

MxP2188

8 x 8 Matrix Paging Controller

MATRIMIX PAGING SYSTEM



FEATURES

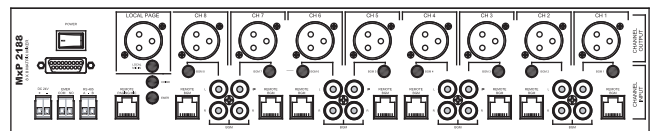
- 8 input and 8 output Matrix controller with inputs of either Mic or BGM or fed from remote source panel
- Individual channel setup for bass, treble and volume
- Built in chime with selectable 2 or 4 tone output
- Built in voice recorder of up to 60 seconds
- Audio output monitor for every zone
- Remote triggering port for message and siren
- Priority override dry contact port whenever ALL CALL is triggered
- Microphone input for paging at rack
- Remote paging desk connectivity to Amperes PD1160

MxP2188 caters for a more delicate requirements of a PA system where every zone shall have flexibility over choice and taste of what should be listened to. It shall be able to cater for small installations of up to 16 zones requiring full matrix setup, such as office, club house, bungalow and entertainment centre.

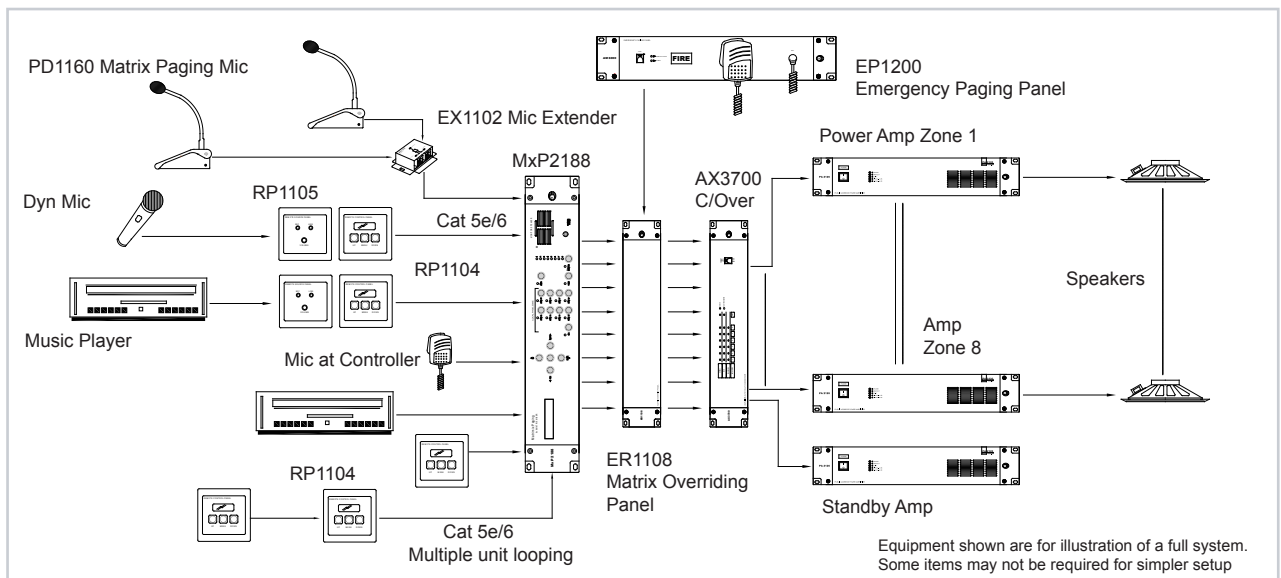
While conventional matrix system only perform signal routing, MxP2188 does more than that. Essential features for a commercial PA system such as emergency overriding, remote mic zone selection, audio monitoring, chime and recording are available as an integral part of the unit.

MIXERS / DISTRIBUTIONS

rear view



APPLICATION SCHEMATIC



TECHNICAL SPECIFICATIONS

Configuration	8 x 8 ; Cascade to 8 x 16
Power source	24V DC ; 2A via adaptor
Inputs	8 local BGM - unbal. line or 8 remote BGM via RP1105 1 remote paging mic PD1160 1 local mic input
Input connections	RJ45 (remote) / RCA jack XLR for local mic input
Input volume control	Manual adj. at each channel
Bass and treble control	+12 dB to -12 dB ; digital select
Phantom power	12V DC (local mic in only)
Priority input	Local page, E/M message
Chime	2 or 4 tone built in
Message recording	60 secs max in single bank

Output	8 x balanced line output
Zone selection	Remote paging mic (PD1160) ; Front panel with ALL CALL
E/M override contact	3A dry contact
Audio monitor	Source monitor with volume control via 3W speaker
Communication	RS485 ; 19.2 Kbps
Remote triggering	Siren (ALL CALL) Message (ALL CALL / individual)
Dimensions (WxHxD)	482 x 88 x 300 mm
Weight	6.0 kg

packing information	Qty per carton : 1 unit W x H x D : 555 x 165 x 295 mm Weight : 7.2 Kg
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PD1160 8 / 16 Zone Remote Paging Microphone



A dedicated remote paging desk with 8 / 16 channel zone selection, connected directly to MxP2188 controller. To achieve multipoint paging setup, use EX1102 mic extender in series connection.

Power source	24V DC via MxP2188
Power consumption	800 mA
Communication	RS485 ; 19.2 kbps
Controls	Zone selection, ALL CALL
Indications	Power, signal, data, zone, busy
Mic	Condenser, cardioid
Output	Balance line output
Dimensions (WxHxD)	150 x 186 x 62 mm (body only)
Weight	1.2 kg

RP1104 Remote Zone Control Panel



RP1104 is an improved version of remote zone controller with sensor touch buttons and with LCD display. It shall be installed at remote location at individual zone and connected to the MxP2188 controller via Cat5e / 6 cable. Each controller shall run individually to each input port of the respective zone.

Power source	24V DC via MxP2188
Power consumption	100 mA
Communication	RS485 ; 19.2 kbps
Controls	Volume, BGM source
Indications	Power, source, volume, busy
Cabling	Cat 5E / 6
Distance	Up to 1000m
Dimensions (WxH)	86 x 86 mm
Weight	100 g

RP1105 Remote Source Input Panel



RP1105 is also an upgraded version of remote source input panel which is to be used together with RP1104, installed side by side.

It allows mic or line level input source with adjustable volume and shall be bypassed if emergency paging is activated at the controller.

Power source	24V DC via MxP2188
Power consumption	100 mA
Communication	RS485 ; 19.2 kbps
Controls	Volume
Inputs	Mic or Line (unbal.), mini jack
Cabling	Cat 5E / 6
Distance	Up to 500m
Dimensions (WxH)	86 x 86 mm
Weight	100 g

EX1102 Paging Mic Extender



When multipoint paging is required, EX1102 shall be used, with each PD1160 connected in series in a single circuit. The mic nearest to the Matrix controller shall have priority over its precedence.

MS1103 Paging Mic Splitter



EX1102 shall split incoming paging microphone circuit into two, with one output connected to the Master controller while the other to the Slave controller.

It is applicable whenever two controllers are cascaded to form 16 channel matrix setup.

Matrix Overriding **ER1108**



ER1108 is an 8 in / 8 out relay panel which would override all individual audio signal from Matrix controller and re-route the outputs to a single emergency source such as EP1200 emergency paging panel.

It is an optional item, and shall be installed after the Matrix controller with outputs to individual amplifier of each zone. EP1200 shall be used with emergency trigger and audio output connected to this unit

PA2120 : 120W 100V
PA2240 : 240W 100V
PA2360 : 360W 100V
PA2480 : 480W 100V

Amperes PA series of power amplifiers had been the workhorse of many installations and are available in power ratings of 120W to 480W 70 / 100V line. Various features had been added throughout the years since its inception and these had enhanced their performance and reliability.

Amperes AS4000 / AX700 can be used alongside with PA series of amplifiers to form an automatic amplifier fault changeover setup or to be much simpler, Amperes AX3700 is recommended to serve the same purpose.

FEATURES

- Available in various ratings ; from 120W to 480W 70 or 100V line
- 4 Ohm speaker connection available with 25V output
- Thermal protection by muting input signal (typically 85 deg at heat sink)
- Momentary short circuit protection
- Temperature dependent dual speed cooling fan
- Manual reset circuit breaker for AC mains and DC input
- Balanced input signal with gain control and selectable grounding option
- AC and DC operation for uninterrupted operation during power failure



PA2240 / 2360 / 2480

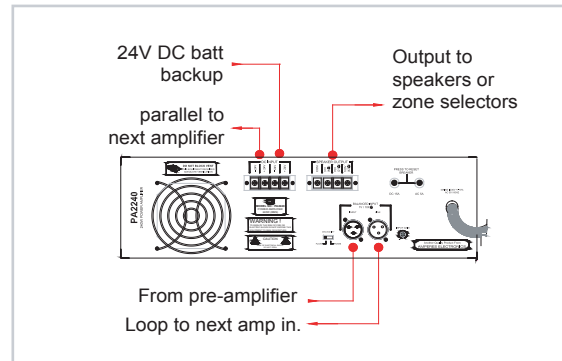


PA2120

TECHNICAL SPECIFICATIONS

	PA2120 / PA2240 / PA2360 / PA2480
Power requirement	230 / 240 V ac (24V DC backup)
24V DC requirement	8A / 19A / 23A / 29A
Pwr consumption (load) ac	1.4A / 3A / 3.4A / 4.5A
Pwr consumption (s/by)	0.4 A
Input sensitivity	1 V / 10 K Ohm
Input gain control	-15 dB ~ 0 dB
Input connection	XLR balanced line input
Rated output (rms)	120W / 240W / 360W / 480W 100V line
Output voltage (4 Ohm)	22 / 31 / 38 / 44 V rms
Output imp (70 V line)	42 / 21 / 13 / 10.2
(100 V line)	83 / 42 / 27.8 / 20.8
Frequency response	180 ~ 17 KHz (with low cut)
S / N ratio	> 60 dB (@ 1KHz)
Protections	Thermal, momentary output short circuit, AC and DC circuit breaker, Input signal clip
Indicators	AC mains, Clip, Protect, Input level
Cooling system	Dual speed fan with heat sensing
Dimensions (WxHxD)	PA2120 : 88 x 482 x 300 mm PA2240 / 2360 / 2480 : 133 x 482 x 300 mm
Weight (kg)	11.0 / 20.5 / 21.2 / 25.1 kg

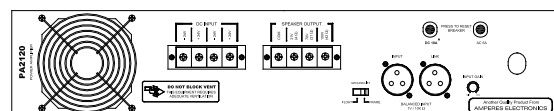
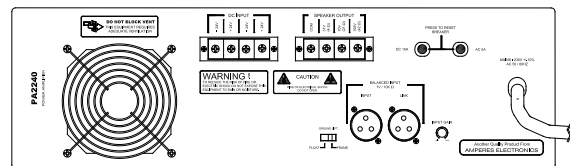
APPLICATION SCHEMATIC



packing information

Qty per carton : 1 unit
W x H x D : PA2120 : 550 x 215 x 420 mm
PA2240 / 2360 / 2480 : 550 x 215 x 420 mm
Weight : PA2120 - 12.2 kg
PA2240 - 21.8 kg
PA2360 - 22.5 kg
PA2480 - 26.4 kg

rear view PA2240 / 2360 / 2480



rear view PA2120



PX series of power amplifiers are equipped with AFS (Auto Fault Sensor) which generate pilot tones internally and automatically diagnose and detect any faulty condition that may occur at the output end. Pilot tones are generated at intervals to avoid straining the power packs, and this shall prolong the life span of the units.

PX series of amplifiers shall be linked to Amperes AX700 changeover unit for standby amplifier takeover in the event a duty unit fails, enabling automatic amplifier fault changeover setup.



PX2200 / 2300 / 2400

- PX2100** : 120W 100V
- PX2200** : 240W 100V
- PX2300** : 360W 100V
- PX2400** : 480W 100V

FEATURES

- Incorporating Auto Fault Sensing (AFS) circuitry for self monitoring of its output
- Pilot tone switchable for normal operation without AFS
- Interval PT generation to avoid continuous loading of the amplifier
- Thermal protection by muting input signal (typically 85 deg at heat sink)
- Temperature dependent dual speed cooling fan
- Manual reset circuit breaker for AC mains and DC input
- Balanced input signal with gain control and selectable grounding option
- AC and DC operation for uninterrupted operation during power failure

TECHNICAL SPECIFICATIONS

PX2100 / PX2200 / PX2300 / PX2400

Power requirement	230 / 240 V ac (24V DC backup)
24V DC requirement	8A / 19A / 23A / 29A
Pwr consumption (load) ac	1.4A / 3A / 3.4A / 4.5A
Pwr consumption (s/by)	0.4 A
Input sensitivity	1 V / 10 K Ohm
Input gain control	-15 dB ~ 0 dB
Input connection	XLR balanced line input
Rated output (rms)	120W / 240W / 360W / 480W 100V line
Output voltage (4 Ohm)	22 / 31 / 38 / 44 V rms
Output imp (70 V line)	42 / 21 / 13 / 10.2
(100 V line)	83 / 42 / 27.8 / 20.8
Frequency response	180 ~ 17 KHz (with low cut)
S / N ratio	> 60 dB (@ 1 KHz)
Protections	Thermal, momentary output short circuit, AC and DC circuit breaker, Input signal clip
Indicators	AC mains, Clip, Protect, Input level, Pilot tone, Fault
Cooling system	Dual speed fan with heat sensing

FAULT DETECTION

Detection interval	10 seconds
Detection response	15 - 25 seconds
Detection method	Internal Pilot Tone generated at 20 kHz
Failure recovery time	20 seconds max
Failure output	Dry contact (NO at 3A rating)

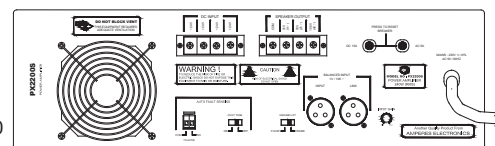
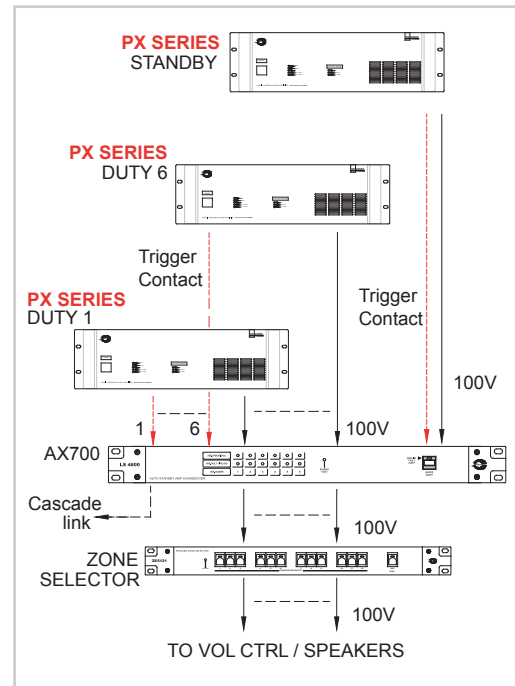
Dimensions (WxHxD)	PX2100 : 88 x 482 x 300 mm PX2200 / 2300 / 2400 : 133 x 482 x 300 mm
Weight (kg)	11.1 / 20.6 / 21.3 / 25.4 kg

packing information

Qty per carton	: 1 unit
W x H x D	: PX2100 : 550 x 175 x 420 mm PX2200 / 2300 / 2400 : 550 x 215 x 420 mm
Weight	: PX2100 - 12.3 kg PX2200 - 21.9 kg PX2300 - 22.6 kg PX2400 - 26.7 kg

rear view : PX2200 / 2300 / 2400

APPLICATION SCHEMATIC



rear view : PX2100

