

*Absolute Realism, Massive Power.
AVENTAGE Separate Components.*



CX-A5000

11.2-channel AV Pre-Amplifier



MX-A5000

11-channel Power Amplifier

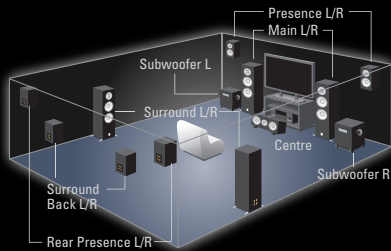
AVENTAGE

Yamaha is proud to introduce two flagship separate components that stand at the pinnacle of the AVENTAGE Series of ultra-high performance components. They are the fullest expression of the AVENTAGE concept, which combines fine craftsmanship, superb sound quality, unequalled sound realism, innovative technologies and enhanced controllability. Drawing on the spirit of uncompromising design and technological integrity manifested by our Z11 flagship receiver, the CX-A5000 and MX-A5000 take the AVENTAGE Series to new levels of audio performance, as well as greater than ever flexibility for use in network environments. By delivering not only great sound quality but also the capability to achieve the best possible performance from any source, they take the home theatre experience to a new standard of excellence and enjoyment.



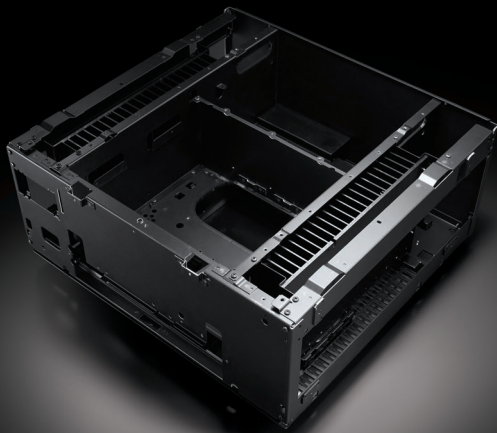
Overwhelming Power and High Density Presence Achieved by 11.2-channel Separate AV Amps

Making full use of Cinema DSP HD³, the pinnacle of 3-dimensional sound field reproduction, the CX-A5000 AV Pre-Amplifier realises detailed, accurate sound imaging. The MX-A5000 discrete structured 11-channel Power Amplifier delivers powerful driving force that provides superb quality and performance for all channels. Combining these two achieves overwhelming silence and sound filled with dynamic feeling, the goal to which Yamaha constantly aspires. With all types of sound sources, you will enjoy a deep resonance that immerses you in music with the full scale presence of 11.2 channels.



Specially Designed High Rigidity Chassis Eliminates the Effects of Vibration for Greater Sound Purity (CX-A5000/MX-A5000)

As part of the no-compromise design policy for these two amplifiers, Yamaha created an advanced chassis with strong rigidity. Chassis stiffness is enhanced by an H-shaped cross frame that boosts mechanical strength, by adopting aluminum side panels that increase the stiffness of the housing, and by a three-ply structure with independent top cover and side panels. Any external vibration from the rack or other sources is damped by heavy insulators. The A.R.T (Anti-Resonance Technology) Wedge in the centre of the bottom cover acts as an additional vibration countermeasure and firmly supports the internal circuits and delicate parts. In addition, both models have a double

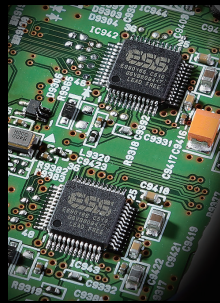


bottom, with the MX-A5000's consisting of vibration control plates made of 1.6mm black steel, the same type of construction used on the previous flagship model Z11. In order to support the heavy heat sinks and other parts, it has a left-right independent construction strengthened by a rigid-frame structure. The bottom frame reduces the transmission of vibration produced by the large power supply transformer and heat sinks. It also incorporates a heavy insulator that blocks external vibration.



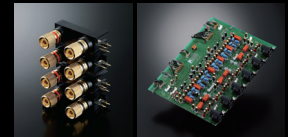
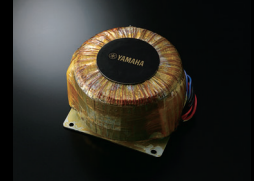
High Density Presence and Richly Detailed Sound Ensured by High Sound Quality Parts and Design (CX-A5000)

In the CX-A5000, all channels use ultra high performance ESS ES9016 DACs, which provide 192kHz/32-bit compatible high SN ratio and dynamic range, ensuring that it can faithfully reproduce audio signals from Blu-ray and other players, and high quality signals 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 ensure high precision D/A conversion. The OP amp is a high grade type adopted only by flagship models, for maximum signal purity. It realises even more detailed sound by adopting a three-layer circuit board design that completely separates the digital, analogue video and analogue audio circuit boards, which have different noise levels and frequency bands, and by a design that provides the shortest possible circuit route. Further, by separating the power supplies to the analogue circuit boards, it eliminates high frequency noise interference from the digital circuits. The shielded power supply restricts noise radiation and the large power transformer minimises vibration.



Highest Quality Parts Achieve High Power to 11 Channels and Unrestricted Speaker Drive (MX-A5000)

The MX-A5000 uses a current feedback power amp with a Three-stage Darlington circuit that has superior phase properties and is resistant to speaker impedance fluctuation. To fully realise its inherent power, it uses high quality parts with superior sound quality that were strictly selected based on listening tests. The power supply transformer is a specially developed high output, high efficiency, large-size toroidal transformer. With two specially developed high capacity (27,000uF) block capacitors, it minimises energy loss and features power supply capacity with generous headroom. This ensures sound capable of superior musical expression. The speaker output terminals are high quality gold-plated types, and are compatible with Y plugs for optimum speaker connectivity.



Noise Resistant, Highly Reliable Balanced Connection (CX-A5000/MX-A5000)

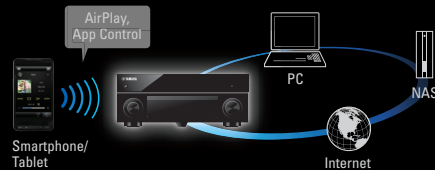
Electrical noise may be generated due to connection with other AV components and even to the connection between them, as well as from other sources of external noise. To ensure that the CX-A5000 and MX-A5000 are not affected by this distortion, they use balanced connections that are highly noise resistant—the same type generally used in pro audio equipment. Even the RCA unbalanced connection uses a ground sensing transmission method that achieves simple balanced transmission. And in cases such as that where each channel with the XLR is used selectively, the impact of noise flowing between the pre-amp and the chassis of the power amp is removed, minimising sound quality deterioration due to the connection. The CX-A5000 also allows balanced audio input connection to high grade source components such as CD players.



Network Integration Functions Provide Wider Source Access with Greater Control

AirPlay lets you stream music wirelessly from a Mac, PC, iPod, iPhone or iPad. You can also access music files stored on a PC or NAS, internet radio or subscription-based music services*1. Compatibility with high resolution music files in the FLAC/WAV 192kHz formats allows playback with outstanding sound quality. And the AV Controller app offers convenient operation from a smartphone or tablet.

*1 Music service availability varies by region.



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 customize the interface by hiding unused icons and renaming functions. A tablet version is also available.



CINEMA DSP HD³ Expands the Sound Field Vertically for More Thrilling and Realistic Surround Sound

CINEMA DSP HD³ literally takes the surround sound experience to new heights. By using four CINEMA DSP engines with advanced 3D processing and four presence channels in an 11-channel configuration, it gives the sound an enhanced vertical dimension. You are enveloped in wide, high and dense sound fields that deliver excitingly realistic surround sound. In addition, a rear Virtual Presence Speaker has been added to the usual front Virtual Presence Speaker, so you can enjoy CINEMA DSP HD³ programmes using a 9-channel system (without rear presence speakers) with almost the same sensational sound as an 11-channel system.



33 DSP Programmes, Including 10 Introduced in the Flagship Z11 Receiver

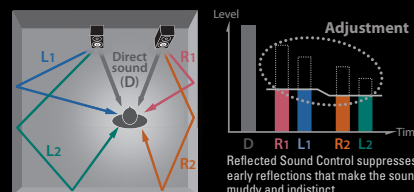
The broad array of surround sound programmes, including 10 featured in the flagship Z11 receiver, features six Movie choices, including Spectacle for movies with strong visual and audio impact, Sci-Fi for SFX movies, Adventure to emphasise the sound of action movies, and Drama. Seven Entertainment programmes match the audio characteristics of sources such as sports, music videos, action games and roleplaying games. Compatibility with the Dolby TrueHD and DTS-HD sound formats means you hear the full potential of every movie and music source.

YPAO-R.S.C. (Reflected Sound Control) Sound Optimisation with Speaker Angle Measurement

YPAO analyses room acoustics and performs speaker angle measurements, then calibrates audio parameters to achieve optimum sound at any of several listening positions. It employs Reflected Sound Control to correct early reflections for studio-quality sound. It also provides DSP Effect Normalization, which varies the CINEMA DSP parameters according to the reflected sounds.



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



HDMI: 8 Inputs and 2 Outputs with MHL Support and 4K Ultra HD Upscaling/Pass-Through

Enjoy the quality and convenience of HDMI connection with eight input and two output components. MHL provides easy, direct connection of compatible mobile phones, with playback of up to 1080p video and multi-channel audio from the phones. The receiver also charges the connected phone. Play, Stop and other basic operations can be controlled from the remote control. 4K upscaling makes it possible to enjoy super high-definition resolution from lower resolution video sources.



Yamaha Original Video Processing

The CX-A5000 is not only a superb audio component, it also helps the AV system achieve the highest possible levels of video performance. Drawing on our experience in developing high-end video projectors, Yamaha has incorporated a number of advanced video processing technologies, including Edge Adaptive to smooth out jaggy noise, Motion Adaptive to analyse image motion for precise by-pixel processing, Cinema Detection of 3:2/2:2 pulldown to match film content, and Multi-Cadence Detection.



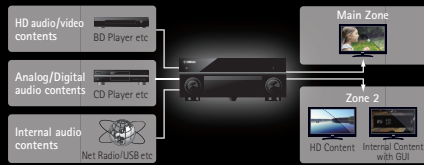
33 DSP Programmes

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
LIVE/CLUB	Church in Freiburg
	Church in Royaumont
	Village Gate
	Village Vanguard
	The Bottom Line
	Cellar Club
	The Roxy Theatre
	Warehouse Loft
	Arena
	11 Channel Stereo
STEREO	11 Channel Stereo
HiFi DSP Subtotal	20

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

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.



AV Controller App Provides Zone Control

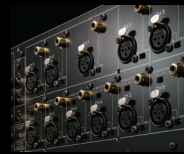
The AV Controller app is extremely useful for controlling various functions in multi-zone custom installations. Displaying zone icons for

easy reference, it allows control of power on/off, input selection and volume level in each zone. It also shows when the Party mode is being used, and allows volume control of the Party function.



In Addition to 11.2-channel Output, 5-channel Biamping and Other Configurations Are Possible.

The CX-A5000 and MX-A5000 are designed to allow flexible system building. Complementing their 11-channel output that maximises Cinema DSP HD³ performance and makes the most of the capabilities of the speakers, they also support biamping for driving tweeter and woofer with separate amps. Furthermore, they allow biamping of, for example, all five channels using the 11 internal channels. Extra amps can be used to power



multiple zones in addition to the main room, letting you configure your system for music play in a bedroom or kitchen, for example. On the MX-A5000, you can switch all 11-channel input jacks back and forth between balanced and unbalanced for each channel, further increasing system flexibility.

Auto Power Standby

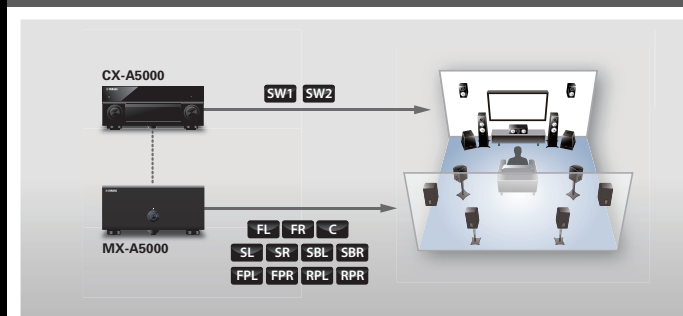
Using less power saves money and is friendly to the earth. The MX-A5000 has an Auto Power Standby function that will turn the power off after eight hours. It can be turned on and off via a rear panel switch, and will be overridden by the Trigger function.

Handy Trigger Control

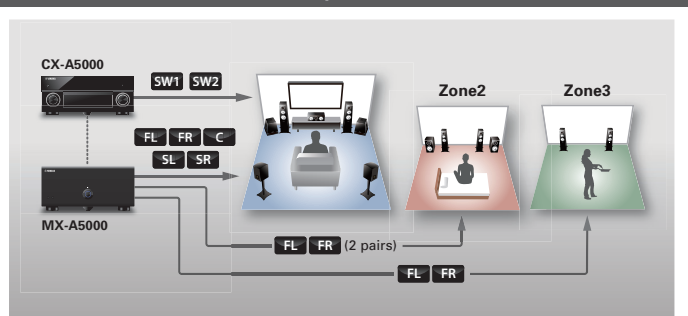
The CX-A5000 provides two Trigger Out jacks that enable control of connected component functions such as power on/off and input selection. The MX-A5000 or another amplifier or subwoofer with a Trigger In jack can be connected to allow use of the convenient Trigger function.

Connection Example

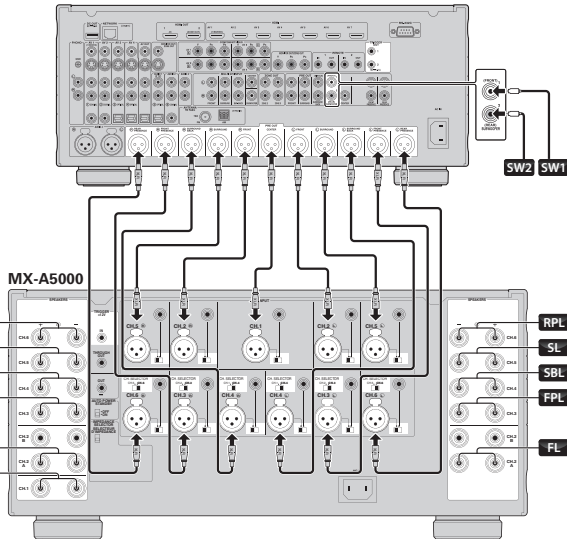
Home theatre system with maximum channels (11.2-ch)



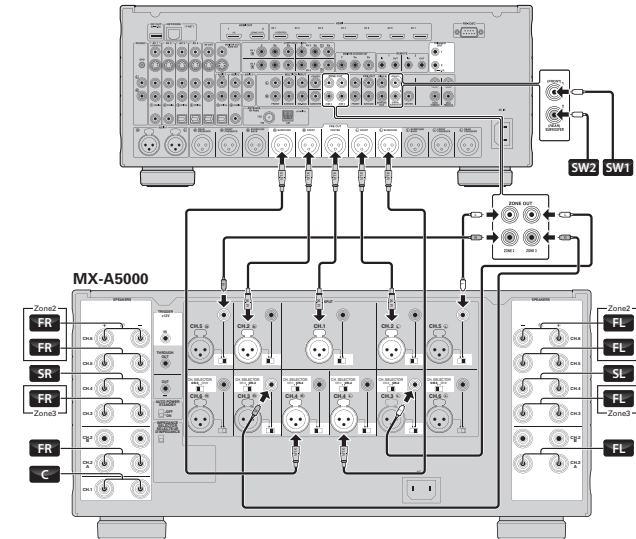
5-ch main zone plus two 2-ch zones



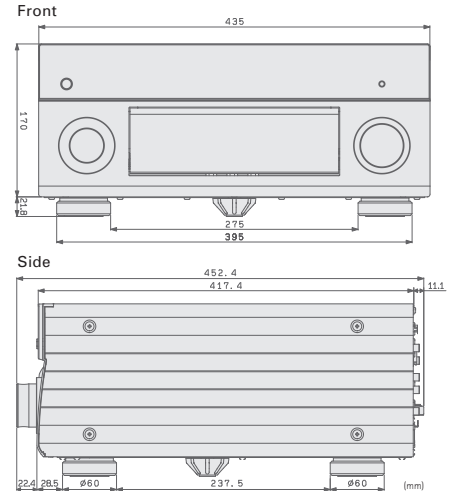
CX-A5000



CX-A5000



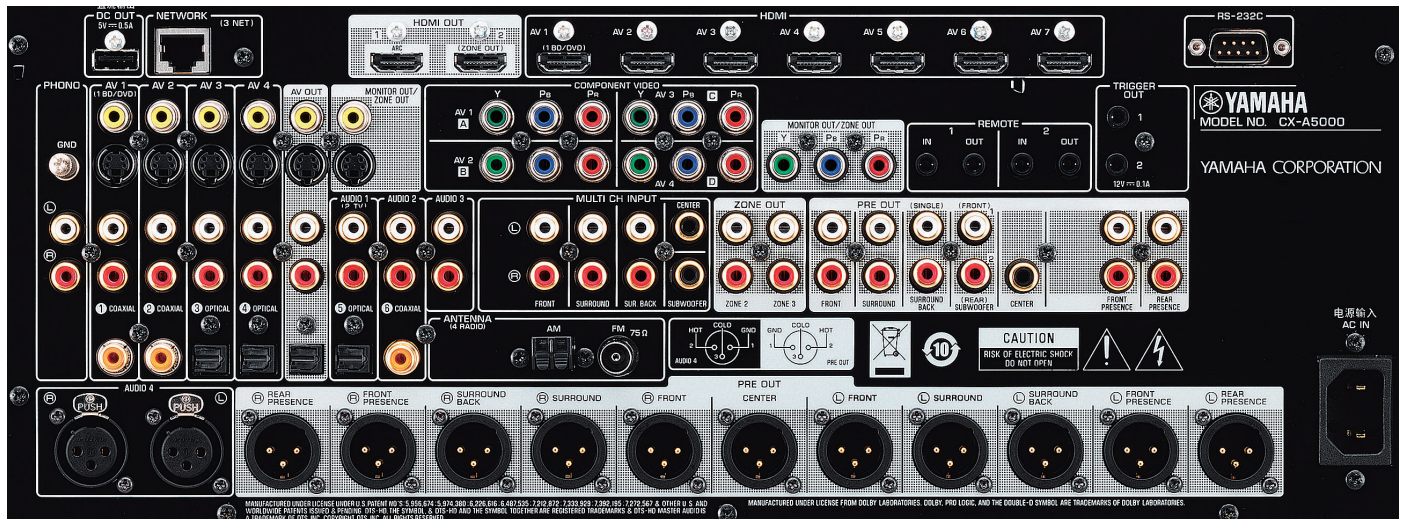
11.2-channel AV Pre-Amplifier **CX-A5000**



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	>4.25 V (except for SW)
XLR Balance	>6.8 V (SW) >8.5 V
Input Sensitivity / Impedance	
RCA Unbalance (Audio 2 etc)	200 mV / 47 k ohms
XLR Balance (Audio 4 Attenuator OFF)	200 mV / 47 k ohms
XLR Balance (Audio 4 Attenuator ON)	400 mV / 47 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 (Bal/Unbal) [Pure Direct, Input 1k ohms Shorted, Analogue Input]	112 dB
Frequency Response (Pure Direct, Audio 2 etc, Front L / R)	10 Hz-100 kHz +0 / -3 dB
General	
Standby Power Consumption	
HDMI Control off, Standby Through off	0.3 W (typical)
HDMI Control on, Standby Through on	5.0 W (typical)
Network Standby on	2.2 W (typical)
Dimensions (W x H x D)	435 x 192 x 448 mm 17-1/8" x 7-1/2" x 17-5/8"
Weight	13.6 kg; 30 lbs.



Extensive Connections

Inputs	
HDMI*1 (Front HDMI : MHL input compatible)	8
Network	1
USB*1	1
Radio Antenna (FM/AM)*2	1 / 1
Analogue Audio	
RCA Unbalance*1 (with Phono)	9
XLR Balance	1
Optical Digital*1 (Assignable except Video AUX)	4
Coaxial Digital (Assignable)	3
Component Video (Assignable)	4
Composite*1 / S-Video	5 / 4
Multi-Channel Input	8 ch

Outputs	
HDMI	2 (Zone Assignable)
Optical Digital	1
Analogue Audio	1
Pre Out	
RCA Unbalance	11.2ch
XLR Balance	11ch
Monitor Out	
Composite Video	1
S-Video*3	1
Component Video*3	1
AV Out (Composite / S-Video)	1 / 1
Subwoofer	2 (stereo, front/rear, mono x 2)
DC Out*4	1
Headphone Jack*1	1

Others	
Zone 2 Out	1
Zone 3 Out	1
Remote In/Out	2 / 2
+12V / Total 100 mA Trigger Out*5	2
RS-232C	1
Terminal for Detachable Power Cable	1

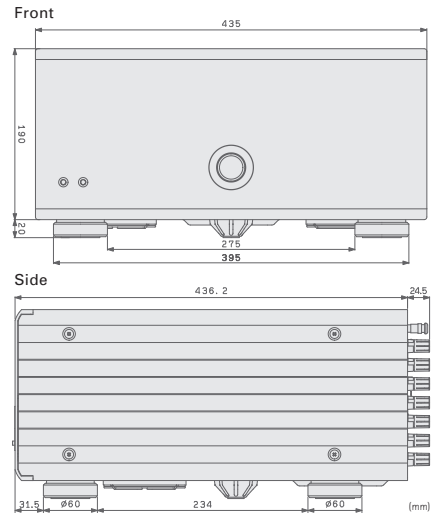
*1 Including front panel terminals.
 *2 The shape of the FM antenna terminal varies according to area.
 *3 Assignable to monitor out or Zone 2/3/4 out.
 *4 For optional accessories.
 *5 Yamaha subwoofer system control support.

European Model

11-channel Power Amplifier
MX-A5000



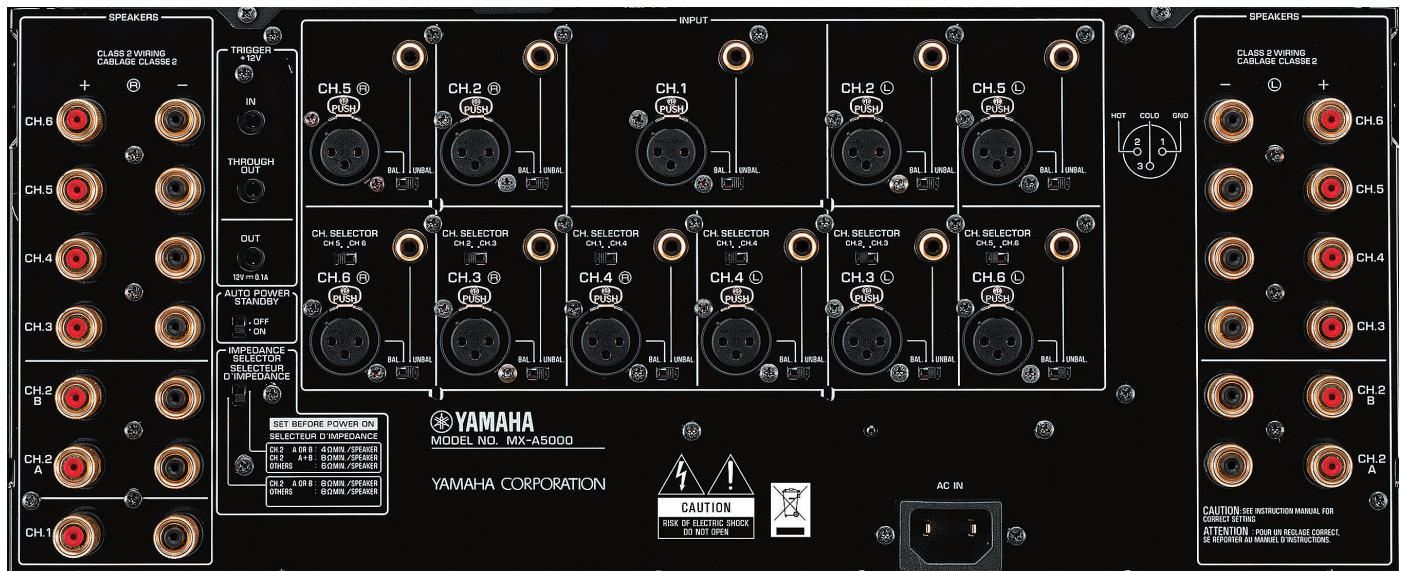
The MX-A5000 offered with black, titanium and gold finish available in some areas.



Main Specifications

Audio Section	
Rated Output Power (6 ohms, 20 Hz-20 kHz, 0.06% THD, 2ch driven) All channel	170 W
Rated Output Power (8 ohms, 20 Hz-20 kHz, 0.06% THD, 2ch driven) All channel	150 W
Rated Output Power (8 ohms, 1 kHz, 0.9% THD, 2 ch driven) All channel	170 W
Rated Output Power (6 ohms, 1 kHz, 0.9% THD, 1 ch driven) All channel	230 W
Rated Output Power (4 ohms, 1 kHz, 0.9% THD, 1 ch driven [European Model]) Ch2(L/R)	290 W
Maximum Effective Output Power (6 ohms, 1 kHz, 10% THD, 1 ch driven, JEITA) All channel	280 W
Dynamic Power/Ch (Front L/R, 8/6/4/2 ohms)	190 / 250 / 350 / 500 W

Total Harmonic Distortion (70 W, 8 ohms)	0.015%
Signal-to-Noise Ratio (IHF-A Network) (Input 1k ohms Shorted, 150 W / 8 ohms)	116 dB
Frequency Response	10 Hz-100 kHz +0 / -3 dB
Input Sensitivity / Impedance (1k ohms, 100 W / 8 ohms)	
Unbalance (Audio 2, etc.)	2.0 V / 47 k-ohms
Balance	1.0 V / 47 k-ohms
Maximum Input Signal (1kHz, 0.5% THD, 8 ohms)	
Unbalance (Audio 2, etc.)	1.3 V
Balance	2.6 V
General	
Standby Power Consumption	0.1 W (typical)
Dimensions (W x H x D)	435 x 210 x 463.5 mm 17-1/8" x 8-1/4" x 18-1/8"
Weight	25.4 kg; 56 lbs.



Extensive Connections

Inputs	Outputs	Others
Analogue RCA Unbalance 11	Speaker*1 11 ch (13 terminals)	Trigger Out**2 (+12V / Max 100 mA) 1
Analogue XLR Balance 11		Trigger In (+12V In) 1
		Trigger Through Out**2 1

*1 Banana-plug compatible speaker terminals are available in some areas.
 *2 Yamaha subwoofer system control support.

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