

Yamaha AVENTAGE CX-A5100 11.2-Channel A/V Preamplifier

Brand: Yamaha
Product Code: CX-A5100BL

Price: \$2,499.95



Description

The AVENTAGE CX-A5100 11.2-Channel A/V Preamp from Yamaha features

3D surround formats, network functions such as Wi-Fi and Bluetooth

compatibility, and full 4K support with HDCP 2.2 compatible HDMI. In

combination with the MX-A5000 power amplifier, you can experience a 3D sound

field and Yamaha digital signal processing with CINEMA DSP HD3 in an

11.2-channel speaker configuration or a 7.1.4-channel configuration with Dolby

Atmos or DTS:X surround sound formats. This device includes digital-to-analog

conversion for all channels, as well as advanced HDMI zone switching that

allows A/V switching to multiple zones. The 11.2-Channel Preamplifier offers 4K

Ultra HD video upscaling with High Dynamic Range (HDR) support via its HDMI

2.0a inputs.

With the free MusicCast app, the CX-A5100 can be expanded to deliver wireless

multi-room audio playback, all controlled by an app. The preamplifier also

supports AirPlay, Spotify, Pandora, and other music streaming services through

the free AV Controller app. The AVENTAGE CX-A5100 is constructed with an

aluminum front panel, an H-shape cross member frame, and a rigid bottom

frame.

Product Features

Noise-Resistant Balanced Connections and XLR Terminals for Long Subwoofer Cables

Electrical noise may be generated from connections with other A/V components,

including the connections between them, as well as from external noise sources. To

prevent the CX-A5100 from being affected by this distortion, it uses balanced

connections that are noise resistant to the same type generally used in pro audio

equipment. Even the unbalanced RCA connection uses a ground-sensing transmission

method that achieves a simple and balanced transmission. When each channel is used

independently, the impact of noise flowing between the preamp and power-amp is

removed, minimizing sound quality deterioration due to the connection. XLR terminals

allow for the use of long cables that may be needed to connect a subwoofer. The CX-

A5100 also has a balanced audio input connection to high-grade source components such

as CD players.

High Density Presence and Richly Detailed Sound

All channels use ultra-high performance ESS ES9016 DACs, which provide 192

kHz/32-bit processing with high dynamic range, providing faithful reproduction from Blu-

ray and other players, as well as from high-resolution source inputs over the network.

Matched to the design of the DAC circuitry, which achieves stable ground potential

(DAC on Pure Ground), the DACs provide high-precision D/A conversion. A Volume IC

realizes low noise and enhanced sound orientation, and a low-jitter clock circuit is used

for clear network audio. In addition, the internal design separates the power supplies to

the analog circuit boards, minimizing high frequency noise interference from the digital

circuitry. The shielded power supplies restrict noise radiation and the large power

transformer minimizes vibration.

High-Rigidity Chassis Minimizes the Effects of Vibration for Greater Sound Purity

This preamp processor features a chassis with strong rigidity. Chassis stiffness is

enhanced by a three-ply structure that incorporates an independent top cover, aluminum

side panels, and an H-shaped cross frame. The Anti-Resonance Technology (ART)

Wedge in the center of the bottom cover acts as an additional vibration countermeasure

for the internal circuits and delicate parts.

Aluminum Front Panel

The AVENTAGE design includes an aluminum front panel and smooth-touch volume

and selector knobs. The aluminum front panel is used to effectively shield sensitive

circuitry from external noise and electronic radiation generated by dimmer switches,

fluorescent lighting, video monitors, and so on.

MusicCast

With a MusicCast capable A/V receiver, such as the AVENTAGE CX-A5100, and

MusicCast speakers, soundbars, or other Hi-Fi components placed throughout your home,

the MusicCast app lets you play music from any room. Wirelessly access your digital

music library, music streaming services, Internet radio, Bluetooth sources, your TV

sound, and external sources attached to your A/V receiver, such as Blu-ray or CD players.

Bluetooth Compatible for Wireless Music Streaming

The CX-A5100 is equipped with Bluetooth functionality to provide wireless music

playback from smartphones and other devices. The technology allows you to stream

music to Bluetooth speakers for added audio coverage or to Bluetooth headphones for

private listening. The Compressed Music Enhancer from Yamaha is compatible with

Bluetooth audio transmissions.

HDMI 2.0a, 4K Ultra HD Video Upconversion, HDCP 2.2, and High Dynamic Range

(HDR)

This unit supports HDMI 2.0a standards, with 4K video transmission at 60 frames per

second (pass-through and video upscaling). Enjoy high definition 4K video quality

without degradation, along with HDCP 2.2 compliance. It also supports HDR video,

which provides enhanced picture quality by simultaneously enabling greater detail for

both the dark and bright parts of an image. (A future firmware update will be required to

enable HDR.)

Yamaha Video Processing

The A/V receiver employs various Yamaha video upscaling techniques, including edge-

adaptive deinterlacing to smooth out jagged noise, motion-adaptive deinterlacing to

detect moving or still images, and multi-cadence detection that includes 3-2 pull-down.

A/V Switching to Multiple Zones

While standard HDMI zone switching can only send HD video programs to the main and

second zones, the CX-A5100 features Yamaha Advanced HDMI zone switching that

adds the capability to choose from all audio and video sources for playback in Zone 2.

(For HDMI inputs, the second HDMI output can be assigned to Zone 4, as well.) An on-

screen graphical user interface enables users to browse and select content from the second

zone, no matter what is being played in the Main Zone.

Network Functions

You can connect the A/V receiver to a Mac or Windows computer with WebBrowser

Control, giving you two-way control of Internet radio, Pandora, Rhapsody, Spotify, or

SiriusXM Internet Radio. The AV Controller app (from iTunes or Google Play) lets you

control various functions from your iPod, iPhone, iPad, or Android phone/tablet.

Built-In Wi-Fi and Wireless Direct

Built-in Wi-Fi allows for a wireless connection with your wireless router, simplifying

system connections for networked audio (PC/NAS) and music streaming services. If a Wi-

Fi router is not available, the Wireless Direct feature not only allows you to stream music

directly from your smartphone or tablet via the AV Controller app, AirPlay, etc., but also

allows to you control the A/V receiver.

AirPlay Allows Streaming Music to A/V Receivers

This A/V receiver supports AirPlay, which means it accepts wireless music streaming

from iPod touch, iPhone, and iPad, as well as from iTunes on a Mac or Windows

computer. You can view metadata such as song title, artist name, or album art on the

receiver's on-screen display.

Stream Songs with Spotify Connect

You can stream Spotify songs from your smartphone or tablet to your networked A/V

receiver using Spotify Connect. When you listen to Spotify outside on your smartphone

or tablet then bring your device inside, the song being played immediately streams to

your A/V receiver without interrupting the music playback. You can also personalize

playlists and receive phone calls while listening to music on Spotify. The free Spotify app

and a premium account are required.

Compressed Music Enhancer

When music is encoded into a digitally compressed format like MP3, the frequency

response suffers. The Compressed Music Enhancer from Yamaha employs digital signal

processing using Yamaha algorithms to restore what was lost (up to 96 kHz/24-bit).

Zone Control with the AV Controller App

This A/V preamplifier lets you use the Yamaha AV Controller app (downloadable from

iTunes, Google Play, or the Amazon Appstore) to control the power, volume, input

selections, DSP modes, and more from an iPhone or Android device. The app can create

zones and control various functions with multi-zone installations. Zone selection is

accomplished from within the app by choosing an icon to reflect each zone location

(bedroom, kitchen, etc.). The app allows you to select inputs or network streaming

services, power on/off, change volume, and more. You can also switch to Party Mode to

allow for volume control of the party function. The AV Controller app comes in 23

different languages and has a customizable interface. A tablet version is also available.

Dolby Atmos

The CX-A5100 supports Dolby Atmos enhanced surround sound.

Supports DTS:X Surround Sound

DTS:X is an object-based, multi-dimensional audio technology created by DTS. (DTS:X

playback capability will be available via future firmware update.)

Dolby Atmos and DTS:X Speaker Layout Patterns

Yamaha provides multiple placement patterns for presence speakers that support Dolby

Atmos and DTS:X, helping you create a sound field that is ideal for your setup. Any

layout can be appropriately reproduced, including the three-dimensional space of

CINEMA DSP, as well as Dolby Atmos and DTS:X. Furthermore, YPAO Reflected

Sound Control optimizes the listening environment, and fundamental high quality audio

design takes full advantage of the detailed spatial localization capability of Dolby Atmos

and DTS:X.

YPAO R.S.C. with 3D, Multipoint, and Angle Measurement

During the automatic room calibration process, YPAO R.S.C. with 3D, multipoint, and

angle measurement analyzes the room acoustics and performs speaker angle

measurements. After this, YPAO calibrates all of the audio parameters to achieve

optimum sound at any of the listening positions in the theater. It employs Reflected

Sound Control to correct early reflections. Additionally, it includes DSP Effect

Normalization, which varies with each CINEMA DSP program and adjusts the room

acoustics according to the reflected sounds of that CINEMA DSP program.

YPAO Volume

YPAO Volume applies loudness EQ correction to automatically adjust high and low

frequency levels as the volume changes. Using the YPAO measurement results, EQ

correction is optimized to your system settings and listening environment.

CINEMA DSP HD3

The CX-A5100 supports surround sound playback formats such as Dolby Atmos and

DTS:X. In addition to conventional channel-based audio, it is possible to create a 3D

space in which separate acoustic elements can move freely, giving a sensation of the

motion of "objects". The CINEMA DSP HD3 features signal processing algorithms to

maximize the theater's sound effect by expanding the sound field vertically. By

supplementing the limited number of speakers in a home system, CINEMA DSP creates

the effect of a movie theater's size with a large number of speakers.

33 DSP Programs

The broad array of surround sound programs includes ten original programs featured in

the flagship RX-Z11 receiver, along with other DSP programs for movies, sports, music

videos, concert halls, and action or role-playing games. Additionally, these 33 DSP

programs are compatible with Dolby Atmos and DTS:X surround formats.

DSP Parameter Adjustment

This A/V receiver is equipped with a variety of sound programs that utilize original DSP

technologies from Yamaha. You can use the AV Controller app to adjust the DSP

parameters in a basic or advanced mode.

Gapless Playback Compatibility

Gapless playback removes the pauses between audio files, providing uninterrupted

playback.

USB Digital Connection for iPod and iPhone on Front Panel

A USB port on the front panel both connects and charges an iPod or iPhone. Because the

digital signal from the iPod or iPhone is transmitted directly to the A/V receiver, there is

no signal-loss or interference. In addition, you can use the receiver's remote control unit

to operate the iPod and iPhone for basic playback control.

Virtual Presence Speaker and Virtual Surround Back Speaker

With the power of CINEMA DSP 3D, the Virtual Presence Speaker function makes full

use of center and surround speakers to create audible information from where presence

(height) speakers are normally installed. The A5100 additionally features a Virtual

Surround Back Speaker function. Even without using surround back speakers, you can

experience sound from behind you without physical speakers being installed in the

surround back area of the listening environment.

Virtual CINEMA FRONT Provides Virtual 7-Channel Surround Sound with High

Resolution

The Virtual CINEMA FRONT feature gives you flexibility to arrange your speakers

inside the room. Simply place the surround speakers in the front of the listening area to

enjoy a virtual 5-channel surround sound with rear virtual sound localization.

Multi-Language GUI On-Screen Display

The Yamaha graphical user interface has a high-resolution display. It also includes a

selectable status bar that shows input source, volume level, DSP mode, and audio format.

The GUI can be displayed over both normal and 3D pictures, and provides a choice of

eight languages: English, French, German, Spanish, Italian, Russian, Japanese, and

Chinese.

SCENE PLUS

The SCENE PLUS function provides one-touch operation to automatically power-on the

preamplifier, choose the desired source input, and select the appropriate DSP programs.

SCENE PLUS offers a choice of 12 SCENE selections, four of which can be assigned to

the second zone in a multi-zone system. SCENE PLUS can be selected from the front

panel, remote control, GUI, or the AV Controller app.

Trigger Control

The CX-A5100 includes two trigger output jacks that provide control of connected

component functions such as power on/off and input selection. An amplifier or subwoofer

with a Trigger In jack can be connected to enable the trigger function.

A/V Setup Guide

The A/V Setup Guide helps you through the receiver setup process by assisting you with

cable connections between the A/V receiver and source devices. Additionally, it guides

you through various settings such as speaker connections, TV and source device

connections, and power amplifier assignments. System illustrations and actual A/V

receiver images help you understand how to make the connections between devices. It is

available in multiple languages and is designed for iOS and Android tablets.

Access to Various Streaming Services

The AVENTAGE CX-A5100 Preamplifier is compatible with several streaming services

for access to a wide range of audio content.

Specifications



Surround Sound

Cinema DSP HD3

33 DSP programs

Dialog level adjustment

Virtual Presence Speaker (with Virtual Rear

Presence Speakers)

Dialogue Lift (no presence speakers required)

SILENT CINEMA / Virtual CINEMA DSP

Dolby Atmos

Dolby TrueHD

Dolby Digital Plus

Dolby Digital

Dolby Pro Logic IIx

DTS:X

DTS-HD Master Audio

Audio

Pure Direct (with video on mode)

Compressed Music Enhancer

High-Resolution Music Enhancer

YPAO Multi-Point Measurement (with R.S.C., 3D,

and angle measurement)

YPAO Volume

Adaptive Dynamic Range Control (DRC)

Initial Volume and Maximum Volume Setting

A.R.T. Wedge

Audio Delay: 0 to 500 ms

192 kHz / 24-bit DACs for all channels (ESS

Technology ES9016S SABRE32 Ultra DAC + ESS

Technology ES9006A SABRE Premier Audio

DAC x 2)

Video

4K Ultra HD pass-through and upscaling (4K 60p

4:4:4)

HDMI 3D pass-through

HDMI Audio Return Channel

Component upscaling

HDMI upscaling (analog to HDMI, HDMI to

HDMI)

Video adjustment

Deep Color / x.v.Color / 24 Hz Refresh Rate / Auto

Lip-Sync

DAC Type

ESS SABRE Ultra DAC ES9016S

HDCP Version	2.2
HDMI CEC	SCENE, device control
Tuner	AM / FM Tuner

Wireless Connectivity

MusicCast

Wi-Fi (with Wireless Direct)

AirPlay

Bluetooth (AAC)

Inputs

8 x HDMI (1 x front)

1 x USB (front)

3 x Optical digital audio

3 x Coaxial digital audio

1 x XLR balanced analog audio

1 x 5.1 multi-channel

1 x Phono

8 x Stereo RCA (1 x front)

3 x Component video

5 x Composite video (1 x front)

1 x 1/8" / 3.5 mm IR remote

1 x 75 ohm coaxial FM antenna

1 x AM loop antenna

Outputs

2 x HDMI

1 x Component video

1 x Composite video

1 x Headphone (front)

1 x XLR balanced preout (11.2-channel)

1 x RCA unbalanced preout (11.2-channel)

2 x 1/8" / 3.5 mm 12 V Trigger

1 x 1/8" / 3.5 mm IR remote

Other Ports

1 x Ethernet

1 x DB-9 RS-232C terminal

1 x YPAO calibration mic (front)

1 x AC power

USB Playback Formats

DSD 2.8 MHz / 5.6 MHz

FLAC / WAV / AIFF 192 kHz / 24-bit

Apple Lossless 96 kHz / 24-bit playback

User Interface

On-Screen Display: Graphical User Interface

SCENE: SCENE PLUS (12 sets)

App Control: iPhone, iPad, Android phone, tablet

Web Browser Control

Remote Control Unit: Preset, learning, macro, full

LED backlight

Zone Control

Zone 2 Audio Output: Preout, HDMI

Zone 3 Audio Output: Preout

Zone 4 Audio Output: HDMI

Zone Video Output: HDMI, Component,

Composite

Zone HDMI (Advanced HDMI zone switching)

Zone B Output: HDMI

Zone GUI

Party Mode

Standby Power Consumption

IR Only: ? 0.1 W

Auto Power Standby

Yes

Dimensions (W x H x D)

With Antenna Down: 17.13 x 7.50 x 18.63" / 43.5

x 19.1 x 47.3 cm

With Antenna Up: 17.13 x 9.75 x 18.63" / 43.5 x

24.8 x 47.3 cm

Weight

29.8 lb / 13.5 kg

Packaging Info

Package Weight

37.0 lb

Box Dimensions (LxWxH)

22.0 x 21.5 x 11.5"