 10 different stereo sources. Its integrated multi-channel power amplifier delivers a robust 45 watts per channel to all rooms. Without requiring any programming, the AES can easily be expanded to support a total of 12 rooms by adding an AAE Audio Expander. Or, as many as 24 rooms can be handled using 3 AAE's with simple setup provided by Crestron Adagio Composer software.

Enhanced Front Panel Control—With its large backlit LCD display, Room and Group select buttons, 4 softkeys and dual rotary encoders, the AES front panel provides a very powerful, yet friendly user interface for controlling audio to a houseful of speakers. Custom naming of rooms, groups, and sources is facilitated on the LCD display, and also on the label strip using Crestron Engraver software.

Preset Groups—The "Group" feature makes it simple to combine speakers in adjacent rooms, or switch into whole-house party mode, by letting the user link any number of rooms to function as one. Grouping lets you easily route one source to multiple rooms at once. Up to 6 groups can be defined using the front panel Preset Group buttons.

Versatile Room Controls—A choice of basic 12-button keypads or the advanced APAD Wall Mount LCD Controller enables versatile control of the AES in every room. A keypad provides the essential controls for adjusting volume, selecting sources, and toggling through tracks and radio channels. For more elegant control, the APAD actually extends the many functions of the AES front panel to each room, providing true feedback for display of audio sources, radio stations, CD titles, artists, and tracks by name, plus audio settings and many other parameters.

Satellite Radio and MP3 Audio Servers—Up to 3 dual radio tuner cards can be installed in the AES to enable combinations of up to 6 AM/FM, XM and Sirius Satellite Radio tuners, letting listeners in different rooms each enjoy their own choice of music, news, sports and talk. With satellite's digital signal, plus RDS/RBDS data on the FM signal, the AES enables the display of the full radio station name and other detailed information about the song or program that you're listening to. The AES comes with one tuner card included.

In addition to radio, ten line-level inputs are provided (Inputs 1-6 are shared with the tuner card slots) to accommodate external audio sources including Crestron's AAS Audio Server and CEN-IDOC Interface for Apple iPod®. Plug-and-play compatibility with the AAS and CEN-IDOC delivers instant access to an entire collection of music from any room in the house with fully-bidirectional communications for browsing by album, artist, and song title.

2-Series Ethernet Control System—Adagio brings Crestron's industry-leading Total Home Technology to homes of any size and budget. At the heart of the AES is the powerful 2-Series control engine. With both Cresnet and Ethernet connectivity, plus custom programmability using Crestron SystemBuilder™ software, the AES allows nearly limitless expansion and customization using Crestron's entire line of touchpanels, wireless remotes, and hundreds of other devices. The built-in Web server with native e-Control®2 XPanel support enables full remote control over IP

from computers and PDA devices, as well as remote diagnostics and updates. Built-in IR, RS-232, relay and digital input ports are included to interface the AES with non-Crestron devices ranging from CD changers to security systems.

Home Automation and Integration—More than just an audio distribution system, the AES can actually grow as part of a complete home automation solution supporting all of Crestron's Cresnet® and infiNET™ controllable dimmers, shade controllers, thermostats, and so much more.

> *Out-of-the-box audio distribution for 6 rooms, expandable up to 24*

> *Enhanced front panel setup and control*

> *Choice of 12-button room keypads or APAD LCD controllers*

> *Accepts up to 3 dual radio tuner cards for XM and Sirius Satellite Radio, and AM/FM radio with RDS/RBDS (1 tuner card included)*

> *Plug-and-play support for Adagio Audio Server and iPod interface*

> *2-Series Ethernet control system — programmable to support Crestron touchpanels, wireless remotes, lighting dimmers, thermostats, and much more!*

AVAILABLE MODELS

AES Adagio Entertainment System with Dual AM/FM Radio Tuner Card

AES-SR Adagio Entertainment System with AM/FM and Sirius Satellite Radio Tuner Card

AES-XM Adagio Entertainment System with AM/FM and XM Satellite Radio Tuner Card

SPECIFICATIONS

Processor

CPU: 32-bit Freescale ColdFire® Microprocessor
Processing Speed: 66 MIPS (Dhrystone 2.1 Benchmark)

Memory

8MB Flash, 32MB SDRAM, 256KB NVRAM

Operating System

Real-time, preemptive, multitasking kernel, multi-threaded, FAT32 file system with long names; supports SIMPL™ Windows® and SIMPL+®

Ethernet

10/100BaseT, static IP or DHCP/DNS, SSL, autonegotiating, full duplex TCP/IP, UDP/IP, SMTP, SNMP, built-in Web server and e-mail client; supports Crestron e-Control 2 XPanel and RoomView applications

Audio (Typical of 6 Room Outputs)

Controls: Volume, Balance, Bass, Treble, Loudness, Mute, Mono, Input Compensation

Volume Gain Range: -80dB to +20dB, 1 dB steps

Mute: -100dB (electronic), -120dB (relay)

Input Compensation: ±10dB

Bass Gain Range: ±12dB @100Hz, 2dB steps

Treble Gain Range: ±12dB @10KHz, 2dB steps

Frequency Response: 20Hz to 20kHz ±0.2dB (preamp), ±0.75dB (power amp)

S/N Ratio: >100dB (preamp), 100dB (power amp) 20Hz to 20kHz A-weighted

THD+N: <0.05% (preamp), 0.05% (power amp) 20Hz to 20kHz

Stereo Separation: >80dB (preamp), >75dB (power amp)

Connectors

NET 1 – 6: (6) 4-pin 3.5mm detachable terminal blocks

Cresnet Master ports, provide data and power for keypads and other Cresnet devices

IR OUT 1 – 8: (8) 3.5mm TRS mini-phone jack, IR/Serial port

IR output up to 1.2 MHz; 1-way serial TTL/RS-232 (0-5V) up to 9600 baud

IR IN: (1) 3.5 mm TRS mini-phone jack

For connection of the CNXRMIIRD IR receiver (sold separately)

Allows IR wireless control from Crestron or third-party remotes using RC-5 IR codes

INPUT 1 – 4: (1) 5-pin 3.5mm detachable terminal block comprising (4) digital inputs

Rated for 0-24 Volts DC, referenced to GND

Input Impedance: 2.2k ohms pulled up to 5 Volts DC

Logic Threshold: 2.5 Volts DC nominal

RELAY OUTPUT 1 – 4: (1) 8-pin 3.5mm detachable terminal block

Comprises (4) normally open, isolated relays

Rated 1 Amp, 30 Volts AC/DC; MOV arc suppression across contacts

COM A – B: (2) DB9 male, bidirectional RS-232 ports

Up to 115.2k baud, hardware and software handshaking support

COMPUTER: (1) 6-pin RJ11 female, bidirectional RS-232 computer console port

LAN: (1) 8-wire RJ45 with 2 LED indicators, 10/100BaseT Ethernet port

Green LED indicates link status, Yellow LED indicates Ethernet activity

NET: (2) 4-pin 3.5mm detachable terminal blocks

Cresnet Master ports, paralleled with NET ports 1 through 6; normally connect to AAE(s)

SLOT 1 – 3: (3) Adagio tuner card slots; accept choice of dual tuner cards

Outputs from the tuner cards parallel to input and loop-thru jacks for SOURCES 1 – 6

SOURCES 1 – 10: (40) RCA female providing (10) unbalanced stereo line-level audio

inputs with parallel loop-thrus; connect to outputs of sources, with loop-thru to AAE;

Inputs 1 through 6 parallel with outputs from tuner card slots

Maximum Input: 3.2 V_{RMS} (flat)

Input Impedance: 47k ohms

PRE-AMP OUT 1 – 6: (12) RCA female providing (6) unbalanced line-level audio outputs

Selectable for variable or fixed level, bass, treble, balance, and loudness

Maximum Output: 2.5 V_{RMS}

Output Impedance: 100 ohms

ROOMS 1 – 6: (12) 2-pin 7.62mm detachable terminal blocks, power amplifier outputs

Wire Size: 12 AWG maximum

Output Power (per Channel): 45 Watts at 8 ohms, 60 Watts at 4 ohms

FUSE: Main fuse holder; 3AG, 8 Amps, 250 Volts, time lag

120V-50-60Hz: (1) IEC Male; mates with removable power cord (included)

G: 6-32 screw, chassis ground lug

USB (front): (1) USB Type B female (behind label strip)

USB 1.1 computer console port (cable included)

LCD Display

Green transmissive LCD dot matrix, 128 x 64 pixels, adjustable LED backlight

Controls and LED Indicators

STANDBY: Pushbutton with green LED, turns off power amplifier

MUTE: Pushbutton with red LED, mutes audio in selected room or group

MODE/MENU: (8) Pushbuttons, select mode or menu item for adjustment: SOURCE, ROOM, HOUSE, MENU, BKLT, SCHED, DISPLAY, MORE (refer to manual)

SOFTKEYS: (4) LCD display-driven pushbuttons, select/activate various functions

ROOM: (6) Pushbuttons with green LEDs and backlit labeling strip, select room to adjust

PRESET GROUP: (6) Pushbuttons with green LEDs and backlit labeling strip, select group(s) to adjust

SELECT: Continuous turn rotary encoder with adjoining "ENTER" pushbutton with green LED; for selecting rooms, sources, and radio stations

VOLUME: Continuous turn rotary encoder, adjusts volume of selected room or group

H: Hardware reset button, recessed, reboots the control system

S: Software reset button, recessed, restarts the SIMPL program

Power Requirements

Main Power Consumption: 7 Amps @ 120 Volts AC, 50-60Hz*

Available Cresnet Power: 20 Watts (0.83 Amps @ 24 Volts DC)

Environmental

Temperature: 41° to 104°F (5° to 40°C)

Humidity: 10% to 90% RH (non-condensing)

Heat Dissipation: 650 BTU/hr @ 8 ohms, 750 BTU/hr @ 4 ohms; all channels loaded to 1/8 full power

Enclosure

Black metal with molded ABS/PC front panel

Freestanding, side ventilation should not be restricted

Dimensions

Height: 7.39 in (18.78 cm)

Width: 17.16 in (43.59 cm)

Depth: 18.60 in (47.24 cm)

Weight

43.0 lbs (19.5 kg)

*230V International Version, Model AESI, also available.

XM Satellite Radio Statement: Hardware and required basic monthly subscription sold separately. Premium Channel available at additional monthly cost. Installation costs and other fees and taxes, including a one-time activation fee may apply. Subscription fee is consumer only. All fees and programming subject to change. Subscriptions subject to Customer Agreement available at xmradio.com. Only available in the 48 contiguous United States. ©2005 XM Satellite Radio Inc. All rights reserved. All other trademarks are the property of their respective owners.

Sirius Satellite Radio requires subscription, sold separately.

AVAILABLE ACCESSORIES

APAD

Adagio Wall Mount LCD Controller

C2N-DBF12

12-Button Decorator Function Keypad

AAE

Adagio Audio Expander

ATC-AMFM2

Dual AM/FM Tuner Card

ATC-AMFMXM

AM/FM and XM Satellite Radio Tuner Card

ATC-AMFMSR

AM/FM and Sirius Satellite Radio Tuner Card

AAS

Adagio Audio Server

CEN-IDOC

Interface for Apple iPod®

CNXRMIIRD

IR Receiver

STIRP

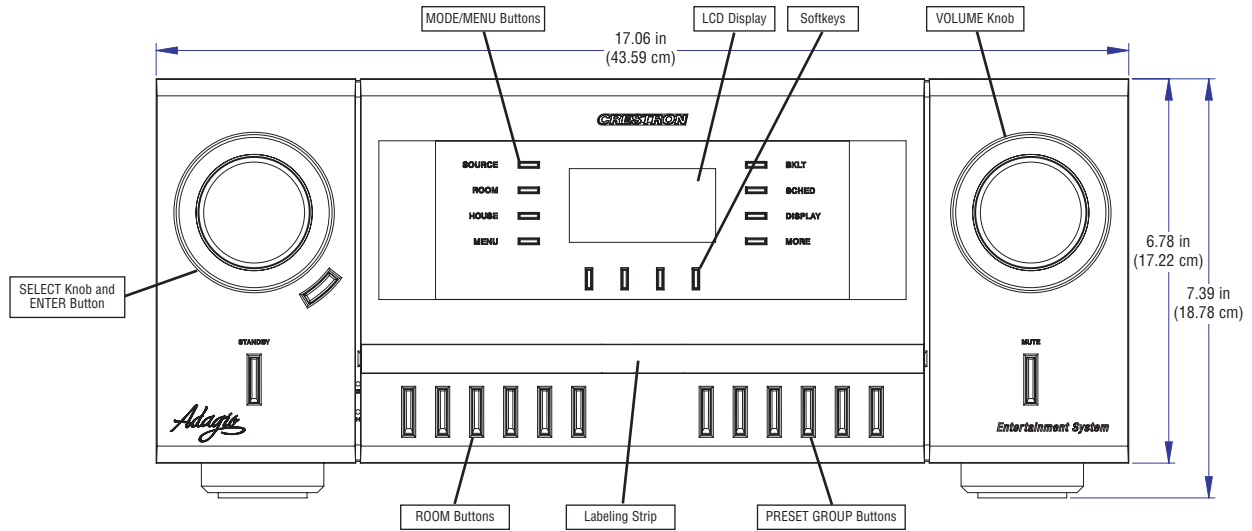
IR Probe

CNSP-XX

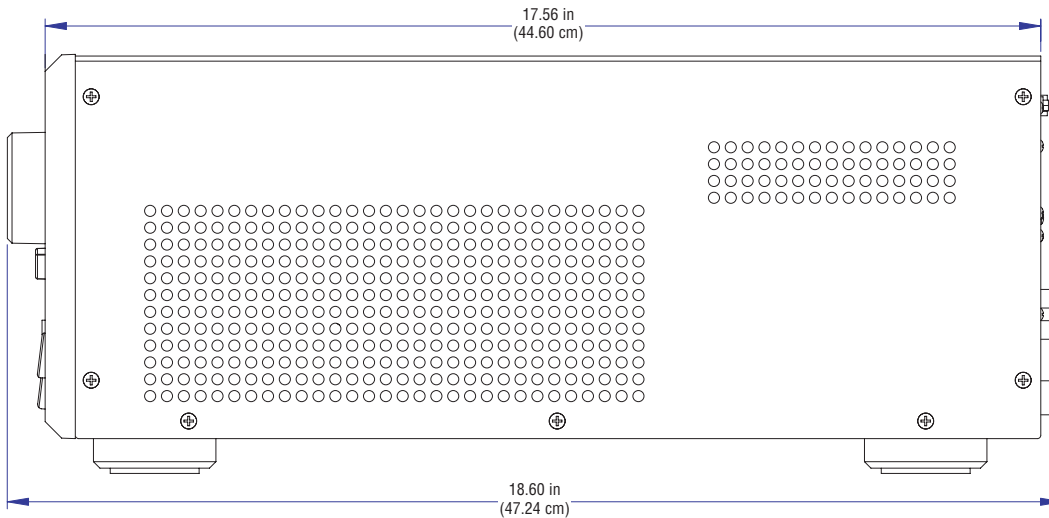
Custom Serial Interface Cable

C2N-TXM-C50

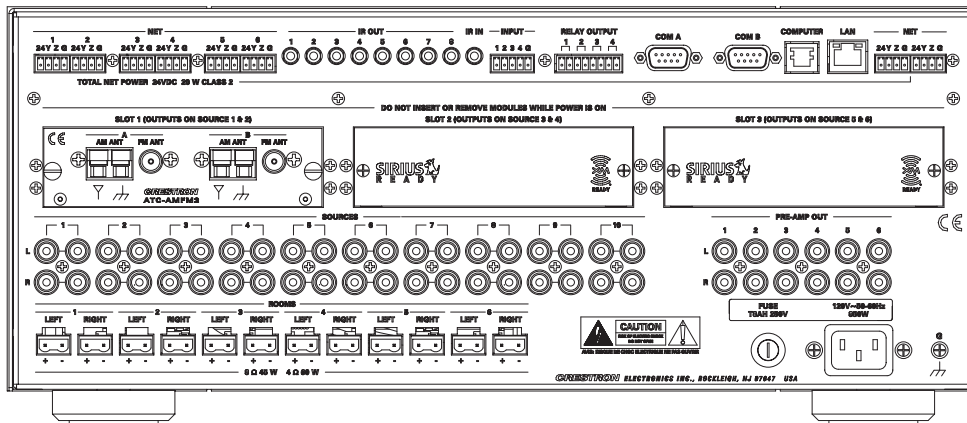
XM Antenna Extension Cable



AES – Front View

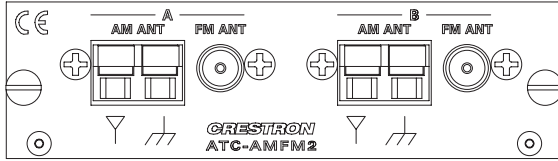


AES – Right Side View



AES – Rear View (AES model shown as shipped with (1) ATC-AMFM2 tuner card installed)

ATC-Series Tuner Cards



ATC-AMFM2 Dual AM/FM Radio Tuner Card

Audio

Maximum Output: 1 V_{RMS} @ 1kHz

FM Tuner (Typical of 2)

Frequency Range: 87.50 to 108 MHz (50 or 100 kHz steps)

Intermediate Frequency: 10.7 MHz

Usable Sensitivity: 11 dBf mono

S/N Ratio: 64dB @ 65 dBf mono; 60dB @ 65 dBf stereo

IF Rejection: 100dB

AM Rejection: 55dB

Stereo Separation: 40dB

AM Tuner (Typical of 2)

Frequency Range: 530 to 1710 kHz (9 or 10 kHz steps)

Sensitivity: 3.5 μV (RF input level 10dB S+N/N)

Selectivity: 10 kHz

Alternate Channel Selectivity: 55dB

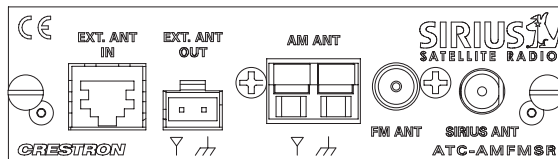
Image Rejection: 35dB

IF Rejection: 60dB

Connectors

AM ANT A – B: (2) 2-pin spring-loaded terminals, (2) AM loop antennas included
Impedance: 50 ohms

FM ANT A – B: (2) IEC 169-2 coaxial (IEC-to-F adapters included)
(2) T-type FM antennas included
Impedance: 75 ohms



ATC-AMFMSR AM/FM and Sirius Satellite Radio Tuner Card

Audio

Maximum Output: 1 V_{RMS} @ 1kHz (AM/FM), 2 V_{RMS} (Sirius)

FM Tuner

Frequency Range: 87.50 to 108 MHz (50 or 100 kHz steps)

Intermediate Frequency: 10.7 MHz

Usable Sensitivity: 11 dBf mono

S/N Ratio: 64dB @ 65 dBf mono; 60dB @ 65 dBf stereo

IF Rejection: 100dB

AM Rejection: 55dB

Stereo Separation: 40dB

AM Tuner

Frequency Range: 530 to 1710 kHz (9 or 10 kHz steps)

Sensitivity: 3.5 μV (RF input level 10dB S+N/N)

Selectivity: 10 kHz

Alternate Channel Selectivity: 55dB

Image Rejection: 35dB

IF Rejection: 60dB

Connectors

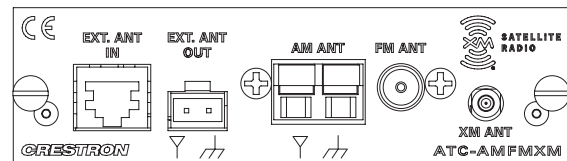
EXT. ANT IN: (1) 8-wire RJ45 female
Reserved for future remote AM antenna (not yet available)

EXT. ANT OUT: (1) 2-pin detachable terminal block
AM antenna signal pass-through from remote antenna

AM ANT: (1) 2-pin spring-loaded terminal, AM loop antenna included
Impedance: 50 ohms

FM ANT: (1) IEC 169-2 coaxial (IEC-to-F adapter included), T-type FM antenna included
Impedance: 75 ohms

SIRIUS ANT: (1) F-type coaxial, indoor/outdoor high-gain antenna included
Impedance: 50 ohms



ATC-AMFMXM AM/FM and XM Satellite Radio Tuner Card

Audio

Maximum Output: 1 V_{RMS} @ 1kHz (AM/FM), 2 V_{RMS} (XM)

FM Tuner

Frequency Range: 87.50 to 108 MHz (50 or 100 kHz steps)

Intermediate Frequency: 10.7 MHz

Usable Sensitivity: 11 dBf mono

S/N Ratio: 64dB @ 65 dBf mono; 60dB @ 65 dBf stereo

IF Rejection: 100dB

AM Rejection: 55dB

Stereo Separation: 40dB

AM Tuner

Frequency Range: 530 to 1710 kHz (9 or 10 kHz steps)

Sensitivity: 3.5 μV (RF input level 10dB S+N/N)

Selectivity: 10 kHz

Alternate Channel Selectivity: 55dB

Image Rejection: 35dB

IF Rejection: 60dB

Connectors

EXT. ANT IN: (1) 8-wire RJ45 female
Reserved for future remote AM antenna (not yet available)

EXT. ANT OUT: (1) 2-pin detachable terminal block
AM antenna signal pass-through from remote antenna

AM ANT: (1) 2-pin spring-loaded terminal, AM loop antenna included
Impedance: 50 ohms

FM ANT: (1) IEC 169-2 coaxial (IEC-to-F adapter included), T-type FM antenna included
Impedance: 75 ohms

XM ANT: (1) SMB, indoor/outdoor high-gain antenna included
Impedance: 50 ohms