



POWER AMPLIFIER

MA/PA SERIES

MA2120 / PA2120 / MA2030a / PA2030a



SHARING PASSION & PERFORMANCE

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Smart, Simple Sound Solutions



With quick, easy setup and intuitive operation, Yamaha's compact MA and PA series power amplifiers make it easier than ever to bring your commercial space to life. The MA2030a and PA2030a are ideal audio solutions for retail stores, eateries, classrooms, or public facilities like hospitals. The MA2120 and PA2120 meet the demands of a wide range of applications requiring higher power as well as more flexible DSP functionality and zone control. All models combine approachable, unobtrusive design with efficient, flexible performance. The MA2030a and MA2120 offer mixing capability with source EQ (Bass/Treble) control, as well as some of the same state-of-the-art DSP technologies that are acclaimed features of professional Yamaha audio gear. Whether providing background music for a café or restaurant, or powering a conference room or other application requiring microphone input, the MA/PA series amplifiers are simple yet powerful tools that can help establish an ideal commercial sound environment.

Features

- Simple, user-friendly interface
- Stereo and microphone inputs (MA series)
- DSP functions optimized for background music (MA series)
- Switchable for low (3/4/8 Ω) and high (70/100 V) impedance speaker systems
- Stereo source EQ with enhancer function (MA series)
- EQ for optimum performance with Yamaha VXC/VXS series speakers built in
- Easy service zone expansion with PA series amplifiers (PA2030a excluded)
- Optional DCP control panels allow convenient remote volume control, microphone ON/OFF switching, and chime activation (PA2030a excluded)
- Industry leading Yamaha quality control and reliability
- Compact, space-saving design*

* All models are naturally cooled designs that require sufficient surrounding space for airflow.

Casual. Smart. Powerful.

Designed for Effortless Everyday Use

The MA and PA series power amplifiers offer powerful features in compact, durable metal chassis. They are designed for easy, intuitive operation that makes specialized training or audio experience unnecessary. For example, the output volume knob has been made the focus of the front panel design, enhancing day-to-day operability while minimizing the possibility of error. No special software, programming, or equipment is required for installation or setup. Anyone can quickly and easily set up a system that will deliver the best possible sound for a wide range of applications.



Yamaha DSP Features for Enhanced Music and Mic Operation

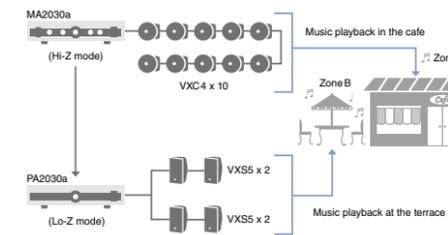
Advanced DSP features for background music and paging are efficiently packed into the remarkably compact MA and PA amplifier enclosures. There's a Feedback Suppressor that can eliminate annoying feedback when using a microphone, a Priority Ducker that smoothly adjusts levels when input is detected at an announcement microphone, a Leveler that maintains constant overall level regardless of changes in input levels, and more. The MA2120 additionally features reverb, echo, and compressor processing that can be used to enhance the sound and quality of microphone input in a variety of applications.



The Flexibility You Need

Build A System That Meets Your Needs

MA and PA series amplifiers adapt flexibly to a diverse range of installation needs. They can be switched for compatibility with Lo-Z or Hi-Z speaker systems, easily serving a variety of applications of differing scale. The MA2120 has two output channels that can serve different zones with independent source selection and volume control. The MA2030a and PA2030a combination can similarly serve two zones with independent volume control. Add one or more optional DCP controllers for convenient remote volume control, microphone ON/OFF switching, and chime activation.



* One DCP1V4S unit can be connected to an MA2030a. A total of two DCP units (DCP1V4S, DCP4S, DCP4V4S) can be connected to the MA2120 and PA2120.

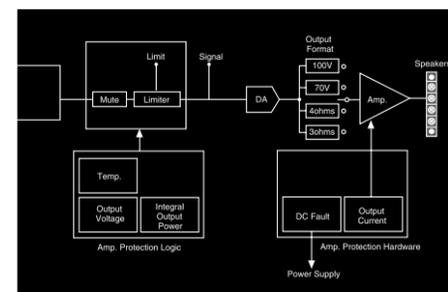
Flexible Connectivity

The MA2030a and MA2120 mixing power amplifiers offer flexible connectivity for a wide range of applications. The MA2030a comes equipped with two microphone inputs (XLR combo jack and Euroblock) and three stereo inputs (RCA pin). The XLR combo jack on the front panel makes setting up for speaking engagements fast and easy. The MA2120 includes six microphone/line inputs (Euroblock) and two stereo inputs (RCA pin, stereo mini phone). All six microphone inputs feature switchable 24V phantom power. Inputs 5 and 6 can also be used as MONO SUM inputs to provide extra input capacity.



Safe and Efficient in Any Environment

The heart of the MA and PA series is a highly efficient Class-D amplifier design that delivers ample output while consuming very little power. It also includes intelligent protection circuitry inherited from Yamaha's flagship touring amplifier series, effectively protecting both the amplifier and connected speakers. Efficient naturally cooled designs that do not require cooling fans contribute to high reliability as well as quiet operation.



The MA2120 and PA2120 are both certified by ENERGY STAR,* the internationally recognized standard of energy efficiency accorded to environmentally friendly equipment. Both models feature an auto standby function that minimizes power consumption by automatically switching to standby mode when no audio input is detected for more than 25 minutes. Normal operation resumes as soon as audio input is detected. The energy-efficient MA/PA Series amplifiers are also certified as Yamaha Eco Products.**



* ENERGY STAR is a US Environmental Protection Agency (EPA) voluntary program that helps businesses and individuals save money and protect the climate through superior energy efficiency. For more information, visit the ENERGY STAR website at: <https://www.energystar.gov/>

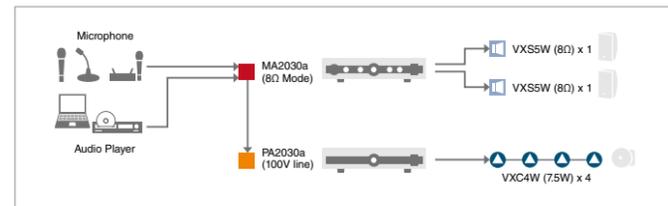
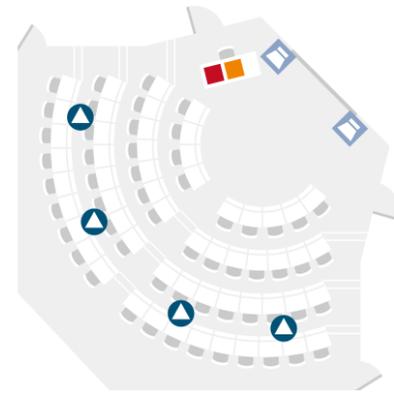
** Yamaha Eco Products are part of Yamaha's voluntary initiative dedicated to environmentally friendly product development. For more details, visit our website at: https://www.yamaha.com/csr/guideline_eco_products/

Applications

Classroom



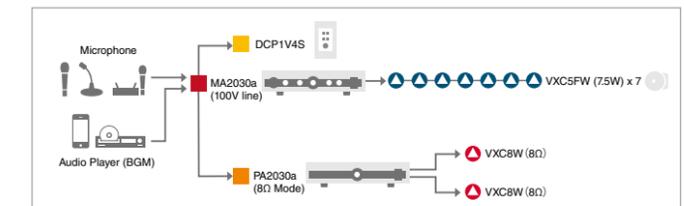
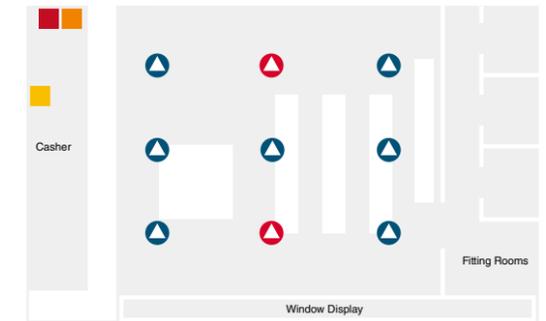
- An ideal system for use in classrooms and lecture halls.
- The PA2030a provides easy system expansion.
- Convenient output level control via front-panel volume knob.



Apparel store 1



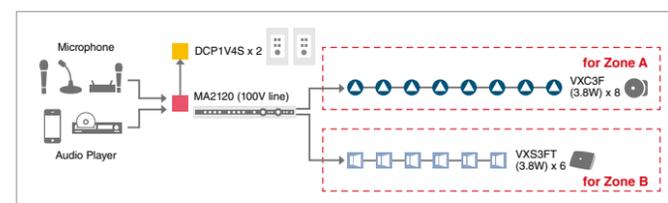
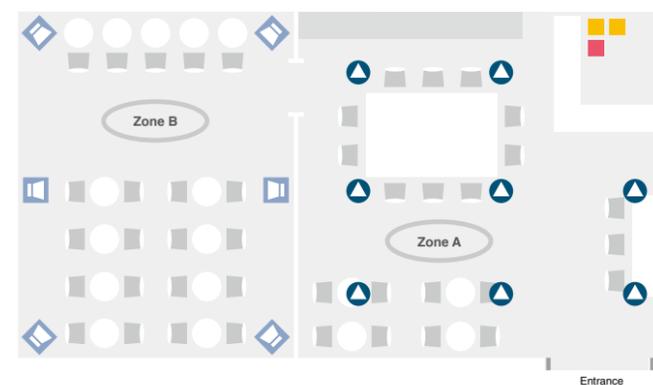
- Apparel store audio delivery is easily handled by this versatile system.
- The PA2030a features a built-in LPF that allows Yamaha VX-C8W speakers to be used to reinforce the system's low-frequency output.
- Flexible volume control from a DCP1V4S control panel.



Café, Bar, Restaurant



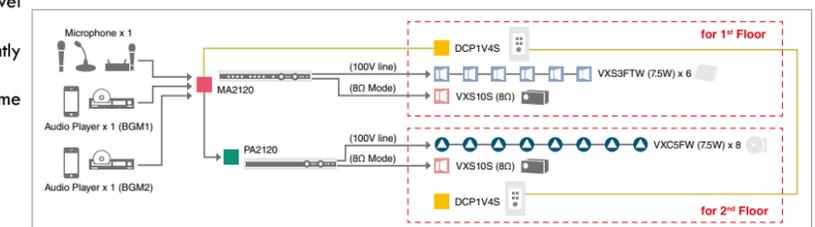
- Efficient delivery of BGM and announcements in a bar or restaurant.
- A single MA2120 serves two zones with independent volume control, and even independent sources if required.
- DCP1V4S control panels provide convenient volume control for each zone.



Apparel store 2



- The MA2120 and PA2120 are used to serve a two-level apparel store.
- Each MA2120 and PA2120 channel can be independently switched to drive a Lo-Z or Hi-Z speaker system.
- DCP1V4S control panels provide independent volume control for two zones.



POWER AMPLIFIER MA2120



Front



Rear

POWER AMPLIFIER PA2120



Front



Rear

POWER AMPLIFIER MA2030a



Front



Rear

POWER AMPLIFIER PA2030a



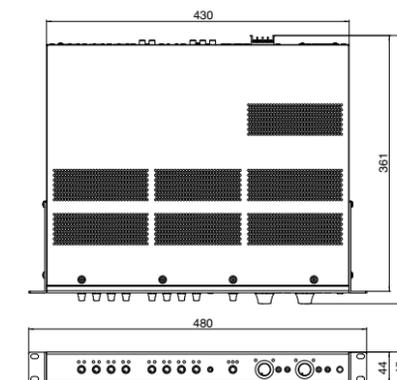
Front



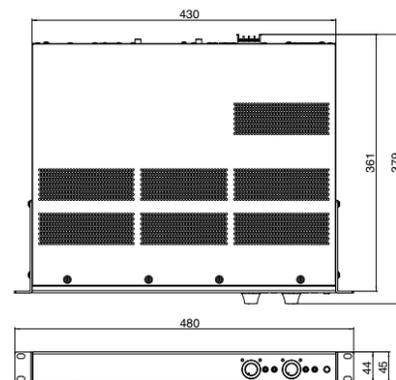
Rear

DIMENSIONS

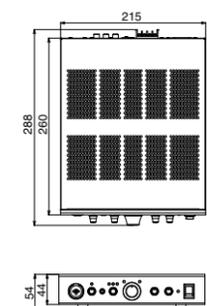
MA2120



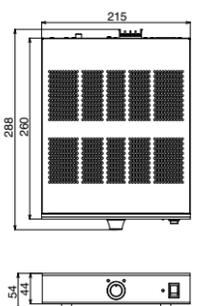
PA2120



MA2030a



PA2030a



(unit: mm)

GENERAL SPECIFICATIONS

Model	MA2120	PA2120	MA2030a	PA2030a	
Amplifier type (output circuitry)	Class D				
Output Power (1kHz, THD+N=1%)	Lo-Z	120W x 2 @4Ω, 100W x 2 @3Ω/8Ω		30W x 2 @3Ω/4Ω/8Ω	
	Hi-Z	200W x 1 or 120W x 2 @70V/100V		60W x 1 @70V/100V	
THD+N	Lo-Z	≤0.2% Line in to Speaker out, Half power @1kHz, 3Ω/4Ω/8Ω		≤0.1% Stereo in to Speaker out, 1kHz@15W, 3Ω/4Ω	
	Hi-Z	≤0.2% Line in to Speaker out, Half Power @1kHz, 70V/100V, 120W/200W		≤0.2% Stereo in (Line in) to Speaker out, 1kHz @30W, 70V/100V	
Mic input	-		MIC IN 1: XLR combo jack (balanced)	-	
	-		MIC IN 2: 3.5mm Euroblock 3-pin (balanced)	-	
Mic/Line input	Input 1-6: 3.5mm Euroblock 6-pin x 3 (balanced)		-		
Connectors	Line input	Input 7-8: Stereo RCA pin (unbalanced) x 2	Input A-B: Mono RCA pin x 2 (unbalanced) or 3.5mm Euro block 6-pin (balanced) x 1	ST IN 1: Stereo mini phone (3.5mm, unbalanced)	LINE IN: Stereo RCA pin (unbalanced) or 3.5mm Euroblock 3-pin (balanced) x 2
		Input 8: 3.5mm Stereo mini phone (unbalanced) x 1	-	ST IN 2 / ST IN 3: Stereo RCA pin (unbalanced)	-
		Input 5-6: RCA pin (MONO SUM, unbalanced) x 4	-	-	-
Speaker output	Barrier strip x 2				
Output	LINE OUT/THRU OUT	LINE OUT: Mono RCA pin x2 (unbalanced)	THRU OUT: Mono RCA pin x2 (unbalanced)	LINE OUT: Stereo RCA pin (unbalanced)	-
		DCP	RJ-45, DCP1V4S / DCP4S / DCP4V4S	RJ-45, DCP1V4S	-
Remote control	Remote connector	3.5mm Euro block 3-pin x 1		-	
Power consumption (1.8 max power, AC100V, pink noise at all channels)	60W @4Ω		30W @3Ω		
AC Power Requirement	100V, 120V, 230V - 240V, 50Hz / 60Hz				
Cooling	Conventional cooling, bottom to up airflow				
Operating temperature	0°C to +40°C				
Installation condition	Rack mount ear	Included		Optional RKH1 rack-mount accessory	
	Condition	Leave more than 1U of spaces above and below the unit (*please refer to the owners manual for details)			
Dimension (W x H x D)	480 x 45 x 379mm (18.9" x 1.8" x 14.9") (incl. knobs, rubber feet and rack-mounting ears)		215 x 54 x 288mm (8.5" x 2.1" x 11.4") (incl. knobs and rubber feet)		
Net weight	4.9kg (10.8lbs)	4.8kg (10.6lbs)	1.8kg (4.0lbs)		

OPTIONS

Rack-mount Accessory RKH1 (for MA2030a and PA2030a)



Digital Control Panel DCP series



SPEAKERS FOR COMMERCIAL INSTALLATIONS



VXC Series



VXC Series F



VXS Series



VXS Series F



VXS Series S



VS Series