

## *Absolute Quality*

*- Next-Generation Real 3D Surround Sound Experience -*



# CX-A5100

11.2-channel AV Preamplifier

**AVENTAGE**

By transferring the best genes, we've gone one step further.

Yamaha, which reached one peak with the Z11, searched for the ideal AV Receiver and developed the AVENTAGE separates.

Now, with the emergence of the latest 3D sound formats, the CX-A5100 has been included in the next generation of AV preamps, making the new dimension of video experience even greater.

The newly revised CINEMA DSP HD<sup>3</sup>, the latest functions, and the best technologies and expertise have all come together here.

— Absolute Quality —

By applying our unmatched craftsmanship to the expression of dynamism and resonance, we offer a whole new level of home theatre excitement.

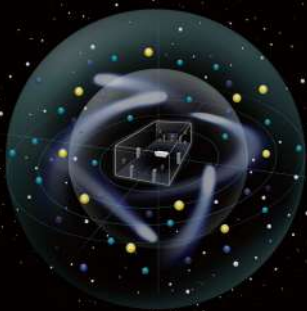


## Featuring the absolute latest technology. The 11.2 channel preamp that brings you new dimensions in sound reproduction

The CX-A5100 is our flagship AV preamp, featuring the latest versions of 3D surround formats, advanced network functions such as WiFi and Bluetooth® compatibility, and full 4K support with HDCP2.2 compatible HDMI for the 4K era. In combination with the MX-A5000 power amplifier, you can enjoy not only a premier 3D sound field CINEMA DSP HD<sup>3</sup> 11.2 channel full-spec reproduction but also new dimensions of surround sound as found in the newest movie theatres — in your own home.

## True sense of realism produced by the next-generation CINEMA DSP HD<sup>3</sup>, compatible with all the latest formats

The CX-A5100 supports the latest 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” above the viewer’s head that fully realises the filmmaker’s intentions. What’s more, the revamped CINEMA DSP HD<sup>3</sup> features newly developed signal processing algorithms to increase their appeal even



further. With three sets of high performance processors for CINEMA DSP, it is possible to maximise the theatre sound effect, accurately reproducing a new dimension of realism for a sound field with a rich sense of presence unlike any system you’ve ever experienced. And by supplementing the limited number of speakers in a home system with CINEMA DSP to create the effect of a movie theatre space with a large number of speakers, you can experience a realistic cinema sound field with the sense of truly being immersed in a movie scene.



## High Density Presence and Richly Detailed Sound Ensured by High Sound Quality Parts and Design

All channels use ultra high performance ESS ES9016 DACs, which provide 192kHz/32-bit compatible superior SN ratio and dynamic range, ensuring faithful reproduction from Blu-ray and other players, as well as from high resolution sound sources input through networks. Matched to the design of the DAC circuit, which achieves stable ground potential (DAC on Pure Ground), they provide high precision D/A conversion. A new Volume IC realises low noise and superior sound orientation, and a superior low jitter clock



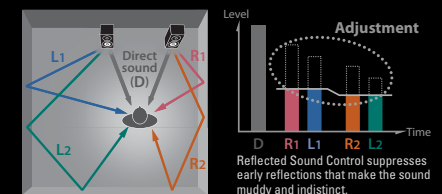
circuit is used for clear and vivid network audio. In addition, the internal design separates the power supplies to the analogue circuit boards, eliminating high frequency noise interference from the digital circuits. The shielded power supplies restrict noise radiation and the large power transformer minimises vibration.

## YPAO-R.S.C Sound Optimisation with High Precision 64-bit EQ Calculation and Speaker Angle Measurement

YPAO analyses room acoustics and performs speaker angle measurements, then calibrates audio parameters to achieve the best sound at any of several listening positions. The height of the presence speakers is also measured, to optimise the 3D sound field. R.S.C. (Reflected Sound Control) corrects early reflections for studio-quality sound. YPAO also uses 64-bit EQ Calculation for realising the most natural room acoustics possible. YPAO 3D provides automatic sound parameter optimisation that maximises the 3D sound field effectiveness of CINEMA DSP HD<sup>3</sup> as well as Dolby Atmos.



### Effects of YPAO Reflected Sound Control (R.S.C.)



## Specially Designed High Rigidity Chassis Eliminates the Effects of Vibration for Greater Sound Purity

As part of this amp’s no-compromise design policy, Yamaha created an advanced chassis with strong rigidity. Chassis stiffness is enhanced by an H-shaped cross frame that boosts mechanical strength, by aluminium side panels that increase stiffness, and by a three-ply structure with independent top cover and side panels. The ART (Anti-Resonance Technology) Wedge in the centre of the bottom cover acts as an additional vibration countermeasure for the internal circuits and delicate parts.



## 33 DSP Programmes

HiFi DSP Programmes	
CLASSICAL	Hall in Munich A
	Hall in Munich B
	Hall in Frankfurt
	Hall in Stuttgart
	Hall in Vienna
	Hall in Amsterdam
	Hall in USA A
	Hall in USA B
	Chamber
	Church in Tokyo
	Church in Freiburg
Church in Royaumont	
LIVE/CLUB	Village Gate
	Village Vanguard
	The Bottom Line
	Cellar Club
	The Roxy Theatre
	Warehouse Loft
STEREO	11 Channel Stereo
HiFi DSP Subtotal	20

CINEMA DSP Programmes	
ENTERTAINMENT	Sports
	Music Video
	Recital/Opera
	Pavilion
	Disco
	Action Game
MOVIE THEATRE	Roleplaying Game
	Standard
	Spectacle
	Sci-Fi
	Adventure
Drama	
Mono Movie	
CINEMA DSP Subtotal	13

### Bluetooth Support, WiFi Built-in and Extensive Format Compatibility

Bluetooth support gives you the convenience of wireless music playback, while Wi-Fi Built-in improves installation flexibility. These two features provide easy access to countless music sources. In addition, compatibility with FLAC/WAV/AIFF 192kHz/24bit, Apple Lossless and DSD 2.8MHz/5.6MHz formats means that you can easily play high resolution audio from a networked NAS, PC or USB.



### AV Controller App Allows Convenient Control from a Smartphone

You can use the Yamaha AV Controller app to control power on/off and volume, select input and DSP modes and operate other functions from an iPhone or Android devices. You can also use in as many as 23 different languages and customise the interface by hiding unused icons and renaming functions. A tablet version is also available.



### HDMI: 8 Inputs and 2 Outputs with Upscaling / Pass-Through, HDCP2.2 and HDR\* Video added in HDMI 2.0a spec

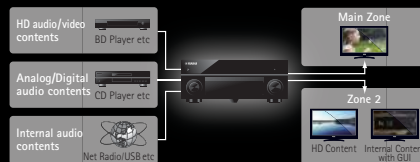
The HDMI inputs and outputs support 4K60p Ultra HD video image pass-through. In addition, 4K Ultra HD upscaling boosts lower resolution images and supports 4:4:4 video signals for more vibrant and lifelike images, ensuring full enjoyment of 4k high definition video quality. The CX-A5100 also adheres to the HDCP2.2 copyright protection standard for 4K video transmission, and supports HDR (High Dynamic Range) Video which provide enhanced picture quality by simultaneously enabling greater detail for both the dark and bright parts of an image.



\*Firmware update is required to enable HDR, and Firmware update schedule is to be decided.

### Advanced HDMI Zone Switching

While standard HDMI zone switching can only send HD video programmes to the main and second zones, Yamaha's Advanced HDMI Zone Switching adds the capability to choose from various audio and video sources for playback in either zone. An on-screen graphical user interface makes it easy to browse and select content to enjoy from the second zone no matter what is being played in the main zone.



### Noise Resistant, Highly Reliable Balanced Connections and High Quality XLR Terminals for Long Subwoofer Cables

Electrical noise may be generated due to connection with other AV components and even to the connection between them, as well as from other sources of external noise. To ensure that the CX-A5100 is not affected by this distortion, it uses balanced connections that are highly noise resistant—the same type generally used in pro audio equipment. Even the RCA unbalanced connection uses a ground sensing transmission method that achieves simple balanced transmission. Even when each channel is used independently, the impact of noise flowing between the preamp and power amp is removed, minimising sound quality deterioration due to the connection. XLR terminals allow use of the long cables that may be needed to connect a subwoofer. The CX-A5100 also allows balanced audio input connection to high grade source components such as CD players.



### Other Notable Features

- DSD Direct playback compatibility
- Yamaha Original Video Processing
- AV Controller App Provides Zone Control
- Auto Power Standby
- Handy Trigger Control

Top-grade AVENTAGE Series performance. 11 channels of amplification with clear, transparent output at all power levels.



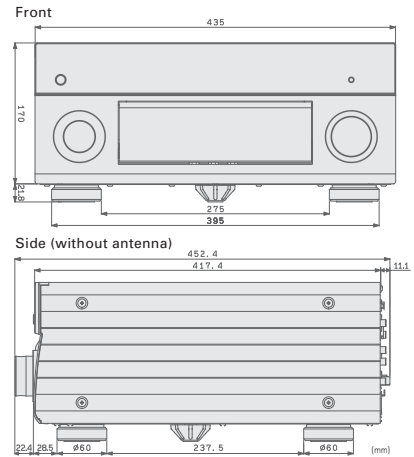
11-channel Power Amplifier

# MX-A5000

- Custom-made large-size toroidal transformer
- Current feedback power amp with Three-stage Darlington circuit
- 27,000uF custom block capacitors
- Specially designed high rigidity chassis and highest quality parts
- Noise resistant XLR balanced connections





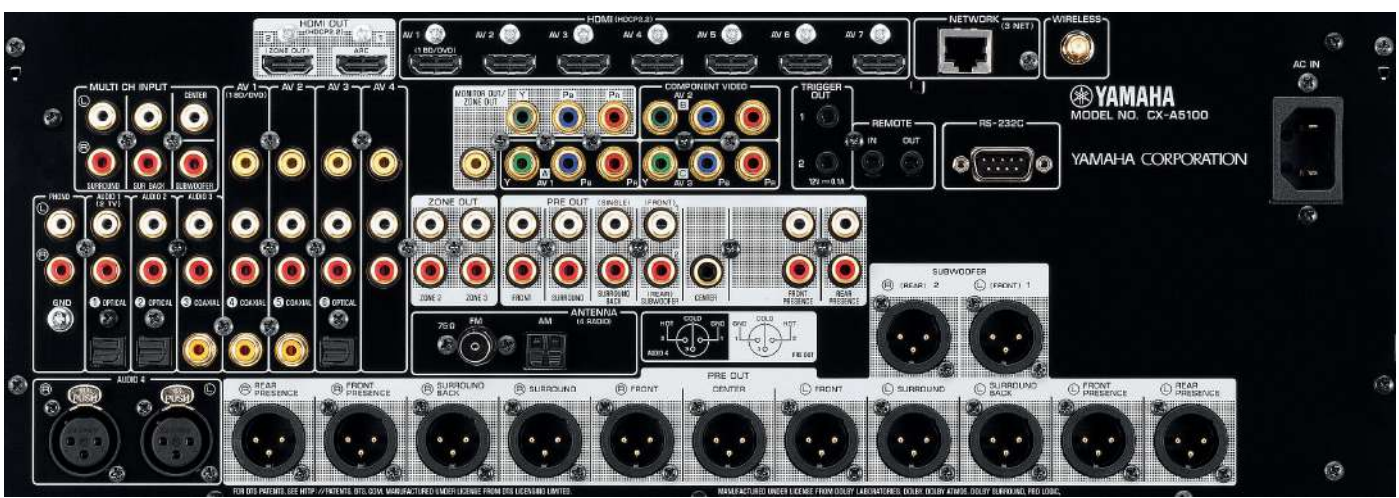


\* DTS-X playback becomes possible with a firmware update. For details about the update, see the Yamaha website.

**Main Specifications**

Audio Section	
Rated Output Level/Impedance	
RCA Unbalance	1.0 V / 470 ohms
XLR Balance	2.0 V / 470 ohms
Max Output Level	
RCA Unbalance	>4.0 V (except for SW) >6.5 V (SW)
XLR Balance	>8.0 V (except for SW) >13.0 V (SW)
Input Sensitivity / Impedance	
RCA Unbalance (Audio 2 etc)	200 mV / 47 k ohms
XLR Balance (Audio 4 Attenuator OFF)	200 mV / 100 k ohms
XLR Balance (Audio 4 Attenuator ON)	400 mV / 100 k ohms
Total Harmonic Distortion	
MULTI CH INPUT to Speaker Out (Pure Direct, 70 W, 8 ohms)	0.008%

Signal-to-Noise Ratio (IHF-A Network)	
Audio 2 etc. to Preout (XLR Balance/RCA Unbalance)	112 dB
Frequency Response (Pure Direct, Audio 2 etc.)	
	10 Hz-100 kHz +0 / -3 dB
<b>General</b>	
Standby Power Consumption	
HDMI Control off, Standby Through off	0.1 W
HDMI Control on, Standby Through on	1.5 W
Network Standby on	2.1 W (wired)
Dimensions (W x H x D)	
	435 x 192 x 474 mm (with antenna up: 435 x 247 x 474 mm)
Weight	
	13.5 kg



**Extensive Connections**

Inputs	
HDMI*1 (HDMI1-7; HDCP2.2 compatible)	8
Network (Ethernet / Wi-Fi)	1 / 1
USB*1	1
Radio Antenna (FM/AM)*2	1 / 1
Analogue Audio	
RCA Unbalance*1 (with Phono)	9
XLR Balance	1
Optical Digital (Assignable except Video AUX)	3
Coaxial Digital (Assignable)	3
Component Video (Assignable)	3
Composite Video*1	5

Outputs	
HDMI	2 (Zone Assignable)
Pre Out	
RCA Unbalance	11.2ch
XLR Balance	11.2ch
Monitor Out	
Composite Video*3	1
Component Video*3	1
Subwoofer	
	2 (stereo, front/rear, mono x 2)
Headphone Jack*1	
	1

Others	
Zone 2 Out	1
Zone 3 Out	1
Remote In/Out	1 / 1
+12V / Total 100 mA Trigger Out*4	2
RS-232C	1
Terminal for Detachable Power Cable	1

\*1 Including front panel terminals.  
\*2 The shape of the FM antenna terminal varies according to area.  
\*3 Assignable to monitor out or Zone 2/3/4 out.  
\*4 Yamaha subwoofer system control support.

• \*Made for iPod\* and \*Made for iPhone\* mean that an electronic accessory has been designed to connect specifically to iPod or iPhone, respectively, and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with iPod or iPhone may affect wireless performance. AirPlay®, iPad, iPhone, iPod, iPod classic, iPod nano, and iPod touch are trademarks of Apple Inc., registered in the U.S. and other countries. • The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Yamaha Corporation is under license. Other trademarks and trade names are those of their respective owners. • Spotify and Spotify logo are registered trademarks of the Spotify Group. • Napster and the Napster logo are trademarks and registered trademarks of Rhapsody International. • JUKE and JUKE logo are registered trademarks of Media-Saturn-Holding GmbH. • The Wi-Fi CERTIFIED Logo is a certification mark of the Wi-Fi Alliance. The Wi-Fi Protected Setup Identifier Mark is a mark of the Wi-Fi Alliance. • DLNA™ and DLNA CERTIFIED™ are trademarks or registered trademarks of Digital Living Network Alliance. All rights reserved. Unauthorized use is strictly prohibited. • Dolby, Dolby Atmos, Dolby Audio, and the double-D symbol are trademarks of Dolby Laboratories. • For DTS patents, see http://patents.dts.com. Manufactured under license from DTS, Inc. DTS, the Symbol, DTS in combination with the Symbol, DTS-X, and the DTS-X logo are registered trademarks or trademarks of DTS, Inc. in the United States and/or other countries. © DTS, Inc. All Rights Reserved. • HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries. • xxColour™ is a trademark of Sony Corporation. • CINEMA DSP is a trademark of Yamaha Corporation. • SILENT CINEMA is a trademark of Yamaha Corporation. • Product designs and specifications are subject to change without notice.