Overview

Intelligent Processing. Serious Power.

Features

- High power and efficient design: 500W (Stereo, into 4Ω)
- Driven by a newly developed Class-D amplifier engine.
- Stable 2-ohm drive capability.
- Supremely efficient amplifiers with low noise, reliable protection features.
- Amp Mode allows the user to configure the system without difficulty by selecting the input routing and output routing.
- Sophisticated signal processing allowing users to achieve consistent clarity and high-quality sound for either front-of-house or monitor configurations.
- Eight programmable presets for instant recall and reduced setup time that can be saved to a USB thumb drive and shared with other PX amplifiers.
- Presets specifically tuned for each model in Yamaha's extensive lineup of passive speakers.
- A variety of input and output terminals.
- Panel locking function to keep your settings safe.

Specifications

General Specifications

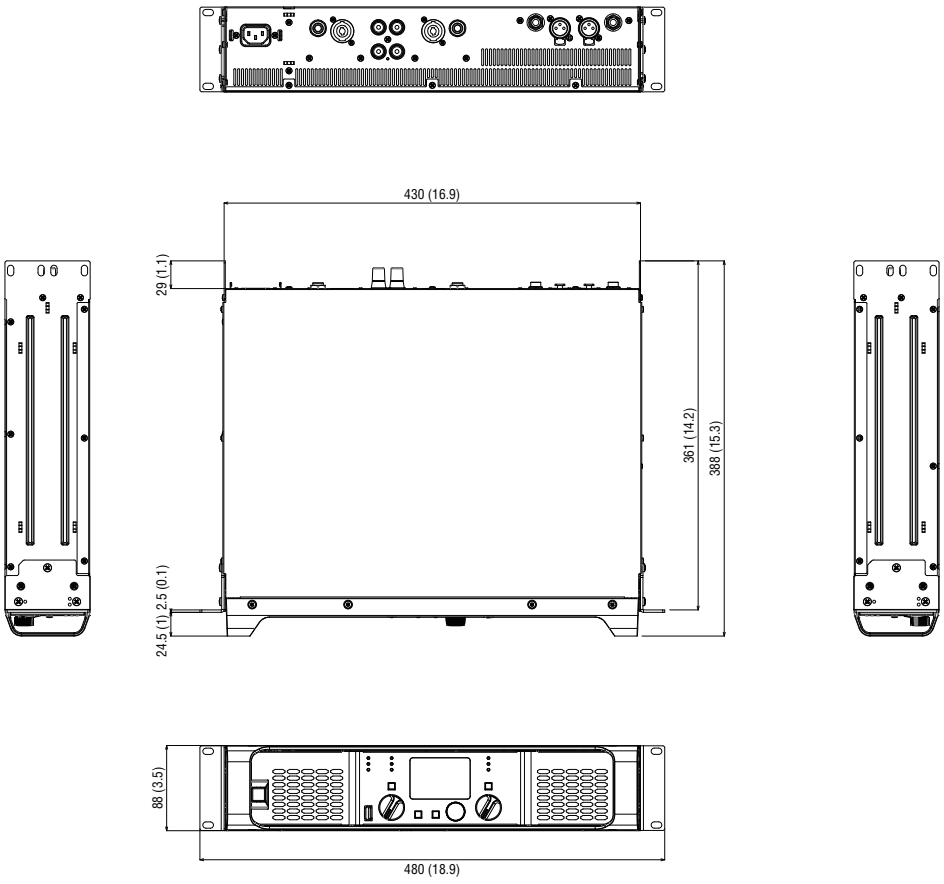
		100V model	120V model	220V-240V model
Amplifier Class		Class D, Balanced output circuit (BTL)		
Output Power (1kHz Non-clip 20msec Burst Both Channels Driven)	8Ω	300W x 2	300W x 2	300W x 2
	4Ω	500W x 2	500W x 2	500W x 2
	2Ω	300W x 2	300W x 2	300W x 2
	8Ω/Power Boost Mode	600W x 1	600W x 1	600W x 1
	4Ω/Power Boost Mode	1000W x 1	1000W x 1	1000W x 1
Sampling Frequency Rate	Internal	48kHz		
A/D D/A Converters		AD/DA: 24-bit linear, 128 times over sampling		
Total Harmonic Distortion		0.1% (1kHz, 10W), 0.3% (1kHz, Half power)		
Frequency Response		±1.0dB (1W, 8Ω, 20Hz to 20kHz)		
S/N Ratio		100dB (A-weighted, 8Ω, Gain setting = +14dBu)		
Crosstalk		Less than -60dB (Half Power, 8Ω, 1kHz, Vol max input 150Ω shunt)		
Voltage Gain/Sensitivity	8Ω Volume Max	32.0dB/+4.1dBu (Gain setting: 32dB), 26.0dB/+10.1dBu (Gain setting: 26dB), 32.1dB/+4dBu (Gain setting: +4dBu), 22.1dB/+14dBu (Gain setting: +14dBu)		
	8Ω Volume Max/ Power Boost Mode	35.0dB/+4.1dBu (Gain setting: 32dB), 29.0dB/+10.1dBu (Gain setting: 26dB), 35.1dB/+4dBu (Gain setting: +4dBu), 25.1dB/+14dBu (Gain setting: +14dBu)		
Maximum Input Voltage		+24dBu		
Input Impedance		20kΩ (Balance), 10kΩ (Unbalance)		
I/O Connectors	Line Input	XLR-3-31 x 2, 1/4" PHONE (TRS) x 2		
	Speaker Output	Neutrik speakON NL4 x 2, Binding post x 2 pairs, 1/4" PHONE (TS) x 2		
	Others	USB 2.0 Standard-A Connector (Female) for Save/Load, Speaker preset update, Firmware update with USB memory; AC inlet x1 with AC cord clamp		
Indicators		POWER x 1 (Green), ALERT x 1 (Red), USB x 1 (Green), PROTECT x 2 (Red), CLIP/LIMIT x 2 (Red), SIGNAL x 2 (Green); Auto LED off feature		
Processors		Input summing; D-CONTOUR (FOH/MAIN, MONITOR, OFF); Delay (0 - 74msec); HPF/LPF (cutoff frequency 20Hz~20kHz with polarity control); Speaker Processor (6 band PEQ* + Limiter + Delay)		
Latency		1.5 msec (Analog Input to Speakers)		
Presets		8 user amplifier presets (Factory preset: Speaker presets for Yamaha passive speakers)		
Protection Circuit	Load Protection	POWER switch on/off: Output mute; Output voltage protection: Over voltage limiter, user configurable by wattage and speaker preset; DC-fault: Power Supply shutdown (NOT restored automatically)		
	Amplifier Protection	Thermal: Output limiter (Restored automatically) → Output mute (Restored automatically); Over current: Output mute (Restored automatically); Over voltage: Output limiter (Restored automatically); Integrated Power Limit: Output limiter (Restored automatically)		
	Power Supply Protection	Thermal: Output limiter (Restored automatically) → Power supply shutdown; Over voltage: Power supply shutdown; Over current: Power supply shutdown		
Cooling		16 step variable speed fan x 2, front to rear airflow		
Power Requirements		Depending on area of purchase; 100V 50Hz/60Hz, 120V 60Hz, 220V-240V 50Hz/60Hz *Verified as operating at rated power voltage +/- 10% voltage.		
Power Consumption		160W (1/8 MAX power, 4Ω, Pink noise at all channels), 55W (4Ω, Idling)		
Dimensions (W x H x D)		480mm x 88mm x 388mm (18-7/8" x 3-7/16" x 15-2/8") (2U)		
Net Weight		6.9 kg (15.21 lbs)		
Accessories		USB cover, Owner's Manual, Specification sheet, AC cable (2.0m) x 1		
Others		USB 2.0 Standard-A Connector (Female) for Save/Load, Speaker preset update, Firmware update with USB memory; AC inlet x 1 with AC cord clamp		

Speaker Processing

Fullrange	A10, A12, A12M, A15, CBR10, CBR12, CBR15, Club112V, Club115V, Club215V, ClubM10V, IF211264, IF211295, IF211299, IF2112AS, IF2112M64, IF2112M95, IF2112M99, IF211564, IF211595, IF211599, IF2115AS, IF2115M64, IF2115M95, IF2115M99, IF2108, IF2205, IF2208, NSAW392, NSAW592, NSAW992, R12M, R15M, R112, R115, R215, VS4, VS6, VXC4, VXC6, VXC8, VXS5, VXS8
Subwoofer	A15W, ClubSW115V, ClubSW118V, ClubSW218V, IS1112, IS1118, IS1215, IS1218, R118W, VXS10S
Bi-AMP	IF211264, IF211295, IF211299, IF2112AS, IF2112M64, IF2112M95, IF2112M99, IF211564, IF211595, IF211599, IF2115AS, IF2115M64, IF2115M95, IF2115M99, IF311564, IF311595, IH200064, IH200095

Dimensions

Unit: mm (inch)



Architectural and Engineering Specifications

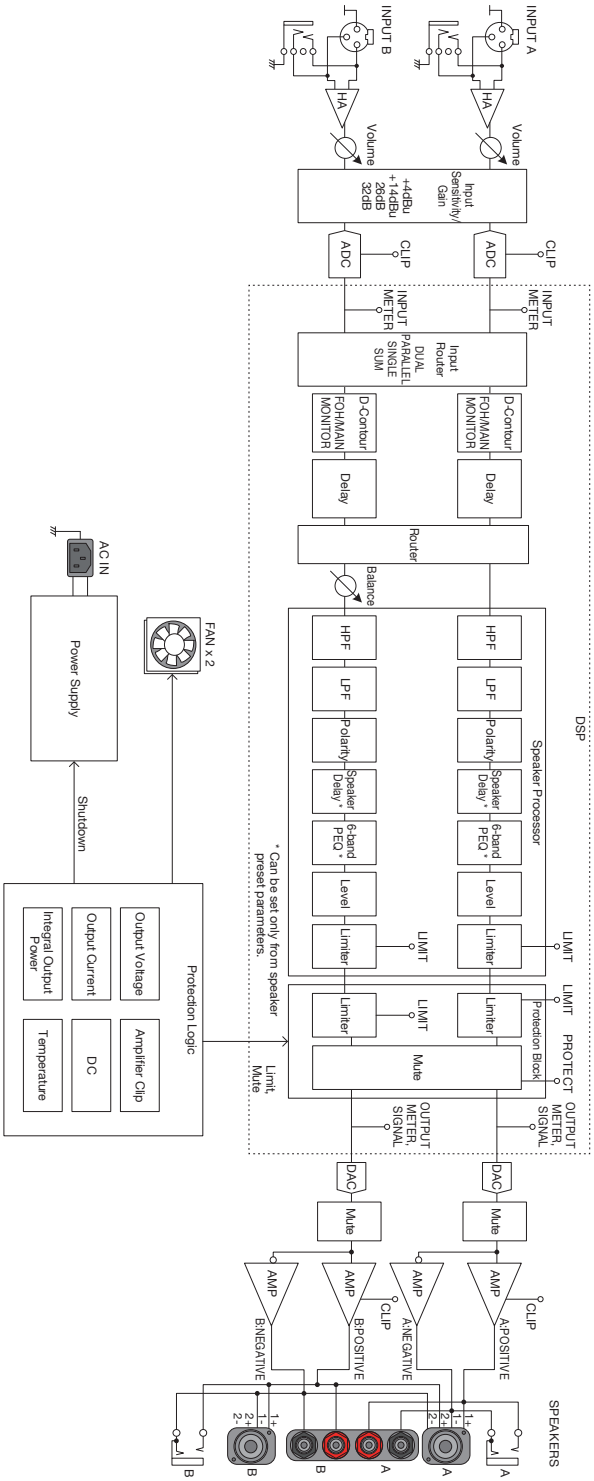
■ 120V

The two-channel power amplifier shall use digital class-D circuit and provide two channels of amplification. The amplifier shall meet the following performance criteria. Power output with both channels driven shall be a 300W per channel with a 2 ohm load, 500W per channel with a 4 ohm load, 300W with an 8 ohm load at 1kHz Non-clip 20msec Burst. The power amplifier shall be capable of operation from a 120V, 60Hz line. Total harmonic distortion (THD+N) shall be less than 0.1% at 1kHz, 10W, and 0.3% at 1kHz, Half power. Frequency response shall be from 20Hz to 20kHz (MAX and TYP: +1dB, MIN: -1dB) at 8 ohm, Po=1W. Input shall be electronically balanced, with a minimum impedance of 20 kohm balanced and 10 kohm unbalanced. The voltage gain shall be 32dB, 26dB, 37.3dB, or 27.3dB and the input sensitivity at 8 ohms shall be +9.3dBu at 32dB voltage gain, +15.3dBu at 26dB voltage gain, +4dBu at 37.3dB voltage gain and +14dBu at 27.3dB voltage gain. Maximum input voltage shall be +24dBu. The unweighted signal to noise ratio over the range of 20Hz - 20kHz shall exceed 101dB, referenced to +14dBu at 8 ohm (A weighted). The built in protection circuitry shall monitor below,
Load protection: POWER switch on/off: Output mute; Output voltage protection: Over voltage limiter, user configurable by wattage and speaker preset; DC-fault: Power Supply shutdown (NOT restored automatically)
Amplifier protection: Thermal: Output limiter (Restored automatically) → Output mute (Restored automatically); Over current: Output mute (Restored automatically); Over voltage: Output limiter (Restored automatically); Integrated Power Limit: Output limiter (Restored automatically)
Power supply protection: Thermal: Output limiter (Restored automatically) → Power supply shutdown; Over voltage: Power supply shutdown; Over current: Power supply shutdown
The amplifier shall employ two 16 step variable speed fan, front to rear airflow. The built in processors shall have input summing, delay, HPF/LPF, and Speaker Processor. The amplifier have 8 user amplifier preset function. The front panel shall have a recessed AC power switch, and a LED indicator. The LED indicators shall indicate POWER, ALERT, USB, PROTECTION, CLIP/LIMIT and SIGNAL condition. The front-panel shall have two 31-step volume knobs (one per ch). The front-panel shall have menu, back, and A/B keys. The front-panel shall have main knob. The front panel shall have a USB 2.0 standard-A connector (Female). Rear panel input connectors shall be a XLR, 1/4" PHONE (TRS) for each channel. The XLR input shall be wired with pin 2 hot. Rear panel output connectors shall be a speakON, binding post and 1/4" PHONE (TS) for each channel. It shall use only two standard rack-spaces and its dimensions shall be 480 mm W x 388 mm D x 88 mm H (18-7/8" x 15-2/8" x 3-7/16"). Weight shall be 6.9 kg (15.21 lbs). The amplifier shall be YAMAHA PX3.

■ 220-240V

The two-channel power amplifier shall use digital class-D circuit and provide two channels of amplification. The amplifier shall meet the following performance criteria. Power output with both channels driven shall be a 300W per channel with a 2 ohm load, 500W per channel with a 4 ohm load, 300W with an 8 ohm load at 1kHz Non-clip 20msec Burst. The power amplifier shall be capable of operation from a 220-240V, 50/60Hz line. Total harmonic distortion (THD+N) shall be less than 0.1% at 1kHz, 10W, and 0.3% at 1kHz, Half power. Frequency response shall be from 20Hz to 20kHz (MAX and TYP: +1dB, MIN: -1dB) at 8 ohm, Po=1W. Input shall be electronically balanced, with a minimum impedance of 20 kohm balanced and 10 kohm unbalanced. The voltage gain shall be 32dB, 26dB, 37.3dB, or 27.3dB and the input sensitivity at 8 ohms shall be +9.3dBu at 32dB voltage gain, +15.3dBu at 26dB voltage gain, +4dBu at 37.3dB voltage gain and +14dBu at 27.3dB voltage gain. Maximum input voltage shall be +24dBu. The unweighted signal to noise ratio over the range of 20Hz - 20kHz shall exceed 101dB, referenced to +14dBu at 8 ohm (A weighted). The built in protection circuitry shall monitor below,
Load protection: POWER switch on/off: Output mute; Output voltage protection: Over voltage limiter, user configurable by wattage and speaker preset; DC-fault: Power Supply shutdown (NOT restored automatically)
Amplifier protection: Thermal: Output limiter (Restored automatically) → Output mute (Restored automatically); Over current: Output mute (Restored automatically); Over voltage: Output limiter (Restored automatically); Integrated Power Limit: Output limiter (Restored automatically)
Power supply protection: Thermal: Output limiter (Restored automatically) → Power supply shutdown; Over voltage: Power supply shutdown; Over current: Power supply shutdown
The amplifier shall employ two 16 step variable speed fan, front to rear airflow. The built in processors shall have input summing, delay, HPF/LPF, and Speaker Processor. The amplifier have 8 user amplifier preset function. The front panel shall have a recessed AC power switch, and a LED indicator. The LED indicators shall indicate POWER, ALERT, USB, PROTECTION, CLIP/LIMIT and SIGNAL condition. The front-panel shall have two 31-step volume knobs (one per ch). The front-panel shall have menu, back, and A/B keys. The front-panel shall have main knob. The front panel shall have a USB 2.0 standard-A connector (Female). Rear panel input connectors shall be a XLR, 1/4" PHONE (TRS) for each channel. The XLR input shall be wired with pin 2 hot. Rear panel output connectors shall be a speakON, binding post and 1/4" PHONE (TS) for each channel. It shall use only two standard rack-spaces and its dimensions shall be 480 mm W x 388 mm D x 88 mm H (18-7/8" x 15-2/8" x 3-7/16"). Weight shall be 6.9 kg (15.21 lbs). The amplifier shall be YAMAHA PX3.

Block Diagrams



*All information subject to change without notice.
*All trademarks and registered trademarks are property of their respective owners.
Created in October, 2017

YAMAHA CORPORATION
P.O.BOX 1, Hamamatsu Japan
www.yamaha.com/proaudio/