



®

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Product Catalogue 2008



Commercial Installations Public address systems



www.ampereselectronics.com

ISO9001 : 2000
Certified
cert no : 16895





Established in mid 1999 and incorporated into private limited company in 2000. Located in Puchong, Selangor, Malaysia. A member of Matrade and FMM (Federation of Malaysian Manufacturer).

Initial activities were producing customised panels to clients' requirement and ventured into standardised product months later. First product was ZS601 ; 6 channel speaker zone selector under the brand name of Amperes and has expanded its product range, exceeding 80 models under own brand name and OEMs.

Obtained ISO9001 : 2000 certification in 2006 under the scope of Design and Manufacturing of Public Address Equipments.

First ventured in export market in year 2005, and expanded its market to Singapore, Thailand, Philippines, Brunei, UAE, Indonesia and Vietnam.



ISO 9001 : 2000 certified company
Design and Manufacturing of Public Address Equipments

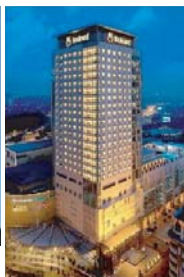


Amperes believes in customer's satisfaction and their recognition as these are the fuel for its existence and growth. We believe in close working relationship with our valued partners, evaluating every feedback and constructive critics with the objective of producing better and more reliable products through our continuous improvement policy. In short, we listens and reacts, seek and apply to achieve a brand name of " The Emerging Preference "

among installations



the weld kl



boulevard hotel mid valley



cyberview lodge resort



intercontinental uae



trader hotel



dell cyberjaya



klcc convention centre



seremban bus terminal



kl plaza



nottingham university semenyih



sunway pyramid 2



the gardens .. mid valley



warisan square kota kinabalu



westin langkawi



low cost carrier terminal klia airport

a INPUTS AND DATA

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PM1000 Series

ANALOGUE PAGING MICROPHONES

inputs and data

VARIANTS

The three variants of analogue paging desk had been serving many installations faithfully since their creation and had been improved further to meet the changing requirements.

PM1000 is used for direct paging without zone selection which can be installed near the rack or at remote location. A dry contact is available upon activation of mic, which can be used to trigger ALL CALL at zone selector, or applied as an emergency or priority mic console.

PM1060 / 1120 has zone selection feature with 6 and 12 zones respectively and is suitable for small scale installation which require remote zone selection for paging.

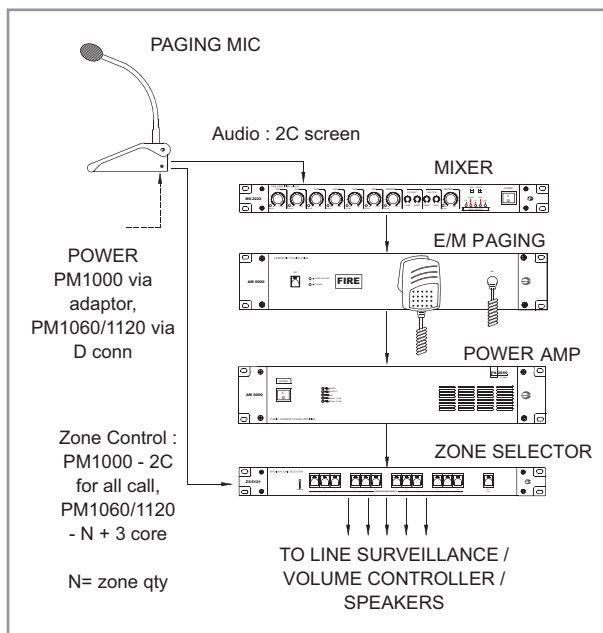
- PM1000 - Chime Paging Desk
- PM1060 - Chime With 6 Zones
- PM1120 - Chime With 12 Zones



Features

- Condenser gooseneck mic with illuminated ring
- Pre and post announcement 4 tone chime
- Adjustable chime and mic volume with balanced mic / line output level
- Output level selection to mic or line to suit input type of mixer
- Dry contact available when mic is active (PM1000 only)
- 6 or 12 zone selection for PM1060 and PM1120

Schematic Diagram

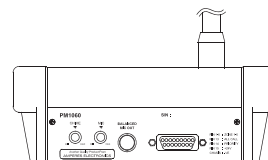


Specifications

| | |
|----------------------|--|
| Power requirement | PM1000 : 24V DC adaptor PM1060 / 1120 : 24V DC via D9 conn. |
| Pwr consumption | 50 mA / 150 mA / 150 mA |
| Zone selection | PM1000 - ALL CALL PM1060 / 1120 - 6 and 12 zones w ALL CALL |
| Microphone | Condenser mic ; cardioid |
| Output impedance | 600 Ohm |
| Output level | 1.2 V (line output) / balanced mic (775 mV) |
| Output dry contact | 3 A normally open (PM1000 only) |
| Output controls | Chime and mic level |
| Audio connection | 1/4 " stereo phone jack |
| Switching connection | D15 connector (PM1060 / 1120 only) |
| Operating distance | 300 m (recommended) |
| Chime | 4 tone up and 4 tone down |
| Indicators | Mic ring, zone switch, ALL CALL |
| Frequency response | 100 ~ 12 KHz (+/- 3dB ; 0 dB out) |
| S / N ratio | > 60 dB |
| Gooseneck mic length | 440 mm |
| Dimensions (WxHxD) | 150 x 62 x 186 mm |
| Weight (kg) | 750 / 760 / 780 gms |

packing information

- Qty per carton : 1 unit
- W x H x D : 525 x 85 x 270 mm
- Weight : PM 1000 - 1.5 kg (incl adaptor)
- : PM 1060 - 1.13 kg
- : PM1120 - 1.15 kg



rear view of PM1060 / PM1120



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PD2400

inputs and data

24 ZONE DIGITAL PAGING MIC

PD2400 is suitable for mid size installations of up to 24 zones. It shall be located in a distance of around 500m which utilizes RS485 for data communication whereas the audio by using balanced line signal.

The unit has individual key for zone selection with 4 groups and ALL CALL. 4 tone chime is incorporated and shall be activated prior and after a paging.

It shall be used with Amperes TD6800 decoder unit or the latest TD6240 rack mounted decoder before connected to the speaker zone selector for zone activation.



Features

- 24 zone paging control with 4 fixed groups and ALL CALL
- RS485 data transmission for long distance remote paging
- Balanced line output for low noise audio connection
- Multi point paging with priority level setting ; up to 3 PD2400 can be connected to a single TD6800 or TD6240
- 4 tone pre and post announcement chime
- BGM muting at zone selector when mic is activated ;
- bypassing zone selection at rack level
- Chime and mic volume control
- High sensitivity condenser microphone
- 12V or 24V DC powering, whichever convenient

Specifications

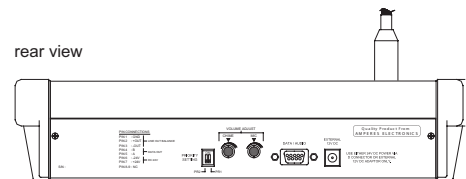
| | |
|-----------------------------|--|
| Power requirement | 24V DC via D9 connector / ext 12V DC pwr adaptor |
| Power consumption | 170 mA |
| Zone selection | 24 individual zone key 4 groups (preset of 6 zones) ALL CALL |
| Microphone | Condenser mic ; cardioid |
| Output impedance | 600 Ohm |
| Output level | 1.2 V (line output) |
| Output controls | Chime and mic level |
| Data output | RS485 ; 19.2 KB / s |
| Data connection | D9 connector |
| Operating distance (data) | Up to 1000 m |
| Audio distance | Typ 500 m (up to cable size) |
| Chime | 4 tone up and 4 tone down |
| Indicators | Mic ring, zone |
| Frequency response | 100 ~ 12 KHz |
| S / N ratio | > 60 dB |
| Gooseneck mic length | 440 mm |
| Dimensions (WxHxD) | 292 x 62 x 186 mm |
| Weight (kg) | 1150 gms (excl. adaptor) |

packing information

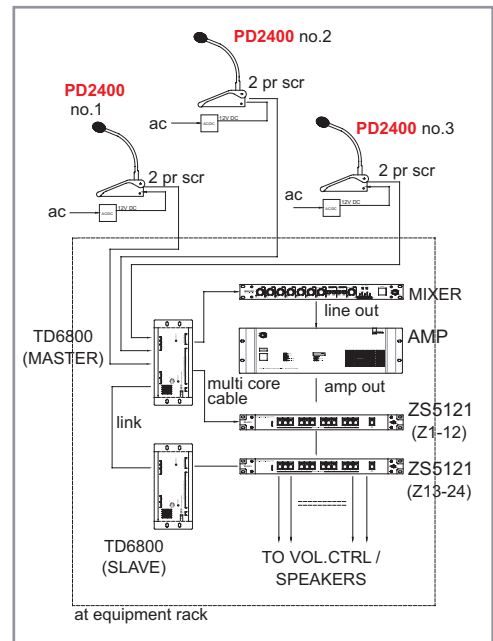


Qty per carton : 1 unit
 W x H x D : 525 x 85 x 270 mm
 Weight : 1.95 kg

rear view



Unit Connections





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PD2800

inputs and data

DIGITAL DESKTOP PAGING MICROPHONE

PD2800 shall be suitable for large setup, offering wide range of features with affordable pricing. Up to 108 zones can be stored in the paging desk's memory and total capacity of zoning shall be up to 256 zones. 9 groupings, each with 12 zones can be programmed for paging convenience.

Multi point paging, connected in series using EX2800 would form a large network of paging points. 3 circuits or loops are allowed to be connected to TD6801 or TD6240 zone decoder with priority setting.

Among other features include the selectable chime tone for paging, numerical keypad with LCD display for ease of programming and simpler connection works. All these shall render this small device too hard to miss.



Specifications

| | |
|-----------------------|-------------------------------------|
| Power requirement | 24V DC 1A via adaptor to EX2800 |
| Power consumption | 0.42 A |
| Microphone | Condenser microphone ; cardioid |
| Zoning capacity | 256 |
| Zone storing capacity | 108 |
| Grouping capacity | 9 groups ; each to store 12 zones |
| Output impedance | 600 Ohm balanced |
| Output level | Line 1.2 V |
| Output controls | Chime and mic level |
| Chime | 2 or 4 tones ; assignable |
| Frequency response | 100 ~ 12 KHz |
| S / N ratio | > 60 dB at 1 KHz |
| Data output | RS485 ; 19.2 KBs |
| Data connection | RJ45 to EX2800 via Cat 5E / 6 cable |
| Compatible decoder | TD6801 |
| Operating distance | Up to 1000m (sub. to cable size) |
| Memory duration | 1 year (internal battery) |
| Gooseneck mic length | 440 mm |
| Dimensions (WxHxD) | 292 x 62 x 186 mm |
| Weight (kg) | 1200 gms (excl. adaptor) |



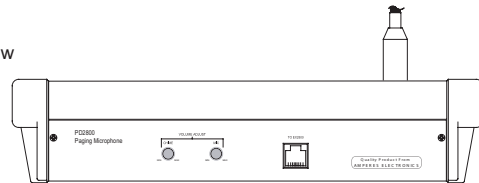
EX2800 EXT.CONNECTION UNIT

Size : 113 x 80 x 35 mm
Weight : 140 gms

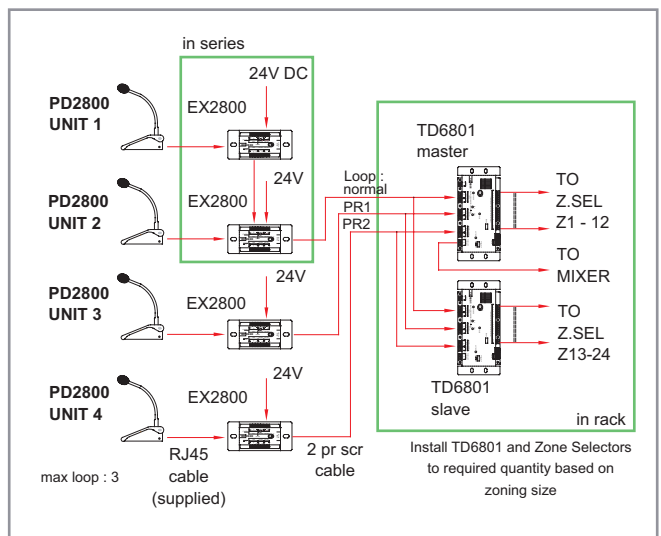
Features

- 108 zone storage capacity with 9 programmable groupings, each shall consist of 12 zones
- Capable to page to 256 zones
- One touch button for ALL CALL activation
- RS485 data transmission for long distance remote paging, decoding via TD6801 or TD6240 and zone selection via Amperes zone selectors
- Flexibility in cabling for large setup ; looping or star
- Multi point paging setup with 3 priority lines
- LCD display for ease of paging and programming
- User selectable chime output tone
- Chime and mic volume control

rear view



Unit Connections



packing information

Qty per carton : 1 unit
W x H x D : 525 x 85 x 270 mm
Weight : 2.05 kg

Standard package :
1 x PD2800 paging desk
1 x EX2800 ext. connection unit
1 x 24 V DC power adaptor
1 x 1m Cat 5 cable RJ45 jack



EP1200 is an essential paging tool for firemen during emergency, or when direct paging to all zone is required at the equipment rack. It shall allow direct access to the PA system which would bypass incoming BGM or other normal paging in progress.

Its built in siren tone generator can be triggered manually via the front panel switch or via external fire sensor or fire switch by providing a close contact to the connector at the back of the unit.

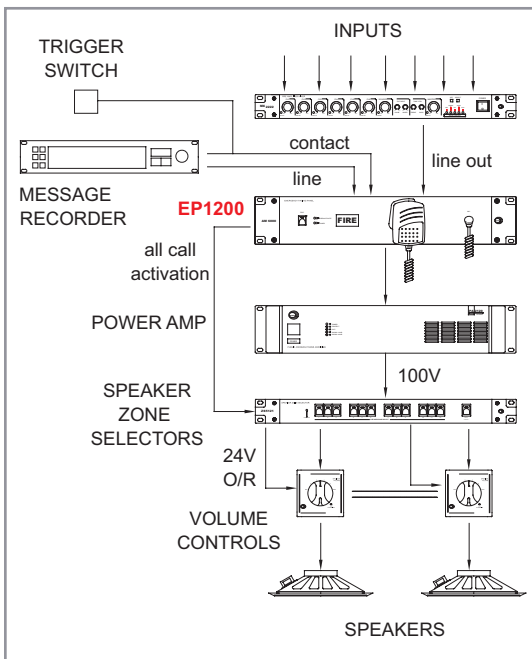
ALL CALL can be established by connecting the unit to the speaker zone selector. Pressing the front paging microphone shall activate the internal dry contact, which can be used to activate 24V emergency overriding signal, thus bypassing the attenuation of the volume controllers.

Features

- Built in siren tone generator (constant signal)
- Visual FIRE indicator
- External voice message activation
- Dual mode siren tone activation
- Dry contact when paging mic is activated
- Priority paging via front panel microphone, bypassing all other audio sources
- Output level controls for siren and message / paging microphone



Unit Connections



Specifications

| | |
|-------------------|--------|
| Power requirement | 24V DC |
| Power consumption | 3.5 W |

MICROPHONE

| | |
|--------------------|-------------------------|
| Mic sensitivity | -72 dB Omni directional |
| Impedance | 600 Ohm |
| Frequency response | 300 ~ 8 KHz |

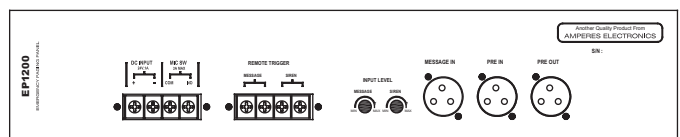
SIREN

| | |
|------------------|------------------------------------|
| Siren frequency | Continuous at 8 KHz |
| Siren duration | Continuous when activated |
| Siren activation | Front test switch / remote contact |

| | |
|--------------------|---|
| Input channel | Pre-amplifier output, message recorder |
| Output level | Balanced line out (1.2 V) |
| Priority sequence | Paging mic - siren - message - pre amp in |
| Indicators | Front FIRE work with backlight illumination |
| Dimensions (WxHxD) | 482 x 88 x 80 mm |
| Weight (kg) | 2.6 kg |

packing information

Qty per carton : 1 unit
W x H x D : 540 x 140 x 270 mm
Weight : 3.15 kg



rear view



CM1400 offers 5 types of chime and 2 siren tones, which can be connected to MX2222 chime input or directly to power amplifiers.

Tone activation shall be by the front panel switches or via the remote trigger port available at the rear panel. This enable the unit to be linked to external sensors or triggering point such as alarm panel, remote paging microphone or emergency switch.

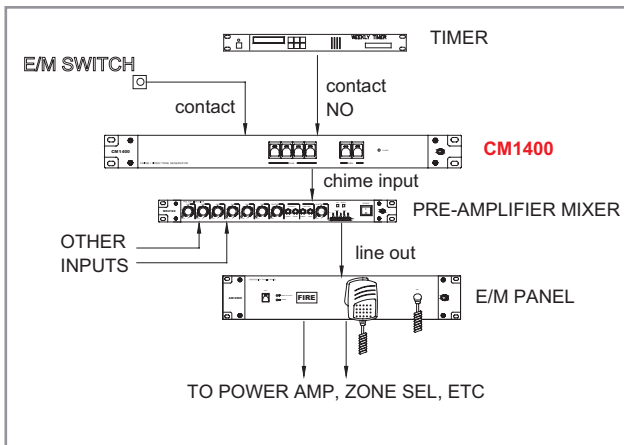
Siren activation shall have priority over other chime tones.



Customisation of chime is available upon request.



Schematic Diagram

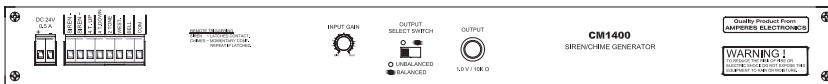


Features

- 5 types of chimes and 2 siren
- Adjustable output volume
- Front panel switch activation or via remote trigger port

Specifications

| | |
|---------------------|--|
| Operating voltage | 24V DC ; 0.5 A |
| Power consumption | 0.3 A |
| Chime type | 4 tone up, 4 tone down, 2 tone Ringing bell, Westminster |
| Siren type | Constant siren 8 KHz Wavy siren |
| External activation | Dry contact |
| Output | Line 1 V |
| Output impedance | 10 K Ohm, balanced / unbalanced selectable |
| Gain | +4 dB max |
| Dimensions (WxHxD) | 482 x 44 x 90 mm |
| Weight (kg) | 1.6 kg |



REAR VIEW

packing information

Qty per carton : 1 unit
 W x H x D : 540 X 105 X 270 mm
 Weight : 2.1 kg



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TE6000

inputs and data

12 CHANNEL SWITCHING DATA ENCODER

Zone switching from analogue paging mic from distance away may need large multi core cables which may not be economical and inaccurate due to voltage drop.

TE6000 shall be used to convert analogue zone switching into RS485 data which is known able to travel a distance of up to 1000m. It is compatible for any analogue paging desk or customised switching panel. Multiple units of TE6000 can be combined to form larger size of zone switching.

It is also used to convert unbalanced audio input to balanced line output, which is the preferred way of long distance audio transmission.



Apart from application in paging system, TE6000 can be applied in sending switching signals by door contacts, alarm sensors or any application that needs to be monitored from a distance away.

Features

- Long distance switching data transmission over RS485 protocol
- Converts unbalanced into balanced audio signal for minimal noise interference in long distance cabling
- Expandable and addressable to cater for more than 12 switching data
- Priority setting for multi point paging setup
- Powering via local 24V adaptor or from rack
- Compatible with most analogue paging desk with negative trigger
- Modular and can be easily placed near paging console



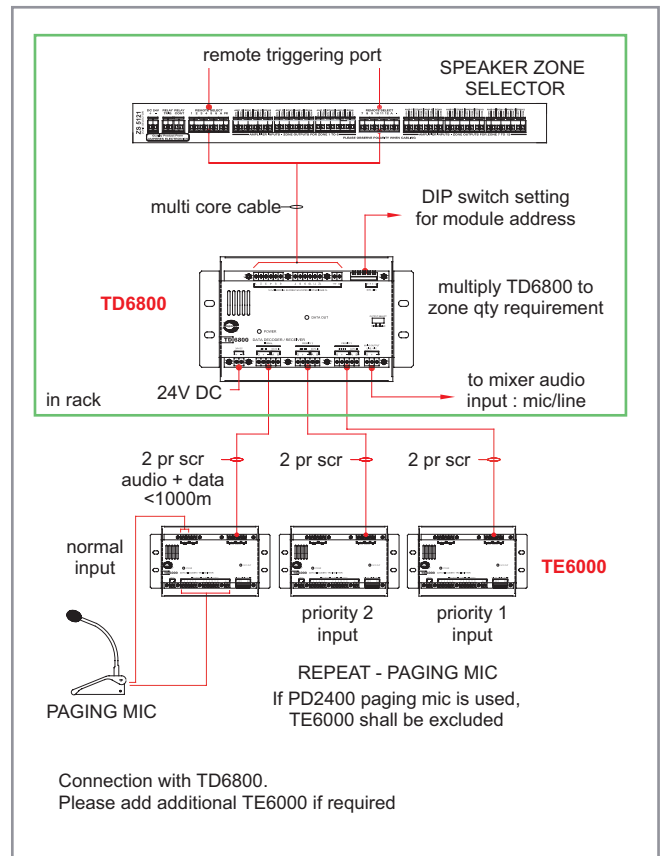
Specifications

| | |
|--------------------|----------------------------------|
| Operating voltage | 24V DC ; 0.5 A |
| Power consumption | 2.4 W / 100 mA |
| Switching inputs | 12 switching / 1 priority |
| Link / cascade | 15 nos max |
| Max zones | Up to 192 zones |
| AUDIO | |
| Input impedance | Mic : 600 Ohm / Line : 10 K Ohm |
| Output impedance | 600 Ohm balanced |
| Frequency response | 70 ~ 15 KHz |
| S/N ratio | > 60 dB (@ 1 KHz) |
| Max audio input | Mic (-60 dB) / Line (-30 dB) |
| Max signal output | + 4 dB |
| DATA | |
| Data protocol | RS485 |
| Baud rate | 19.2 K bps |
| Dimensions (WxHxD) | 218 x 35 x 127 mm |
| Weight | 500 gms |

packing information

Qty per carton : 5 unit
W x H x D : 225 x 175 x 185 mm
Weight : 2.7 kg

Schematic Diagram





the emerging preference

TD6800 Series

SWITCHING DATA DECODERS

inputs and data

VARIANTS

Switching data from TE6000 encoder or PD2400 / PD2800 paging mic shall be decoded by TD6800 series of decoders. (Please refer to the variants).

Each decoder shall have 12 (TD6800 / 6801) or 24 (TD6240) switching channels which would be connected to speaker zone selectors which have remote negative triggering ports. More than one TD can be connected if zones are more than the capacity of a single unit.

Multiple point paging from 3 locations can be fed to TD6800 with different priority level. Output level from decoder is selectable, either to be line or mic output, whichever appropriate to be connected to pre amplifier mixer.

- TD6800 - Decoder for TE6000 / PD2400
- TD6801 - Decoder for PD2800 Mic
- TD6240 - 24 Ch. Rack Mounted Decoder

NEW **TD6240**
24 Zone Rack Mounted Decoder with simplified switching connections



TD6240

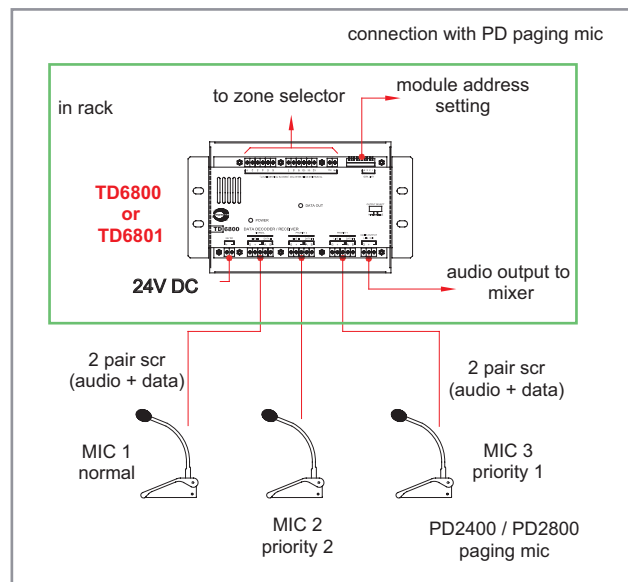
Features

- Long distance switching data transmission over RS485 protocol
- Expandable and addressable to cater for more than 12 zone data decoding
- Priority setting for multi point paging setup
- Selectable balanced audio output level
- Compatible with most zone selectors with remote triggering port (negative triggering method)
- Rack mounted or modular unit available
- Simpler connections with TD6240 to improvised ZS series speaker zone selectors

Specifications

| | TD6800 / TD6240 |
|---------------------------|--|
| Operating voltage | 24V DC ; 0.5 A |
| Power consumption | 2.4 W , 100 mA |
| Switching inputs | TD6800 : 12 switching / 1 priority TD6240 : 24 switching / 1 priority |
| Link / cascade | 15 nos max / 7 max |
| Max zones | Up to 192 zones |
| Max inputs | 3 lines |
| Output connections | TD6800 - hardwired connectors TD6240 - RJ45 |
| AUDIO | |
| Input impedance | Line : 10 K Ohm |
| Output impedance | 600 Ohm balanced |
| Frequency response | 70 ~ 15 KHz |
| S/N ratio | > 60 dB (@ 1 KHz) |
| Max audio input | Mic (-60 dB) / Line (-30 dB) |
| Max signal output | 0 dB |
| DATA | |
| Data protocol | RS485 |
| Baud rate | 19.2 K bps |
| Dimensions (WxHxD) | |
| | TD6800 - 218 x 35 x 127 mm TD6240 - 482 x 44 x 130 mm |
| Weight | 500 gms / 1.7 kg |

Schematic Diagram



TD6800 / TD6801



packing information

Qty per carton : TD6800 (5 ut) ; TD6824 (1 ut)
W x H x D : TD6800 : 225 x 175 x 185 mm
 TD6240 : 540 x 105 x 270 mm
Weight : TD6800 : 2.7 kg
 TD6240 : 2.2 kg



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MX2222

mixer and amplifier series

12 INPUT PRE-AMPLIFIER MIXER

This compact 1 hu pre-amplifier mixer features 6 mic, 4 BGM sources, chime and external line inputs and is suitable for any application, such as meeting room, lecture theatre, hall of prayer and definitely commercial fixed PA installation.



It dual output feature can be used for uninterrupted paging setup, ie. BGM and paging announcement. Adjustable priority muting level is available for paging announcement to override BGM and other lower priority sources. Adjusting it to minimum and the unit shall work like any other mixing unit and the other end, suitable for PA system with external paging.



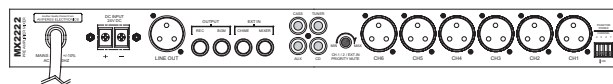
12V DC Phantom power is available for Mic channel 1 to 4 with DIP switch, making condenser mic readily functional when connecting to MX2222.



Specifications

| | |
|--------------------|--|
| Operating voltage | 230 / 240 V ac / 24 V DC |
| Power consumption | 2.4W on 240 V ac / 100 mA on 24 V DC |
| Input channels | 6 x mic ; 4 x BGM ; ext chime in ; mixer link |
| Input impedance | Mic : 600 Ohm BGM : 47 K Ohm unbalanced Chime input : 10 K Ohm unbalanced Mixer link : 600 Ohm balanced |
| Sensitivity | Mic : 0.775 mV BGM : 0.2 V Chime : 0.7 V Mixer : 0.7 V |
| Output level | 1.2 V XLR balanced (mixed output) 1.0 V phone jack balanced (BGM output) |
| Output impedance | 600 Ohm balanced |
| Controls | Mic channel ; chime ; mixer input Master mixed ; BGM ; Bass and treble controls |
| Phantom power | 12V DC switchable at mic 1 to 4 |
| Frequency response | 70 - 15 kHz (+/- 0.5 dB) |
| S/N ratio | > 60 dB at 1 KHz |
| Dimensions (WxHxD) | 482 x 44 x 180 mm |
| Weight (kg) | 2.55 kg |

rear view



packing information

Qty per carton : 1 unit
W x H x D : 540 x 105 x 270 mm
Weight : 3.0 Kg

Features

- 12 inputs of mic, BGM sources, ext.chime and mixer link
- Expandable to form more channels for larger setup
- Auto mic muting with adjustable mixing level for mic Ch. 1, 2, ext.chime and mixer link
- Priority muting with disable option for normal mixing mode
- Switchable phantom power for mic channel 1 to 4
- Dual output ; mixed line and BGM output for uninterrupted paging setup
- Independently adjustable BGM output level with balance line
- Built in daisy chain source selector with last selection memory
- Bass and treble tone control
- AC and DC operation for uninterrupted operation during power failure

Schematic diagram

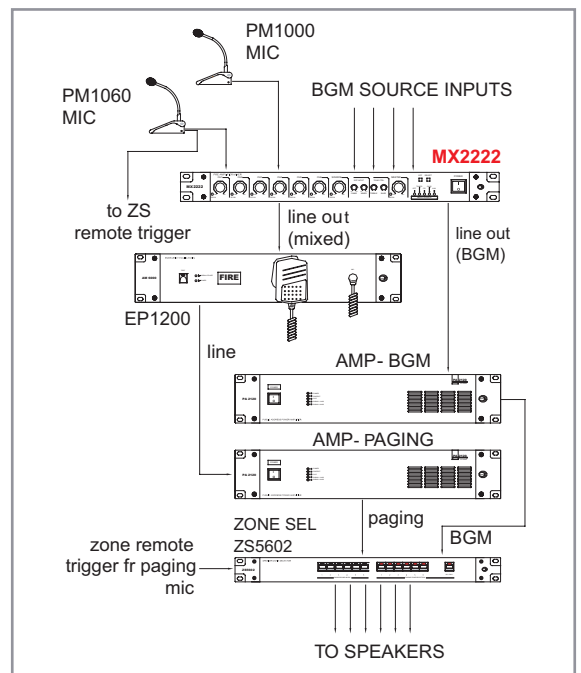


illustration for uninterrupted paging system.



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MxP 2188

mixer and amplifier series

MATRIMIX PAGING SYSTEM



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 18 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.



Features

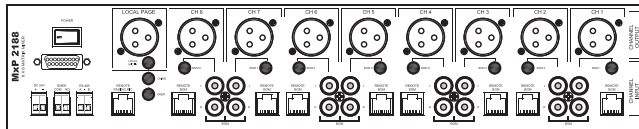
8 x 8 or 8 x 16 Matrix Setup

Each MxP2188 has 8 input and 8 output configuration with additional channels for local mic input, message and a remote paging mic. Two MxP can be linked together to form 8 x 16 matrix with some simple configurations.

Choice of inputs to each channel

Each channel can cater for various input sources such as dynamic microphone, BGM source or remote paging desk

rear view



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 RP1101 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 | 3.3 kg |

Individual channel setup

Volume, bass and tone adjustment can be made at each individual input to cater to listeners' taste as well as making signal adjustment to suit the environment.

Menu driven setup

Programming or setup can be performed easily by following the front panel menu without having to use external program.

Built in chime

2 or 4 tone selectable chime or siren can be activated via the front switch when doing local paging or via remote paging desk.

Built in voice recording

Pre-recorded announcement of up to 60 minutes in single bank can be stored and played via front panel activation or through remote triggering by external devices.

Built in monitor

Each source can be monitored via the front speaker with volume controller.

Priority override port

Whenever ALL CALL or priority paging is made, a dry contact is available for connection to 24V DC overriding to external volume controllers.

Remote / external triggering

External triggering point is available to activate pre-recorded message either at individual zone or ALL CALL. Siren activation shall be available for ALL CALL. This activation shall have priority over BGM or remote paging mic input.

Local paging input

Localised handheld microphone can be plugged to the unit for priority paging and zone selection can be performed via the front panel switches.



PD1160 - 8/16 ZONE MATRIMIX REMOTE PAGING MICROPHONE

A dedicated remote paging desk with 8 / 16 channel zone selection, shall be connected directly to MxP2188. Multi point paging setup can be achieved using EX1102 mic extender in series connections.

| | |
|--------------------|---------------------------------|
| 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 |

RP1100 - REMOTE ZONE CONTROL



A remote zone control panel for source and volume control which is to be installed at individual zone and connected to the remote control port of MxP2188.

| | |
|-------------------|-----------------------------|
| 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 |

RP1101 - REMOTE SOURCE INPUT PANEL

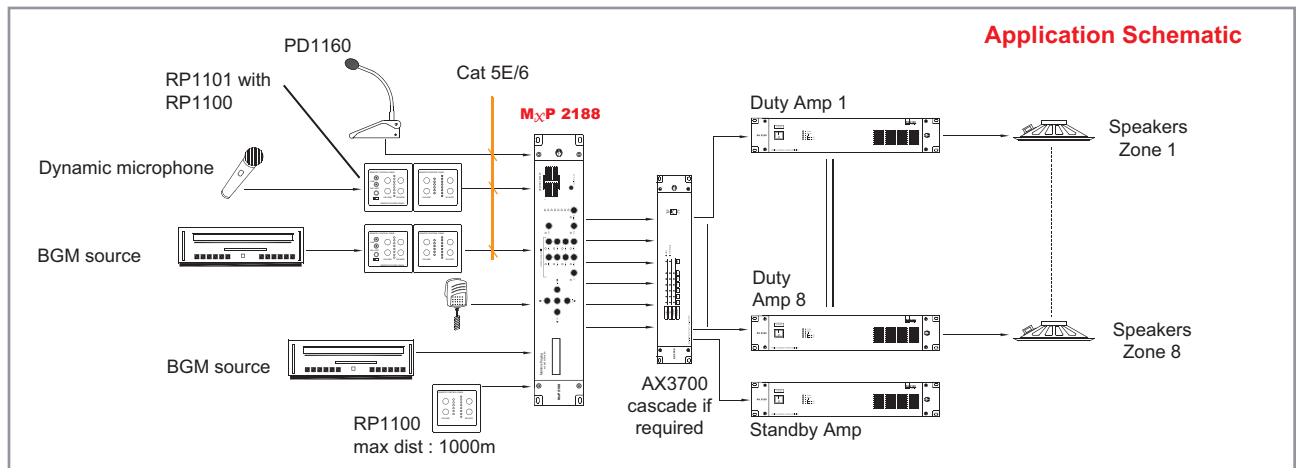


RP1101 shall be used together with RP1100 to provide local source input to the particular zone.

Mic or Line level sources can be injected to the system and the volume shall be controlled through RP1100.

In the event of emergency paging, this panel shall give way to allow the announcement to go through.

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



EX1102 MIC EXTENDER

It is used when multi point paging is required, connected in series in a single circuit. The paging mic nearest to the main controller shall have priority over others.



MS1103 MIC SPLITTER

It splits incoming paging mic circuit into two outputs, to be connected to Master and Slave unit when two MxP2188 are used as cascade mode.



packing information

Carton Size : 540 (W) x 140 (H) x 270 (D) mm
 Weight : 3.7 kg
 Qty : 1 units / carton

Please order associated components separately.



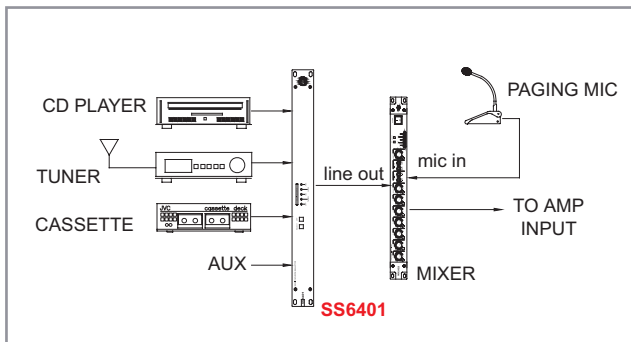
SS6401 is a source selector panel with 4 inputs and a single output. Its input level balancing circuitry provides constant output level irrespective of type of source being selected. With this, user shall not be troubled with adjusting the input volume everytime a different BGM source is changed.



IMPROVED



Schematic Diagram



Features

- 4 input sources ; Cassette, CD, Tuner and Aux
- Input level balancing circuit for constant output level for different type of BGM source

Specifications

| | |
|---|--|
| Operating voltage | 24V DC ; 0.5 A |
| Power consumption | 0.15 A |
| Input level / impedance (max input level) | CD : 2V / 47 K Ohm Tuner : 600 mV / 10 K Ohm Cassette : 500 mV / 10 K Ohm Aux : 1.25 V / 20 K Ohm |
| Input connection | RCA jack / stereo |
| Output | Stereo jack - balanced |
| Output level / impedance | 1V / 600 Ohm |
| Gain (max) | CD : -6 dB Tuner : 4 dB Cassette : 6 dB Aux : -2 dB |
| Source selection | Daisy chain |
| Dimensions (WxHxD) | 482 x 44 x 65 mm |
| Weight | 1.6 kg |

MC2080

8 CHANNEL MICROPHONE INPUT CONTROLLER

MC2080 shall be suitable for use at counters with many paging desks such as in service counters, food courts, check in counters, etc which all microphones shall be connected to this unit and only a single source shall be fed to the pre-amplifier mixer.

It can be used as 2 group mode with each consisting of 4 inputs and dual output or single group of 8 inputs with one output. Microphone selection can be programmed as first in first out or with priority.



Among benefits of installing MC2080 shall be reduction of cabling works to main system, ability to control mic source locally as well as reducing cost of installing more pre-amplifier mixers when the number of inputs exceeds the channel capacity of mixer.

available mid 2008



Features

- 8 inputs with two grouping modes : 4 / 4 / 2 out or 8 / 1 out
- Programmable as first in first out (FIFO) or priority for mic inputs, either in two groups or single group
- Aux contact for mic in use
- Adjustable line output level
- Busy indicator when mic is in use
- Channel activation via dry contact from microphone console
- 1 hu casing, placed at local area or at main rack



the emerging preference

mixer and amplifier series

PX2000 Series

120 / 240 / 360 / 480W 100V LINE POWER AMPS WITH AUTO FAULT SENSOR (AFS)

VARIANTS

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



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 lifespan 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. By employing PX series, an automatic amplifier monitoring and changeover system is thus created, thus reducing the workload of manual monitoring.

Features

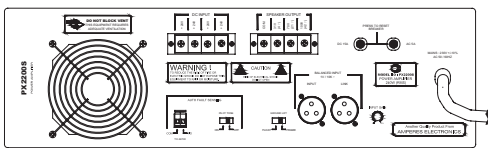
- Incorporating Auto Fault Sensing (AFS) circuitry for self monitoring of its output
- Pilot tone switchable for normal operation without AFS
- Interval PT generation to avoid continuous loading of the amplifier
- Thermal protection by muting input signal (typically 85 deg at heat sink)
- Temperature 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



PX2200 / 2300 / 2400

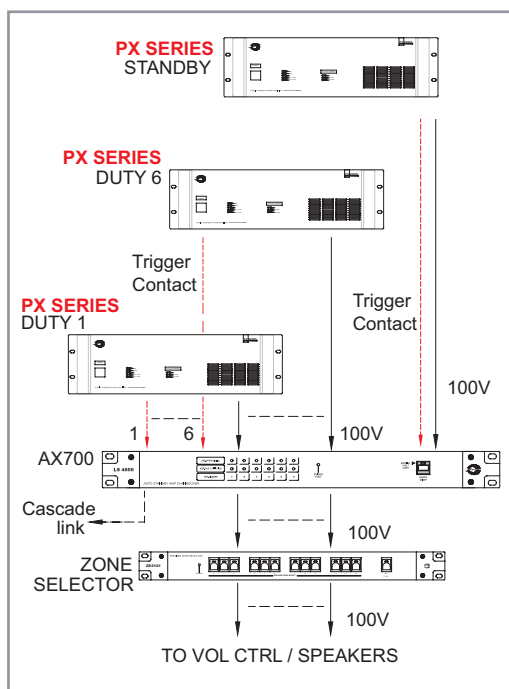
Specifications

| | 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 Ohm |
| (100 V line) | 83 / 42 / 27.8 / 20.8 Ohm |
| Frequency response | 80 ~ 17 KHz |
| 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 |



rear view : PX2200 / 2300

Application Schematic



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) | 11.6 / 21.0 / 22.2 / 25.5 kg |

packing information

| | |
|------------------|---|
| Qty per carton : | 1 unit |
| W x H x D : | PX2100 : 540 x 140 x 405 mm |
| | PX2200 / 2300 / 2400 : 540 x 195 x 405 mm |
| Weight : | PX2100 - 12.2 kg |
| | PX2200 - 22.0 kg |
| | PX2300 - 23.2 kg |
| | PX2400 - 26.5 kg |



the emerging preference

PA2000 Series

mixer and amplifier series

120 / 240 / 360 / 480W 100V LINE POWER AMPLIFIERS



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.

The PA series can be used merely as booster or incorporate with Amperes AS4000 / AX700 to form an automatic amplifier monitoring and changeover system. Should this setup is required, we recommend that AX3700 to be used for simplicity in cabling works.

As a trusted model, the PA series shall perform surpassing your expectation.

VARIANTS

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



Specifications

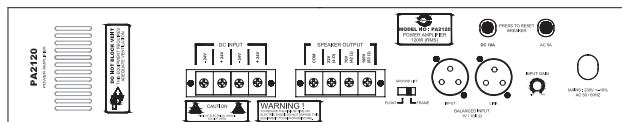
| | PA2120 / PA2240 / PA2360 / PA2480 |
|---------------------------|---|
| Power requirement | 230 / 240 V ac (24V DC backup) |
| 24V DC requirement | 8A / 19A / 23A / 29A |
| Pwr consumption (load) ac | 1.4A / 3A / 3.4A / 4.5A |
| Pwr consumption (s/by) | 0.4 A |
| Input sensitivity | 1 V / 10 K Ohm |
| 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 Ohm |
| (100 V line) | 83 / 42 / 27.8 / 20.8 Ohm |
| Frequency response | 80 ~ 17 KHz |
| 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, Pilot tone, Fault |
| 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) | 11.6 / 21.0 / 22.2 / 25.5 kg |

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



PA2120



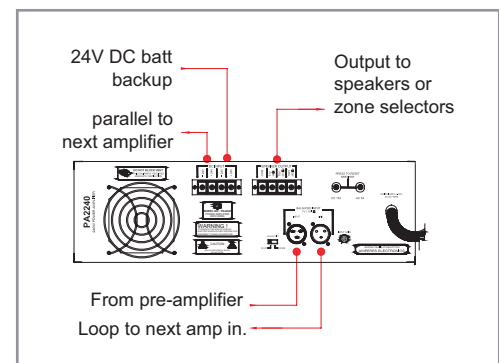
rear view of PA2120



packing information

- Qty per carton : 1 unit
- W x H x D : PX2120 : 540 x 140 x 405 mm
PA2240 / 2360 / 2480 : 540 x 195 x 405 mm
- Weight : PA2120 - 12.2 kg
PA2240 - 22.0 kg
PA2360 - 23.2 kg
PA2480 - 26.5 kg

Unit Connections





the emerging preference

MA2000 Series

mixer and amplifier series

60 / 120W 100V LINE MIXER AMPLIFIER

MA series of mixer amplifiers are suitable for small installations such as in showroom, meeting room, lecture theater and any installation with few zone separations.

It features 6 inputs of mic and line sources with front jack for priority paging. Selectable input level with phantom power and 3 channel zone selector with remote triggering for connection to Amperes PM1060 paging desk. Expansion or stacking MA series to other line amplifiers can be achieved with its balanced line output. Speakers can be connected to its 100V line output as well as the 4 Ohm option.

MA series produce sound clarity surpassing others, thanks to its wider frequency response.

VARIANTS

- MA2060 - 60W 100V
- MA2012 - 120W 100V



Specifications

MA2060 / MA2012

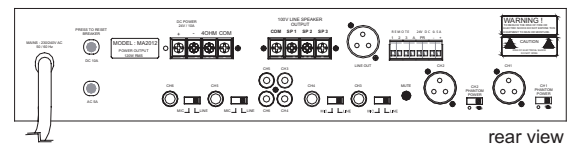
| | |
|-------------------------------|--|
| Power requirement | 230 / 240 V ac (24V DC backup) |
| 24V DC requirement | 3 A / 5 A |
| Pwr consumption (load) ac | 1.3 A / 2.2 A |
| Pwr consumption (s/by) | 0.4 A (240 V ac) |
| Input channel | 6 mic / line selectable |
| Input sensitivity / impedance | Mic : 2.45 mV / 2 K Ohm balanced Line : 245 mV / 30 K Ohm unbalanced RCA : 495 mV unbalanced |
| Input connection | XLR balanced input : Mic 1 and 2 RCA jacks : 3 ~ 6 line inputs Mono phone jack : front mic input |
| Tone controls | Bass (100 Hx) ; Treble (10 KHz) |
| Rated output (rms) | 60W / 120W 100V line |
| Outputs | 4 Ohm / 100V line in 3 zones |
| Output selection | Front panel and remote triggering |
| Frequency response | 60 ~ 18 KHz |
| S / N ratio | > 60 dB |
| Protections | Thermal, momentary output short circuit, AC and DC circuit breaker |
| Indicators | AC mains, Clip, Protect, Input level |
| Cooling system | Dual speed fan with heat sensing |
| Dimensions (WxHxD) | 88 x 424 x 300 mm |
| Weight (kg) | 9.9 / 12.0 kg |

packing information

Qty per carton : 1 unit
 W x H x D : 540 x 140 x 405 mm
 Weight : MA2060 - 10.5 kg
 MA2012 - 12.4 kg

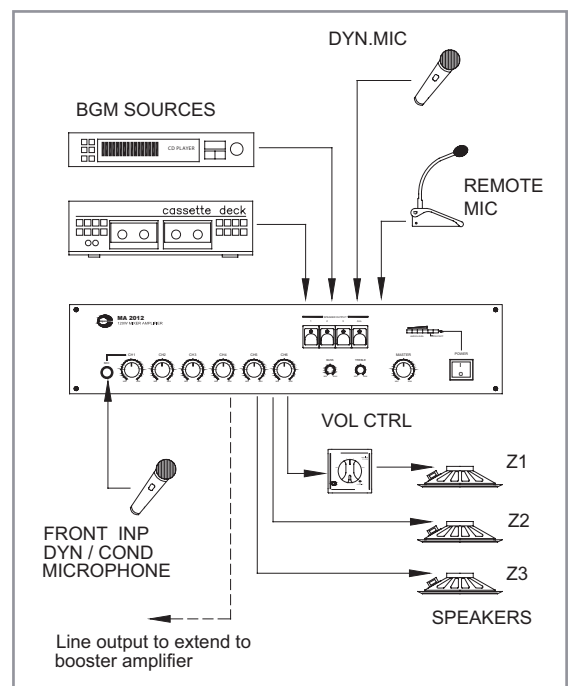
Features

- 6 mic / line selectable input channels, with front mic jack
- Switchable phantom power (12V DC) for mic input 1 and 2
- Individual input level control with master out
- Priority muting for mic input 1 with adjustable muting level
- 3 zone speaker output with ALL CALL
- Remote zone selection by connecting to Amperes PM1060 paging microphone
- 70 / 100V line output with aux 4 ohm speaker terminal
- Tone and bass controls
- AC / DC operation for fixed and uninterrupted operation



rear view

Unit Connections





the emerging preference

MB2100 Series

mixer and amplifier series

60 / 120W 100V LINE MIXER AMPLIFIER

Introducing the very basic of mixing amplifier series .. the MB2100 series with power rating of 60 and 120 watts respectively.

Both models offer 6 mic and line inputs and single output of 100V line which shall be suitable for small and simple application in classroom, meeting room etc. Though simple and economical, various protection features are never neglected, such as thermal protection, short circuit cut off as well as circuit breakers.

The wide frequency response provides a pleasure to listening with bass and treble controls.

VARIANTS

- MB2106 - 60W 100V
- MB2112 - 120W 100V



NEW

Features

- 6 input channels for mic and line signals
- Individual input level control with master out
- Tone and bass controls
- 70 / 100V line output with aux 4 ohm speaker terminal
- Thermal, short circuit protections
- Ventilation via thermal controlled fan
- AC / DC operation for fixed and uninterrupted operation

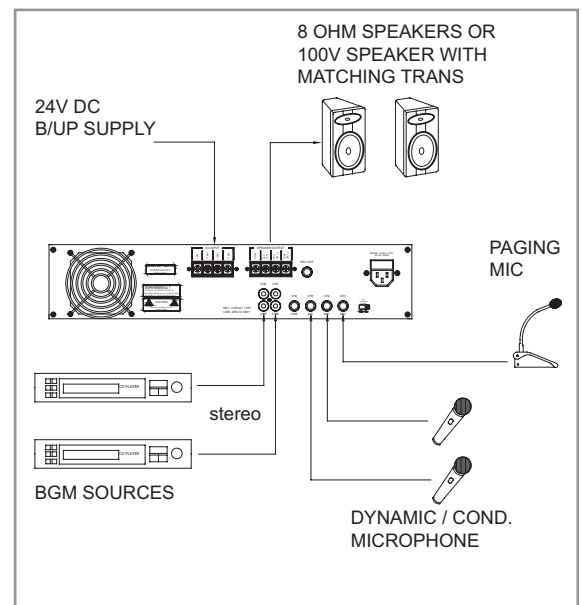


Specifications

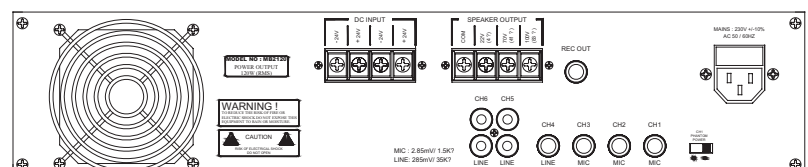
MB2106 / MB2112

| | |
|-------------------------------|---|
| Power requirement | 230 / 240 V ac (24V DC backup) |
| 24V DC requirement | 5 A / 8 A |
| Pwr consumption (load) ac | 1.3 A / 2.2 A |
| Pwr consumption (s/by) | 0.4 A (240 V ac) |
| Input channel | 3 x mic ; 1 x line ; 2 x RCA |
| Input sensitivity / impedance | Mic : 2.45 mV / 1.5 K balanced Line : 245 mV / 35 K unbalanced RCA : 245 mV unbalanced |
| Input connection | Phone jack balanced : mic input 1 to 3 Phone jack balanced : line input 4 RCA stereo : line input 5 and 6 |
| Tone controls | Bass (150 Hz) ; Treble (10 KHz) |
| Rated output (rms) | 60W / 120W 100V line |
| Outputs | 4 Ohm ; 70 ; 100V line ; line output |
| Frequency response | 60 ~ 15 KHz |
| Protections | Thermal, momentary output short circuit |
| Indicators | 5 segment level ; power |
| Cooling system | Dual speed fan with heat sensing |
| Dimensions (WxHxD) | 88 x 424 x 300 mm |
| Weight (kg) | 8.4 / 10.5 kg |

Unit Connections



rear view



packing information

- Qty per carton : 1 unit
- W x H x D : 540 x 140 x 405 mm
- Weight : MB2106 - 9.5 kg
MB2112 - 11.6 kg



the emerging preference

PA310 / PA320

mixer and amplifier series

10 W / 20 W 4 OHM MINI AMPLIFIERS



Both models are upgraded version of the popular PA305, with higher power rating and better sound reproduction.

They are used to amplify BGM signal to a speaker of 4 or 8 Ohm rating from a line source, such as from TV output to a bathroom speaker in a hotel room. Amperes VC7805 volume controls and VP7810 BGM - Speaker patch panel can be installed if required to allow emergency paging to be announced at the speaker.

The application is not limited to the above, and you shall find this little device truly versatile.

VARIANTS

PA310 - 10W 4 OHM
PA320 - 20W 4 OHM

NEW Improved to replace PA305



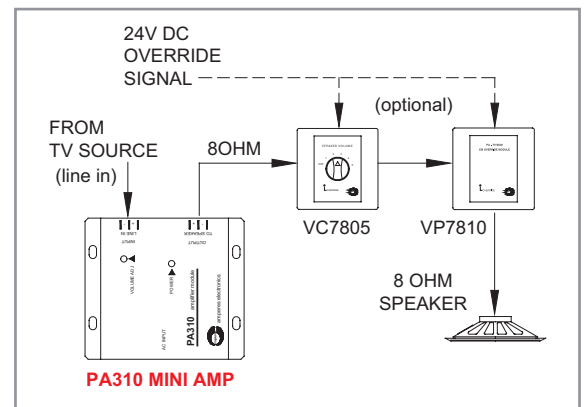
Specifications

| | PA310 / PA320 |
|---------------------|--|
| Input voltage | 230 / 240 V ac |
| Power rating | 10 W / 20 W 4 Ohm |
| Current consumption | 0.06A / 0.14A 240V ac |
| Input signal | Mono ; unbalanced detachable connector |
| Input sensitivity | 40 mV |
| Max input signal | 1.2 V |
| Input impedance | 150 K Ohm |
| Frequency response | 40 - 18 K Hz (+/- 3 dB) |
| Controls | Input volume |
| Indications | Power LED |
| Dimensions (WxHxD) | 103 x 45 x 83 / 103 x 54 x 99 mm |
| Weight (kg) | 400 g / 650 g |

Features

- Available in 10 or 20W 4 Ohm rating
- Adjustable volume control for volume preset
- Compact size for easy installations

Connection Diagram



PA360

60W 100V REMOTE LINE AMPLIFIER

NEW
Preliminary Info

If a decentralised PA system is required, Where amplifiers are located away from the rack, a simple hook on power pack shall be a logical choice. As such, PA360 shall be able to drive speakers with a total load of 120W in the localised area.

The input shall be balanced signal sent from the main console and looping connection is available to link to the next amplifiers. PA360 shall be able to accept 100V line tapping too, via a step down module TS6100, which converts 100V line input to balanced line output.



Specifications

| | |
|--------------------|------------------------|
| Input voltage | 230 / 240 V ac |
| Power rating | 60W 100V line |
| Power consumption | 1.3A 240V ac |
| Input signal | Line Balanced XLR jack |
| Input impedance | 10 K Ohm |
| Dimensions (WxHxD) | 285 x 290 x 75 mm |
| Weight (kg) | 7.5 kg |



the emerging preference

ZS5601 / 5121

selectors series

6 / 12 CH SPEAKER ZONE SELECTORS

ZS5601 / 5121 are the earliest models from Amperes and has been installed in thousands of sites, performing well and known for their reliability.

They provide direct speaker zone selection for paging or BGM for a single source PA setup. Switching of zones shall be through the front panel switches or via remote paging microphones, connected using the remote trigger port.

Amperes PM series paging mic can be connected directly to the remote trigger port whereas PD series shall require decoder unit (TD6800 / 6801 / 6240). Other makes of paging consoles are compatible provided they have remote select output port with negative common.



IMPROVED with easy connect to decoder using RJ45 jacks



ZS5121 - 12 CH. SPEAKER ZONE SELECTOR

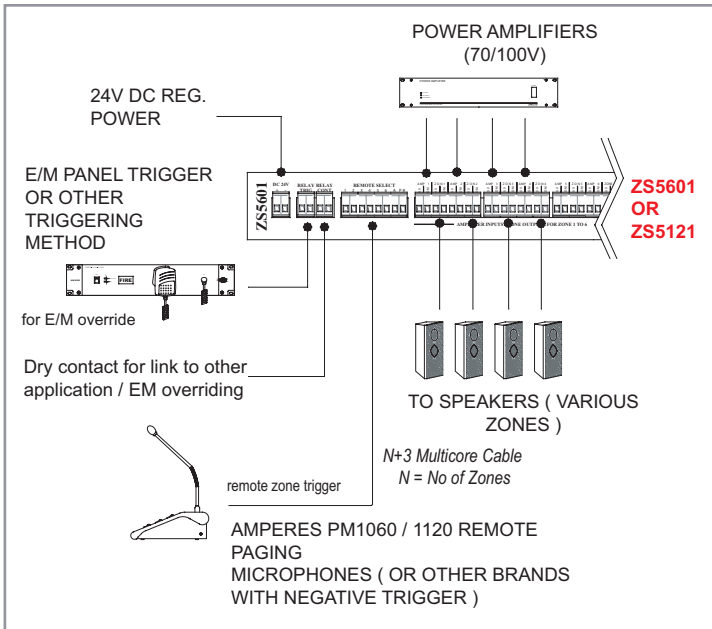
Features

- Available in 6 (ZS5601) and 12 zone (ZS5121) respectively with ALL CALL
- Expandable to more zones as required
- Remote zone triggering port via external paging microphone or console
- Paging override by Amperes paging console with Priority override indicator
- Emergency paging mic triggering port with dry contact for volume controller overriding application
- Flexible amplifier to zone configuration

A distinctive feature from other zone selectors is the remote override feature which bypasses the local zone selection whenever the mic is activated.

Each zone shall have individual input and output connection, thereby making it rather flexible for amp-zone configurations.

The 2008 version has been improved further with new front switches and easier rear connections for remote triggering.



rear views

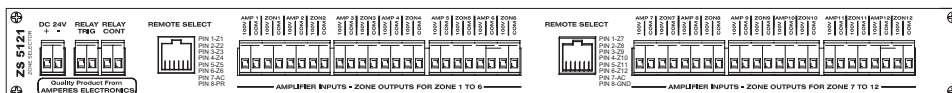
Specifications

| | |
|--------------------|--|
| Operating voltage | 24V DC ; 0.5 A |
| Power consumption | ZS5601 : 3.5W , 0.14A w ALL CALL ZS5121 : 6.8W , 0.28A w ALL CALL |
| Max load / channel | 400W at 100V line |
| Number of zones | 6 (ZS5601) ; 12 (ZS5121) |
| Amplifier inputs | 6 (ZS5601) ; 12 (ZS5121) |
| Zone selection | Front panel switch and remote |
| Cascade limitation | Unlimited |
| Remote triggering | - ve triggered (common ground) |
| Indicators | Individual zone switch, Priority |
| Switching mode | Individual, ALL CALL Local zone selection bypassed when remote trigger is activated |
| Dimensions (WxHxD) | 482 x 44 x 130 mm |
| Weight | 1.6 kg (ZS5601) ; 1.75 kg (ZS5121) |



packing information

Carton Size : 540 (W) x 105 (H) x 270 (D) mm
 Weight : ZS5601 : 2.05 kg
 : ZS5121 : 2.20 kg
 Qty : 1 units / carton





the emerging preference

ZS5602

selectors series

6 CH UNINTERRUPTED PAGING ZONE SELECTOR

ZS5602 is used when uninterrupted paging setup is required. ie. when an announcement to a zone, other areas shall not be affected, which would continue to listen to the broadcasted BGM.

Such configuration shall require two sets of amplifiers, one being dedicated to Paging and the other to BGM. Other method is by assigning each zone to an amplifier, such as in Matrix system. Using ZS5602 shall be of lower cost to achieve the purpose.

Like ZS5601 or ZS5121, it can be remotely triggered by remote paging console or zone selection decoder. Each zone shall have individual input and output connections, making it rather flexible for amp-zone configuration.



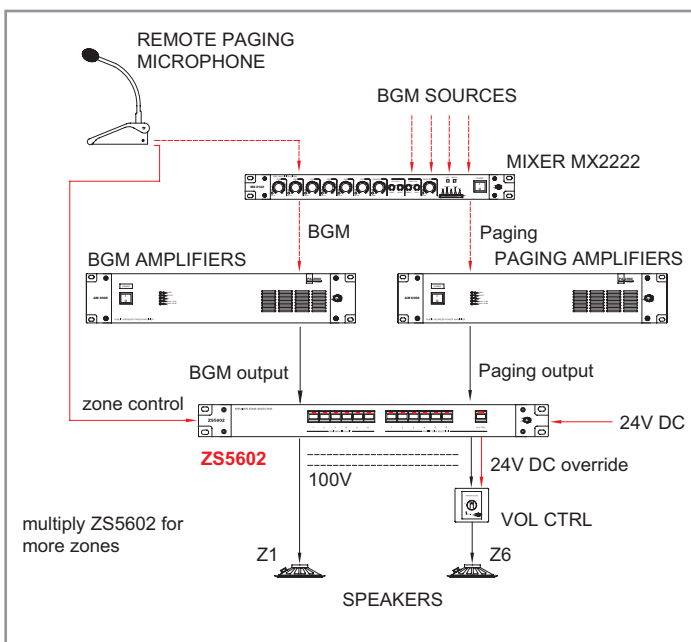
Features

- Available in 6 zones for BGM and 6 for Paging with ALL CALL
- Expandable or link multiple units to form more zones
- Remote zone triggering port via external paging mic
- Emergency paging mic triggering port with dry contact for volume controller overriding application
- Aux DC output for selected paging one
- Suitable for 3 or 4 wire system

Specifications

| | |
|-------------------------|----------------------------|
| Operating voltage | 24V DC ; 0.5 A |
| Power consumption | 10W ; 0.42 A at ALL CALL |
| Insertion loss | 0.5 dB max |
| Max load / channel | 400W at 100V line |
| Number of zones | 6 |
| Amplifier inputs | 6 BGM ; 6 Paging |
| Zone selection- BGM | Front panel switch |
| Zone selection - Paging | Front panel switch, remote |
| Indicators | Zone LED |
| Aux output voltage | 24V DC ; 3A max / zone |
| Dimensions (WxHxD) | 482 x 44 x 130 mm |
| Weight | 2.0 kg |

Schematic Diagram



packing information

Carton Size : 540 (W) x 105 (H) x 270 (D) mm
 Weight : 2.45 kg
 Qty : 1 units / carton



rear view



the emerging preference

LS4600

monitoring and changeover

6 CHANNEL SPEAKER LINE SURVEILLANCE

Speaker and cable condition should be maintained at good condition at all time to ensure message is delivered during crucial time. Faulty lines would not only cause undelivered broadcast but may cause damage to the central system itself, ie. power amplifiers. Thereby constant monitoring is required, and preferably performed automatically at fixed intervals.

LS4600 is a 6 channel speaker line monitoring device which monitors the impedance of the circuit. Flaws such as short circuit, ground leakage or speaker fault are the parameters being monitored. Any faults shall be alerted to the maintenance team via buzzer, LED indicators as well as external sounding devices.



IMPROVED

Monitoring shall be performed by using impedance measurement method and therefore additional components such as blocking capacitors and EOL resistors are not required. Circuit branching shall also be allowed.

IMPEDANCE
measurement method



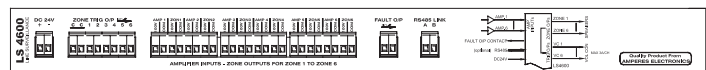
Specifications

| | |
|--------------------------------|---|
| Operating voltage | 24V DC via PS9400 PSU |
| Power consumption | 3.5 W |
| Capacity | 6 channel and expandable |
| Processor | PIC microcontroller with 12 bit ADC |
| Impedance detection range | 25 to 4.4 K Ohm |
| Power measurement range | 3 to 400 W 100V line |
| Measurement accuracy | +/- 3% within range |
| Pilot tone injection frequency | 1 KHz |
| Pilot tone signal output level | 5V sine |
| Transmittal detection period | 3 seconds per channel |
| Detection interval | User preset from 1 min to 48 hrs |
| Sensitivity setting | User preset at each channel |
| Indicators - LED | Normal, Fault, Buzzer, Auto run |
| Display LCD | 2 x 16 characters sigh back light setting |
| Audible output signal | Continuous buzzer with Off option |
| Dry contact setting | 3A |
| DC output in detection mode | 24 V DC for individual channel |
| Dimensions (WxHxD) | 482 x 44 x 130 mm |
| Weight | 1.8 kg |

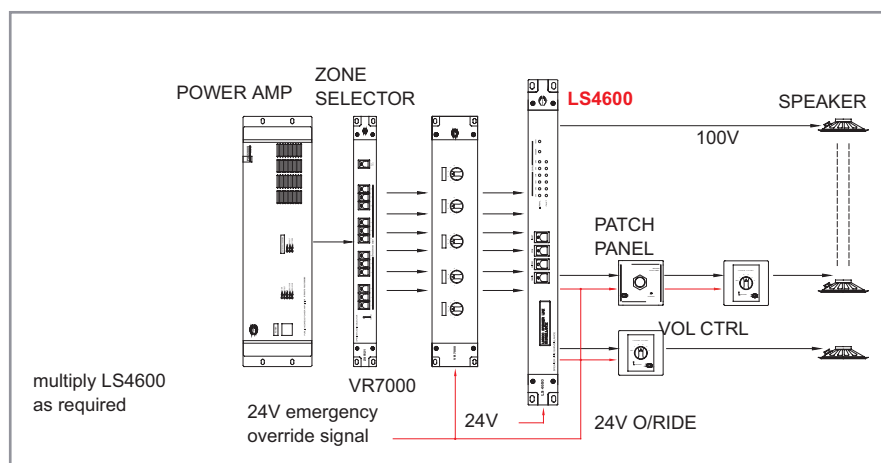
Features

- 6 channel speaker line monitoring and expandable
- Detection of faulty cable and speaker in individual zone or circuit
- Impedance measurement method - no capacitor coupling required and cable branching allowed.
- Built in impedance meter, range within 25 to 4.4 K Ohm
- LCD display to facilitate system setup, measurement and monitoring
- Fault alert with LED indicators and switchable buzzer
- Detection test interval setting from 1 min to 48 hours
- Short burst test signal, minimizing interruption to PA operation
- User setting for detection sensitivity for open, short and leakage
- Aux 24V DC output for volume controller overriding during testing mode

rear view



Application Schematic



multiply LS4600 as required



packing information

Carton : 540(W) x 105(H) x 270(D) mm
Weight : 2.2 kg
Qty : 1 units / carton



the emerging preference

AX3700

monitoring and changeover

6 DUTY / 1 STANDBY AUTO AMP FAULT CHANGEOVER

Amperes AX3700 offers a great flexibility and simplicity in cabling for auto amplifier fault changeover system. It is a combination of amplifier fault sensor modules and changeover panel in a box. The internally generated Pilot Tone and sensory circuit shall detect any faulty duty amplifier and would initiate a changeover process.

AX3700 has been optimised for faster fault detection and changeover as compared with AS4000 modules. Pilot tones are generated at intervals to avoid constant loading of power amplifiers.

Changeover are performed at both input and output sections, making it suitable for application in a matrix system. At any one time, only a failed duty unit shall be replaced by a standby amp, to avoid overloading.



AX3700 is compatible with most 70/100V line amplifiers.
Status of each channel represents the true condition of the amplifier.

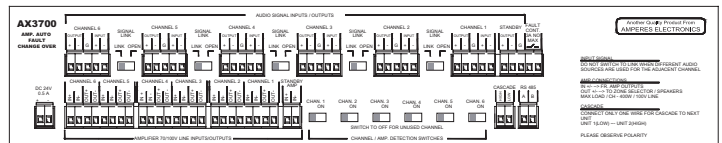
Specifications

| | |
|------------------------|---------------------------------|
| Operating voltage | 24V DC 1 A via PS9400 PSU |
| Power consumption | 7.2 W |
| Input signal | 6 ch. balanced line signal |
| Input impedance | 10 K Ohm |
| Audio output gain | Unity |
| Pilot tone interval | 10 secs / channel |
| Pilot tone frequency | 20 KHz (+/- 5%) |
| Detection line | 70 / 100 V line |
| Detection level | 50 V rms |
| Failure detection time | 10 ~ 25 seconds |
| Failure recovery time | 20 seconds max |
| Zone load rating | 400W / 100V line |
| Status indications | Normal ; Fault ; Changeover |
| Changeover alert | Buzzer with switch |
| Changeover section | Input and Output simultaneously |
| Dimensions (WxHxD) | 482 x 88 x 150 mm |
| Weight | 3 kg |

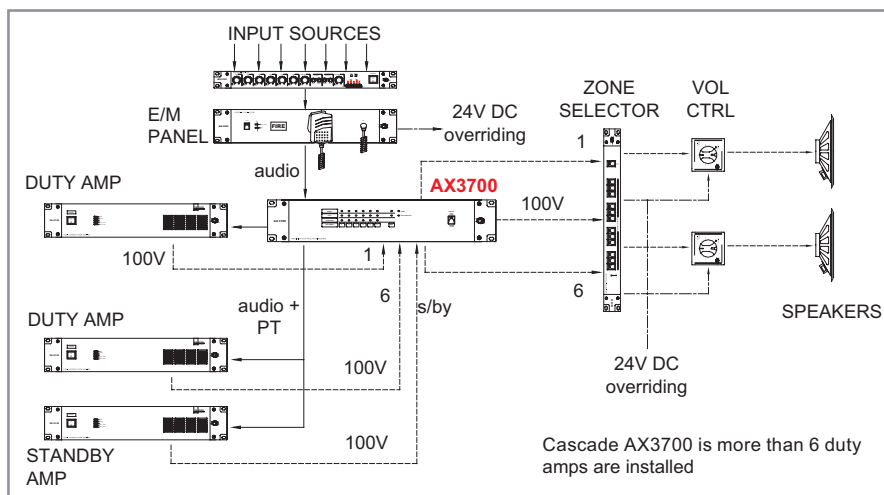
Features

- Cater for 6 duty and 1 standby
- Expandable for 1 standby to cater for more than 6 duty amps.
- Built in Pilot Tone generator, transmit at intervals and senses at sequence to protect amplifiers
- Overloading protection by allowing only a single take over
- Prioritised changeover which higher numbered amplifier shall be preferred for take over if more than two units are down
- Shorter fault detection time from 10 to 25 seconds
- Changeover at input and output section simultaneously ; suitable for matrix system installations
- Input link switch ; making connection of sources easier
- Channel isolation switch for unused or unmonitored channel
- Individual channel status indicators ; normal, fault and changeover

rear view



Application Schematic



Cascade AX3700 is more than 6 duty amps are installed



packing information

Carton : 540(W) x 140(H) x 270(D) mm
Weight : 3.6 kg
Qty : 1 units / carton



the emerging preference

AX700

monitoring and changeover

6 DUTY / 1 STANDBY AMPLIFIER CHANGEOVER PANEL



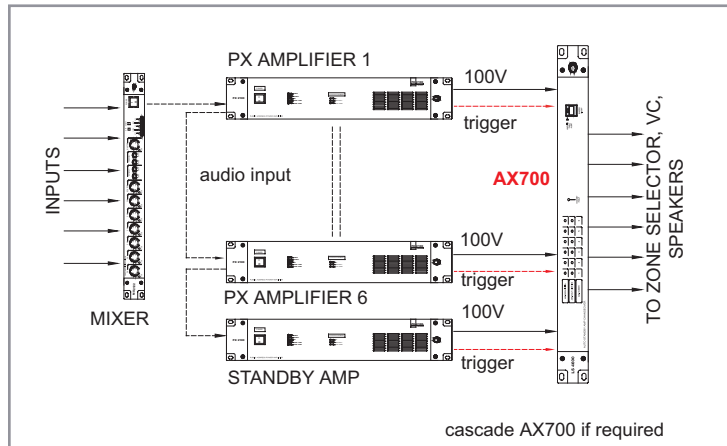
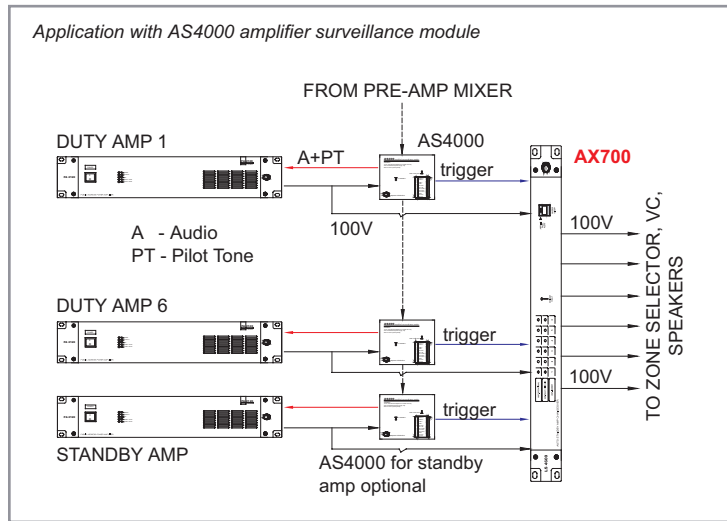
AX700 provides a platform for standby amplifier to take over failed duty unit in an automated changeover setup. Each unit caters for 6 duty and 1 standby amplifier but expandable to larger setup with a single standby power pack.

It shall be used with amplifiers with auto fault sensing (AFS) such as PX series and whereas normal amplifiers are used, Amperes AS4000 shall be installed at every duty unit. In such case, we recommend that Amperes AX3700 to be used instead.

AX700 has protection features that only allow a single takeover to prevent overloading.



Application Schematic



Features

- Cater for 6 duty and 1 standby amplifier
- Expandable for 1 standby to serve more than 6 duty units
- Overload protection by allowing only a single take over
- Prioritized changeover - unit with higher number is preferred for changeover
- Fault alert with LED indicator and switchable buzzer
- Compatible with most auto detection cards

Specifications

| | |
|--------------------|---|
| Operating voltage | 24V DC via PS9400 PSU |
| Power consumption | Standby : 82 mW, 3.4 A Operating : 1.3 W, 50 mA |
| Zone load rating | 400 W / 100V line per ch. |
| Amplifier inputs | 6 duty / 1 standby |
| Indications | Red LED for takeover Green - normal / non c/over |
| Switching mode | Dry contact activation by AS4000 / other contacts |
| Changeover alert | Buzzer, LED |
| Changeover section | Amplifier outputs only |
| Cable connection | Plug in connectors |
| Cable size | 2.5 mm sq |
| Dimensions (WxHxD) | 482 x 44 x 130 mm |
| Weight | 1.7 kg |



packing information

Carton : 540(W) x 105(H) x 270(D) mm
Weight : 2.10 kg
Qty : 1 units / carton



rear view



the emerging preference

AC3601

monitoring and changeover

6 DUTY / 1 STANDBY MANUAL AMP CHANGEOVER

Standby amplifier is normally required for a continuous and uninterrupted operation of a PA system in the event that any of the duty pack fails. A panel is required for the standby unit to take over a duty amp without having to change the input connection or redo the cabling works.

Amperes AC3601 is a changeover panel for 6 duty with 1 standby amplifier but is expandable for a single standby unit to cater for more than 6 duty packs.

Protection circuitry is embedded that only allowed a failed duty amplifier to be taken over by standby unit to prevent overloading. Priority features shall ensure higher numbered failed unit has preference for changeover.

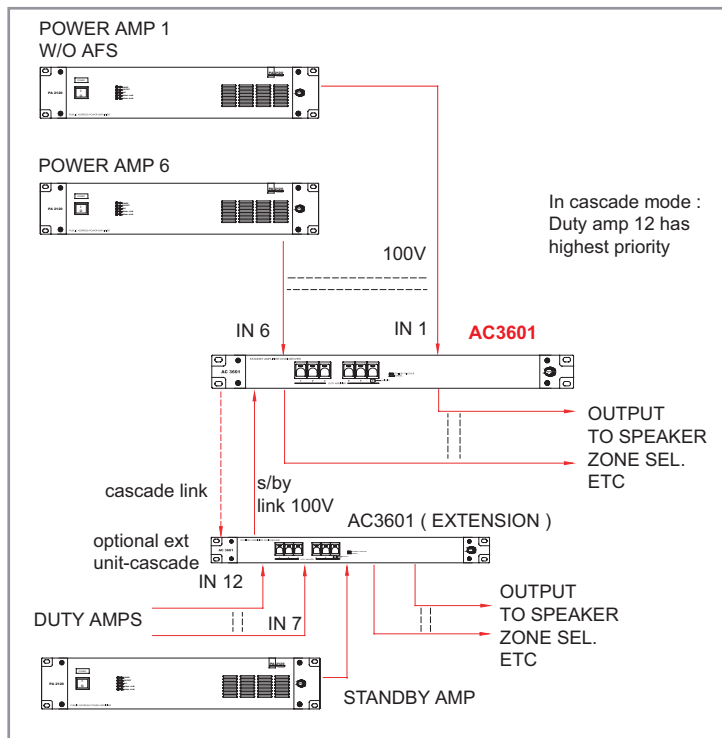


Product Options :

AX700
6 duty / 1 standby auto changeover panel to be used with Amperes AS4000

AX3700
6 duty / 1 standby auto fault changeover unit with self generated Pilot Tone and switch over for inputs and outputs.

Application Schematic

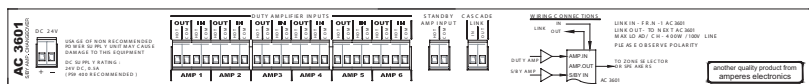


Features

- Cater for 6 duty and 1 standby amplifier
- Expandable for 1 standby to serve more than 6 duty units
- Overload protection by allowing only a single take over
- Prioritized changeover - unit with higher number is preferred for changeover
- Manual front panel changeover selection

Specifications

| | |
|-----------------------|--|
| Operating voltage | 24V DC via PS9400 PSU |
| Power consumption | Standby : 82 mW, 3.4 A Operating : 1.3 W, 50 mA |
| Zone load rating | 400 W / 100V line per ch. |
| Amplifier inputs | 6 duty / 1 standby |
| Changeover indication | Front switch LED |
| Switching mode | Via front panel switch |
| Cable connection | Plug in connectors |
| Cable size | 2.5 mm sq |
| Dimensions (WxHxD) | 482 x 44 x 130 mm |
| Weight | 1.6 kg |



rear view



packing information

Carton : 540(W) x 105(H) x 270(D) mm
Weight : 2.05 kg
Qty : 1 units / carton



the emerging preference

AM6000

monitoring and changeover

6 CH AMPLIFIER MONITOR PANEL

It is often useful to install amplifier monitor panel at rack for listening to the output of each amplifier and also to be used as a tool for sound output level calibration of different zones.

AM6000 shall be used to monitor the condition of amplifier outputs of 70 / 100V line which is equipped with level meter, amplifier output LED and speaker for audio monitoring.



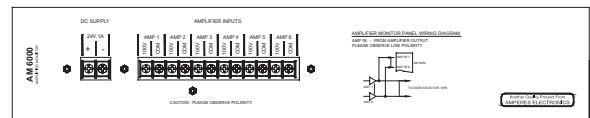
Features

- 6 inputs for 70 / 100 V line amplifier outputs
- Dual mode monitoring with continuous signal indicator
- Audio monitoring with volume control

Specifications

| | |
|--------------------|--|
| Operating voltage | 24V DC via PS9400 PSU |
| Power consumption | 50 mW |
| Amplifier inputs | 6 : 70 / 100V line |
| Monitoring mode | Audio : 1 W speaker with 5 presets Visual : 9 segment LED level meter LED for all channels |
| Dimensions (WxHxD) | 482 x 88 x 130 mm |
| Weight | 2.1 kg |

rear view



packing information

Carton : 540(W) x 140(H) x 270(D) mm
 Weight : 2.6 kg
 Qty : 1 units / carton

AS4000

AMPLIFIER SURVEILLANCE MODULE

AS4000 is used to monitor the status of 70 / 100 V line power amplifiers which do not have built in detection module. Every amplifier shall employ one AS4000 and the dry contact output from the unit shall then be connected to Amperes AX700. Repeating this link shall then form an automatic amplifier fault changeover / surveillance system.



Features

- Interval Pilot Tone injection ; reduces strain to amplifiers
- Works independently with or without availability of audio signal
- Low distortion to original audio signal
- Status monitoring via LED ; Pilot Tone and amplifier fault
- Compatible with most 70 / 100 V line amplifiers in the market

Specifications

| | |
|--------------------|-----------------------|
| Operating voltage | 24V DC via PS9400 PSU |
| Power consumption | 200 mW nominal |
| Input impedance | 10 K Ohm balanced |
| Output impedance | 600 Ohm balanced |
| Max audio input | 0.75 V |
| Max audio output | 1.2 V |
| Transmit interval | 10 seconds |
| Detection delay | 20 seconds |
| Recovery time | 30 seconds |
| Frequency response | 20 - 20 KHz |
| Detection output | NO and NC dry contact |
| Dimensions (WxHxD) | 120 x 96 x 28 mm |
| Weight | 300 gms |

Please refer to AX700 section for connection diagram
 No standard packing applicable



the emerging preference

SQ9715

power distribution series

7 CHANNEL SEQUENTIAL POWER SWITCHER

When rules of switching On or Off the stack of AV or PA equipments are neglected, it may cause damage to the component of the system, such as speakers, amplifiers or video projectors.

SQ9715 offers a solution to the switching sequence by switching on in sequence from channel 1 to 7 and vice versa during shutting down by a push of a switch. Two units of SQ9715 can be linked to form 14 channels setup ; one being Master and the other as Slave.



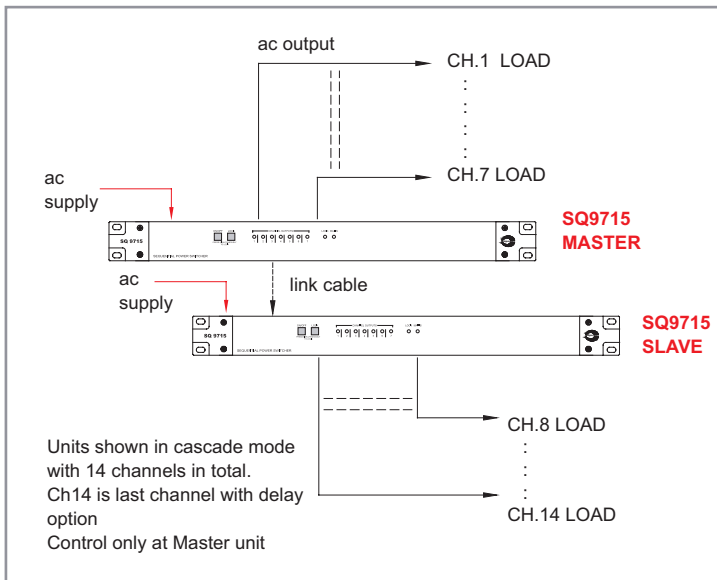
Suitable for
- PA System
- Sound System
- Video Projection

Features

- 7 channel with 6 A per channel ; total load 15 A maximum
- Cascade two units to form 14 channel setup
- Incremental switching from Ch. 1 to Ch. 7 (or Ch. 1 to Ch. 14 in cascade mode)
- Decremental switching from Ch. 7 to Ch. 1 (or Ch. 14 to Ch. 1 in cascade mode)
- Remote switching port via external noiseless contact
- AC output via IEC connectors
- Channel isolation via DIP switch
- Channel 7 with delay Off option for 2 minutes ; suitable for video projector powering
- Lock mode to avoid incidental switching
- Built in surge protection

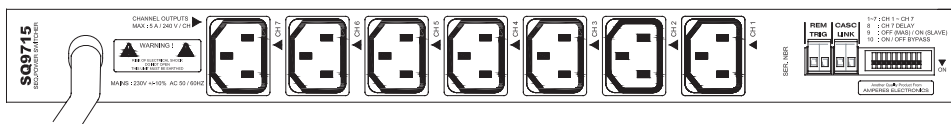
Specifications

| | |
|--------------------|---------------------------|
| Operating voltage | 230 / 240V ac |
| Power consumption | 50 mW (without load) |
| Output voltage | 230 / 240 V ac |
| Max load / channel | 6 A |
| Max total load | 15 A |
| Output connection | IEC female socket |
| Max cascade | 2 uts : total 14 channels |
| Surge protection | L-N, L-E, N-E. |
| Clamping voltage | 870V ac |
| Turn on sequence | Step 1 to 7 incremental |
| Turn off sequence | Step 7 to 1 decremental |
| Step timing | 2 seconds |
| Delay off option | Channel 7 via DIP switch |
| Delay off timer | 2 minutes |
| Switch lock | Via front switch |
| Indicators | AC mains, Ch. on, Lock |
| Dimensions (WxHxD) | 482 x 44 x 180 mm |
| Weight | 2.5 kg excl. accessories |



packing information

Carton Size : 540 (W) x 105 (H) x 270 (D)
Weight : 3.15 kg
Qty : 1 units / carton



rear view



the emerging preference

power distribution series

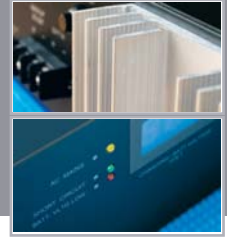
BC9730

24V DC BATTERY CHARGER

Back up battery bank is a must for an uninterrupted PA system in the event that the mains fails.

BC9730 is a 24V DC current regulated automatic battery charger which is suitable for charging of batteries up to 100 Ah. This constant voltage, current regulated charger shall at initial stage charges the battery bank with 3A and would eventually reduces the current upon reaching charging saturation level.

Various protection circuitries are featured in BC9730, to prevent immature failure to batteries as well as to the charger itself, thus making this unit an outstanding product in its class.

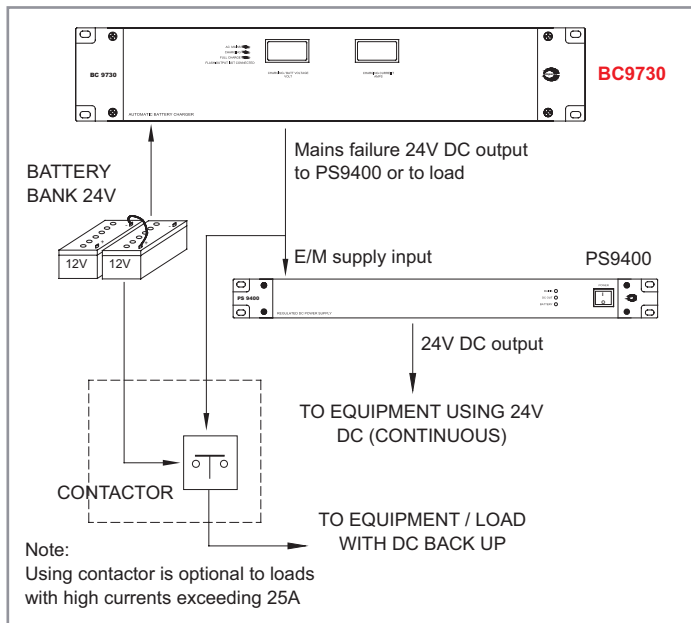


5 LEVEL OF PROTECTIONS
Ensuring safety & longer battery lifespan

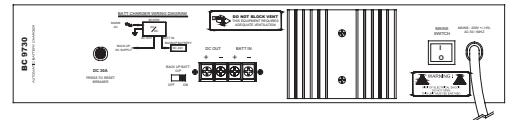
Features

- DC constant voltage charging for 24V battery bank
- 3A charging current with reducing rate vc charging time
- Digital volt and ammeter
- Built in surge protection and resetable fuse
- Output short circuit protection
- Thermal protection by cutting off charging voltage
- Rear mains switch to avoid unnecessary switching off the unit which would trigger false mains failure - an added protection to other equipment
- Battery disconnect switch for disengaging the batteries when not in used for a long period of time
- Low battery LED indication
- Auto low battery disconnection to avoid battery over discharging

Application Schematic



rear view



Specifications

| | |
|---------------------|---|
| Input voltage | 230 / 240V ac |
| Charging voltage | 27.3 ~ 27.8 V DC |
| Charging current | 3.3 A max with reducing current |
| No load consumption | 30 mW |
| Max consumption | 100 W |
| Protections | resetable fuse Built in surge suppression Low battery auto disconnection Thermal overheat protection Short circuit protection |
| Indications | AC mains, charging and low batt. |
| Displays | Voltage and current |
| E/M back up rating | 25 A max Use ext. relay / contactor if reqd. |
| Terminals | Batt. inputs, EM load |
| Dimensions (WxHxD) | 482 x 88 x 150 mm |
| Weight | 3.4 kg |



packing information

Carton Size : 540 (W) x 140 (H) x 270 (D) mm
 Weight : 4.1 kg
 Qty : 1 units / carton



the emerging preference

PS9400

power distribution series

24V DC REGULATED POWER SUPPLY

It is recommended that a regulated power supply unit is used through out the system for powering equipments running on 24V DC.

PS9400 is a rack mounted regulated 24V DC supply unit designed specially for PA application. Its built in changeover relay can be connected to back up supply to allow back up DC source to continue powering the equipments whenever mains failed.

PS9400 offers high voltage regulation with minimal heat dissipation with 4A output, thanks to its switching power supply circuitry.



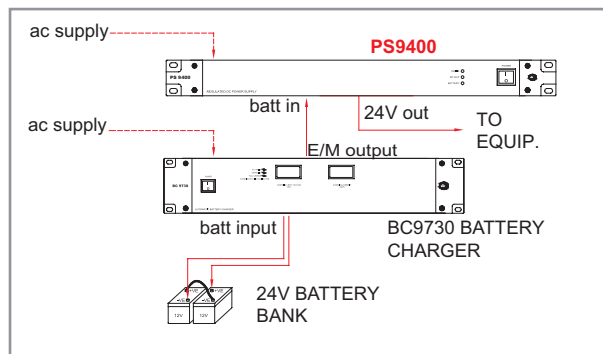
Features

- 24V DC 4A output switching power supply in compact 1 hu height
- Highly regulated output though mains fluctuates
- Manual reset output circuit breaker protection
- Built in surge protection
- Short circuit / overload protection
- Low heat dissipation
- Back up battery overriding terminal for continuous DC supply to system

Features

Specifications

| | |
|----------------------|--|
| Input ac voltage | 220 ~ 240V ac |
| Output voltage | 24V DC +/- 1% |
| Rating | 4A nominal ; max 4.5A |
| No load consumption | 50 mW |
| Efficiency | 83% |
| Indicators | AC mains, battery input, DC output |
| Protections | Built in surge protection Short circuit Overload (105% ~ 150%) Over voltage (115% ~ 135%) |
| Output DC protection | Manual reset circuit breaker |
| Terminals | Batt input and load ; barrier connector |
| Dimensions (WxHxD) | 482 x 44 x 150 mm |
| Weight | 2.25 kg |



rear view



packing information

Carton Size : 540 (W) x 105 (H) x 270 (D) mm
 Weight : 2.70 kg
 Qty : 1 units / carton

PS9000

24V DC SWITCHING POWER SUPPLY MODULE



PS9400 is the bare module of 24V DC power supply which incorporates features such as high efficiency regulation, short circuit, surge, over voltage and over load protections.

Dimensions (W x H x D) : 100 x 200 x 38 mm
Weight : 600 gms



the emerging preference

VC8000 Series

volume controllers / patch panel

SPEAKER VOLUME CONTROLLERS

VARIANTS

- VC8010 - 10W 100V LINE
- VC8030 - 30W 100V LINE
- VC8050 - 50W 100V LINE
- VC8100 - 100W 100V LINE

VC8000 has contemporary design with slim profile to match the installation environment. Various ratings are available from 10 to 100W 100V line and is suitable for 4 wire system.

Improved construction has made this series more robust against drops and mishandlings. Its slip grip contour knob prevents deliberate forceful overturn which could prematurely damage the unit.



Note :
Wall concealed installation shall require back enclosure with depth of 60 mm from finishing surface.

Back enclosures are available as optional item



Blank panel to cover up unused outlets

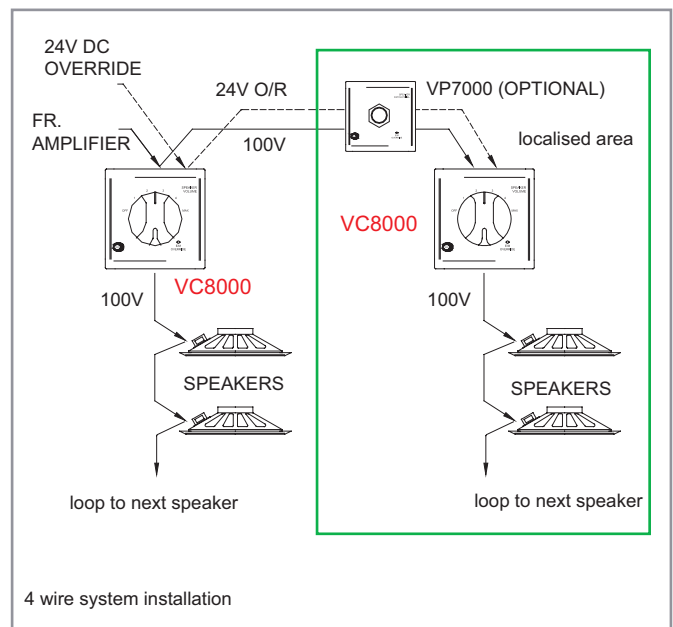
Features

- Suitable for 4 wire system : 2 for 100V line , 2 for 24V DC overriding signal
- Slim front plate design
- Slip grip contour knob to prevent abuse / overturn
- Built in overriding relay to allow emergency signal to bypass volume attenuation
- Overriding LED indicator whenever EM paging is activated
- 5 preset attenuation with OFF
- Large cable terminal block for ease of termination

Specifications

| | VC8010 / VC8030 / VC8050 / VC8100 |
|--------------------|--|
| Power rating | 10 / 30 / 50 / 100W 100V line |
| Overriding voltage | 24V DC |
| Overriding current | 15 mA per channel |
| Attenuation | 6 steps incl. OFF |
| Attenuation / step | 6 dB / step |
| Attenuation method | Auto transformer |
| Colour | White |
| Size (W x H x D) | 86 x 86 x 45 mm |
| Weight (kg) | VC8010 - 220 gms VC8030 - 220 gms VC8050 - 235 gms VC8100 - 345 gms |
| Optional item : | |
| Conceal enclosure | 77 x 77 x 60 mm |
| Surface enclosure | 85 x 85 x 60 mm |

Application Schematic



packing information

Unit Pack :
W x H x D : 80 x 110 x 70 mm
Weight : Model NW + 40 gms

Carton Pack :
Subject to quantity ordered



the emerging preference

volume controllers / patch panel

VC7000 Series

SPEAKER VOLUME CONTROLLERS

The proven VC7000 series of volume controllers had been installed in thousands of venues, providing a reliable and trusted medium of speaker volume attenuation. Various ratings are available, ranging from 5 watts to 150 watts 100V line.

Two version of face plates are available, 86 x 86 mm and 70 x 120 mm face plates to cater for different market segment in the region.

They are suitable for 4 wire system installation and 3 wire type shall be available upon request. Each of them is equipped with emergency overriding relay with LED indicator.

VARIANTS :

86 X 86 mm Face Plate Version

- VC7805 - 5W 8 Ohm resistive
- VC7005 - 5W 100V resistive
- VC7010 - 10W 100V resistive
- VC7030 - 30W 100V auto transformer
- VC7050 - 50W 100V auto transformer
- VC7100 - 100W 100V auto transformer
- VC7150 - 150W 100V auto transformer

70 x 120 mm Face Plate Version

- VC7005A - 5W 100V resistive
- VC7010A - 10W 100V resistive
- VC7030A - 30W 100V auto transformer
- VC7050A - 50W 100V auto transformer
- VC7100A - 100W 100V auto transformer



VC7000A - 70 X 120 MM FACE PLATE

Note :
Wall concealed installation shall require back enclosure with depth of 60 mm from finishing surface.

Back enclosures are available as optional item

VC7000 - 86 X 86 FACE PLATE



Features

- Suitable for 4 wire system : 2 for 100V line , 2 for 24V DC overriding signal
- 2 plate mounting for better looks
- Built in overriding relay to allow emergency signal to bypass volume attenuation
- Overriding LED indicator whenever EM paging is activated
- 5 preset attenuation with OFF
- Large cable terminal block for ease of termination

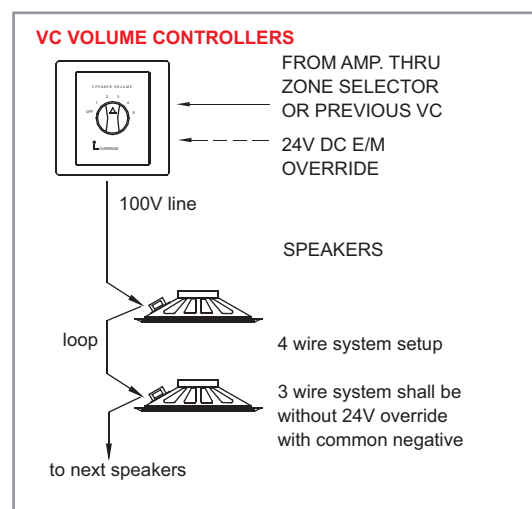
Specifications

| | |
|--------------------|--|
| Power rating | Refer to variants |
| Overriding voltage | 24V DC |
| Overriding current | 15 mA per channel |
| Attenuation | 6 steps incl. OFF |
| Attenuation / step | 6 dB / step |
| Attenuation method | VC7005 / 7010 - Resistive Others - Auto transformer |
| Colour | White |
| Size (W x H x D) | VC7000 - 86 x 86 x 40 mm VC7000A - 70 x 120 x 40 mm |
| Weight (kg) | VC7805 / 7005 / 7010 - 100 gms VC7010 / 7030 - 200 gms VC7100 / 7150 - 330 gms |

Optional item :

| | |
|-------------------|-----------------|
| Conceal enclosure | 77 x 77 x 60 mm |
| Surface enclosure | 85 x 85 x 60 mm |

Application Schematic



packing information

- Unit Pack (86x86)
- W x H x D : 80 x 110 x 70 mm
- Weight : Model weight + 40 gms
- Unit Pack (70 x 120)
- W x H x D : 80 x 130 x 70 mm
- Weight : Model weight + 43 gms
- Carton Pack :
- Size / weight subject to ordered qty



the emerging preference

VR7600 Series

volume controllers / patch panel

RACK MOUNTED ZONE VOLUME CONTROLLERS

VARIANTS

VR7605 - 6 ZONE X 50W
VR7610 - 6 ZONE X 100W

Customised rating for individual zone available upon request



Most installations may require different volume of sound output at different zones and do not want the output level being adjusted unnecessarily by unauthorised person. It is the reason why master volume for each individual zone are to be located in the control room or at the main rack.

Amperes VR7600 series are available as standard 50 or 100W 100V line per zone with each panel having 6 zones. Customised rating per zone shall be available upon request.

VR7600 is usually installed at the last exit point of the rack, i.e. after the speaker zone selector. If speaker line surveillance unit is available, VR should be installed before the line surveillance to avoid detection instability due to variation of impedance.

VR7605 - 6 X 50W RACK MOUNTED ZONE VOLUME CONTROLLER



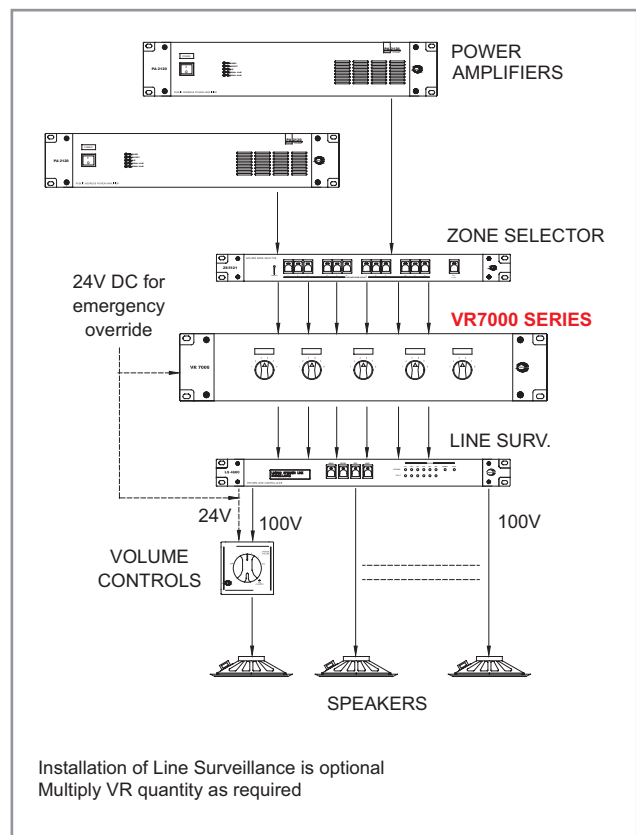
Features

- 6 zones with 50 / 100 W 100V line rating for each zone
- Customised zone rating option available
- Suitable for 4 wire system : 2 for 100V audio ; 2 for 24V DC overriding
- Built in overriding relay for emergency volume bypass at individual zone

Specifications

| | VR7605 / VR7610 |
|--------------------|----------------------------|
| Power rating | 50 / 100W 100V line / zone |
| Overriding voltage | 24V DC |
| Overriding current | 15 mA per channel |
| Attenuation | 6 steps incl. OFF |
| Attenuation / step | 6 dB / step |
| Attenuation method | Auto transformer |
| Colour | Black |
| Size (W x H x D) | 482 x 88 x 60 mm |
| Weight (kg) | 3.4 kg / 4.5 kg |

Application Schematic



packing information

Qty / Pack : 2
W x H x D : 540 x 105 x 270 mm
Weight : Model weight x 2 + 600 grams



the emerging preference

VP7000 Series

volume controllers / patch panel

LOCALISED SPEAKER PATCH PANEL



VP7501 is used to isolate a group of speakers (ie, in a meeting or conference room) from central paging system for local sound reinforcement by using a separate portable PA amplifier. Once patched to it, the local speakers shall be routed to the local amplifier output. However in the event of emergency or important announcement, the local paging shall be bypassed to allow central paging signal to go through by activating the built in overriding relay.

VARIANTS

- VP7501 - 100V LINE SPEAKER PATCH
- VP7810 - 100V-8 OHM SPEAKER PATCH

also available in 70x120 mm face plate

VP7810 works similarly but the local source is meant for 8 Ohm speakers, eg. to broadcast TV signal to a speaker in bathroom by using a mini amplifier. In event of emergency paging via central PA, the overriding relay shall allow the incoming 100V line signal to be broadcasted by converting it to match the speaker's impedance.

Features

- Suitable for 4 wire system : 2 for 100V line and 2 for 24V DC overriding signal
- Built in overriding relay to allow emergency signal to bypass the local paging
- Overriding LED indicator
- Also available in 70 x 120 mm face plate

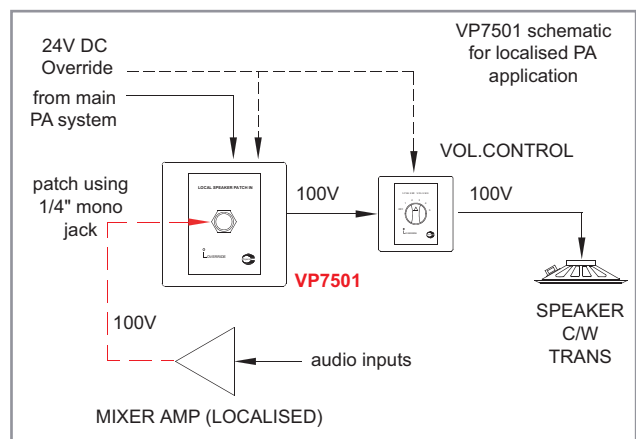
Specifications

| | VP7501 / VP7810 |
|----------------------------|--|
| Power rating | 50W 100V line / 10W 8 Ohm |
| Overriding voltage | 24V DC |
| Overriding current | 15 mA |
| Patch connection | VP7501 : 1/4" phone jack - front patch VP7810 : hardwired |
| Cablings | 4 wire system (2 audio ; 2 overriding) |
| Colour | White |
| Size (front panel) | 86 x 86 mm |
| | 70 x 120 mm available upon request |
| Optional enclosure : | |
| Concealed (W x H x D) | 77 x 77 x 60 mm |
| Surface (W x H x D) | 85 x 85 x 60 mm |
| Weight (excl. enclosure) | 70 / 180 gms |

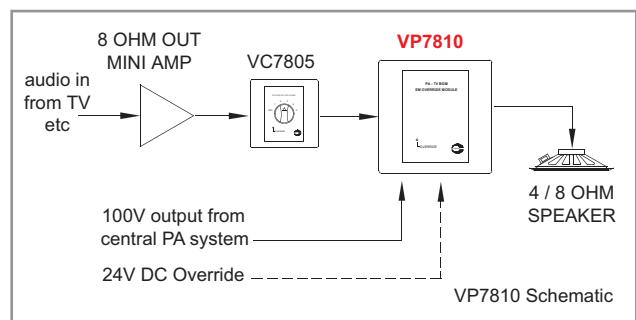


VP7501 - 50W 100V LINE SPEAKER PATCH PANEL

Application Schematic



VP7810 - 100V LINE - 8 OHM PATCH UNIT



packing information

Unit Packing :
W x H x D : 80 x 110 x 70 mm
Weight : Model weight + 40 grams

Carton Pack : Subject to quantity ordered



the emerging preference

speaker series

CS Series

CEILING SPEAKERS

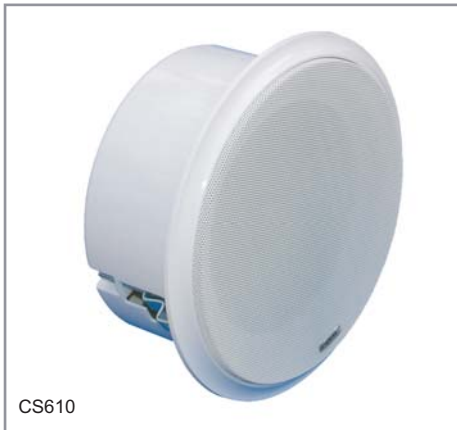
VARIANTS

CS510 - 5" 6W 100V LINE
CS610 - 6" 6W 100V LINE



These popular versions of ceiling speakers are available in 5" and 6" of driver size complete with matching transformer of three tapings ; 1, 3 or 6W 100V line. Back enclosures are supplied as integral part of the speakers made with quality ABS plastic, thus delivering satisfactory sound reproduction for PA application.

Installation of the speakers are made easy through its easy mounting mechanism.



CS610



packing information

CS510 : 885 (W) x 363 (H) x 300 (D) mm
17.5 kg 20 uts per carton
CS610 : 683 (W) x 473 (H) x 360 (D) mm
21.6 kg 18 uts per carton



CS510

Specifications

| SPEAKER | CS510 / CS610 |
|-----------------------------|------------------------------|
| Diameter | 5" (125mm) / 6" (150 mm) |
| Cone type | Dual cone |
| Impedance | 8 Ohm |
| Power rating | 6W nominal (max 10W) |
| Freq. response (+/- 5 dB) | 150 ~ 19 KHz / 120 ~ 19 KHz |
| SPL @1W/m (+/- 3 dB) | 93 / 92 dB |
| Magnet weight | 3 oz / 5.3 oz |
| Grille / enclosure | White metal / ABS plastic |

TRANSFORMER

| | |
|-----------------------|--------------------------|
| Tapping (100V line) | 1 / 3 / 6 W 100V line |
| Primary impedance | 10 K / 3.3 K / 1.6 K Ohm |
| Secondary impedance | 8 Ohm |

| | |
|------------------------------|--------------------------|
| Cutting hole dim (mm) | 140 / 175 mm |
| Overall size (dia x depth) | 177 x 130 / 230 x 102 mm |
| Weight | 715 / 785 gms |

When sound reproduction is more than just announcement, Amperes CS840 and CS620 are the right offer for the demanding Listeners Its co-axial speaker ensures wider frequency band delivering satisfying bass and treble effects.

It is also suitable for high bay installations with high SPL level and typical installation includes large lecture theatres, showrooms, hypermarket as well as exhibition halls. It can be used as complementary speakers for sound reinforcement in auditoriums.

Both models are equipped with matching transformer.

CS840 - 8" 40W 100V CO-AXIAL CEILING SPEAKER CS620 - 6" 20W 100V CO-AXIAL CEILING SPEAKER



Specifications

| | CS 620 / CS 840 |
|------------------------------|---------------------------------|
| Diameter | 6.5" (160 mm) / 8" (200 mm) |
| Cone type | Co-axial |
| Impedance (speaker) | 8 Ohm |
| Impedance (unit) | 500 / 250 Ohm |
| Power rating | 20W / 40W 100V line |
| Freq. response (+/- 5 dB) | 80 ~ 18 KHz / 90 ~ 19 KHz |
| SPL @1W/m (+/- 3 dB) | 88 / 90 dB |
| Grille / enclosure | Metal / ABS plastic |
| Colour | Off white / White |
| Cutting hole dim (mm) | 205 / 240 mm |
| Overall size (dia x depth) | 240 x 145 / 280 x 145 mm |
| Weight | 2.4 / 2.9 kg |



packing information

CS840 : 305 (W) x 305 (D) x 175 (H) mm
2.6 kg 1 ut per carton
CS620 : 265 (W) x 265 (D) x 170 (H) mm
3.1 kg 1 ut per carton



the emerging preference

speaker series

BS410 / DV410

SURFACE MOUNT SPEAKERS

BS410 is the latest addition to the speaker range with semi circle shape and higher rating of 4" speaker. They can be installed on the wall, vertically or horizontally as well as to ceilings.

Standard colour is RAL9016 pure white and other colours are available upon request.

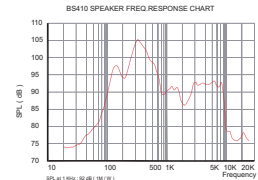


packing information

Carton Size : 540 (W) x 410 (H) x 300 (D) mm
Weight : 13.3 kg
Qty : 12 units / carton

BS410 - 10W 100V LINE SURFACE MOUNT SPEAKER

It is constructed using high quality ABS plastic with salt tested metal grille, to enable years of lasting installation. Standard power tapping available is 1 / 3 / 6 and 10W.



Specifications

| | |
|----------------------------|--------------------------------|
| Speaker : | |
| Speaker type | 100 mm dia dual cone |
| Power rating | 10 W 100 V Line |
| Impedance | 8 Ohm |
| Freq response (+/- 5 dB) | 100 - 18 kHz |
| Sensitivity | 92 dB @ 1 KHz |
| Magnet size | 7.5 oz |
| Baffle construction | ABS with metal grille |
| Weight | 1100 gms |
| Size (W x L x H) | 185 x 215 x 90 mm |
| Transformer : | |
| Input voltage | 70 / 100V line |
| Input impedance | 10 K / 3.3 K / 1.6 K / 1 K Ohm |
| Output impedance | 4 / 8 Ohm |

A classic yet favourite model which delivers sound reproduction within the requirement of PA installation. Available in white colour.

Suitable for horizontal or vertical mounting, installation at ceiling as well to wall. Standard power tapping : 1 / 3 / 6 W 100 V line.

DV410 - 6W 100V LINE SURFACE MOUNT SPEAKER



packing information

Carton Size : 590 (W) x 400 (H) x 303 (D) mm
Weight : 15.4 kg
Qty : 18 units / carton

Specifications

| | |
|----------------------------|--------------------------|
| Speaker : | |
| Speaker type | 100 mm dia dual cone |
| Power rating | 6W ; max 10W |
| Impedance | 4 Ohm |
| Freq response (+/- 5 dB) | 100 - 18 kHz |
| Sensitivity | 92 dB @ 1 KHz, 1 m |
| Magnet size | 3 oz |
| Baffle construction | ABS with metal grille |
| Weight | 750 gms |
| Size | 220 x 190 x 100 mm |
| Transformer : | |
| Input voltage | 70 / 100V line |
| Input impedance | 1.6 K / 3.3 K / 10 K Ohm |
| Output impedance | 4 / 8 Ohm |



the emerging preference

CH / FS Series

speaker series

COLUMN SPEAKERS

VARIANTS

- CH720 - 20W 100V LINE
- CH730 - 30W 100V LINE
- CH740 - 40W 100V LINE



Classic looks but with outstanding performance. Built ruggedly using aluminum die cast housing with power rating from 20 to 40W 100V line. Each model can be tapped at full or half power driven by 4" drivers with matching transformers.



Specifications

| SPEAKER | CH720 / CH730 / CH740 |
|----------------------------|---|
| Power rating | 20W / 30W / 40W 100V Line |
| Power tapping | 10/20W / 15/30W / 20/40W |
| Impedance (Ohm) | 1K/500 / 660/330 / 500/230 |
| Speaker type | 4.5" dual cone driver |
| Speaker qty / cabinet | 2 / 3 / 4 |
| Freq response (+/- 5 dB) | 85~15 KHz / 80~15 KHz / 75~15 KHz |
| SPL (1 W/m @ 1 KHz) | 91 / 93 / 95 dB |
| Housing | Aluminum diecast, epoxy coated |
| Dimensions (mm) | CH720 : 400 x 100 x 145 CH730 : 495 x 100 x 145 CH740 : 605 x 100 x 145 |
| Weight | 3.2 / 3.7 / 4.6 kg |
| Colour | Dark grey / front black wiremesh |



packing information

CH720 : 510 (W) x 363 (H) x 300 (D) mm
7.8 kg 2 uts per carton

CH730 : 683 (W) x 473 (H) x 360 (D) mm
9.0 kg 2 uts per carton

CH740 : 802 (W) x 563 (H) x 389 (D) mm
11.0 kg 2 uts per carton

Suitable for foreground music as well as speech with built in matching transformer. Available in two variants of 4" and 6" speaker with HF driver, 15 and 30W 100V line respectively.

Among applications are in clubs, restaurants, meeting room, showrooms etc.

FS415 - 4" 10W 100V FULL RANGE SPEAKER FS630 - 6" 30W 100V FULL RANGE SPEAKER

Specifications

| SPEAKER | FS415 / FS630 |
|----------------------------|--|
| Power rating | 10 / 30W 100V Line |
| Impedance (Ohm) | 1 K / 330 Ohm |
| Speaker type | 4" / 6" with tweeter |
| Freq response (+/- 5 dB) | 95 ~ 16 KHz / 85 ~ 18 KHz |
| SPL (1 W/m @ 1 KHz) | 85 / 88 dB |
| Housing | ABS cabinet |
| Dimensions (W x H x D) | FS415 : 160 x 220 x 140 mm (excl. bracket) FS630 : 215 x 295 x 190 mm |
| Weight (excl. bracket) | 1.2 x 2.8 kg |
| Colour | Black / White |



packing information

FS415 : 197 (W) x 175 (H) x 248 (D) mm
1.7 kg 1 uts per carton

FS630 : 250 (W) x 330 (H) x 215 (D) mm
3.3 kg 1 uts per carton



the emerging preference

speaker series

HS815 / HS830

HORN SPEAKERS

VARIANTS

HS815 - 15W 100V LINE
HS830 - 30W 100V LINE



8" and 12" rounded aluminum flare with beige colour are available for HS815 and HS830 respectively. Both models are equipped with multiple power selection via rotary switch mounted at the rear of the speakers.

Among applications includes schools, mosques, car parks and factories which can be used indoor or under shade at outdoors.

Specifications

| SPEAKER | HS815 / HS830 |
|---------------------------|--|
| Power rating | 15W / 30W 100V line |
| Impedance / Power : | 1 670 Ohm (15 W) / 330 Ohm (30 W) |
| | 2 1 K Ohm (10 W) / 670 Ohm (15 W) |
| | 3 2 K Ohm (5 W) / 1 K Ohm (10 W) |
| | 4 3.3 K Ohm (3 W) / 2 K Ohm (5 W) |
| | 5 10 K Ohm (1 W) / 3.3 K Ohm (3 W) |
| Freq response (+/- 5 dB) | 350 ~ 7 KHz / 300 ~ 10 KHz |
| SPL (1 W/m @ 1 KHz) | 103 dB / 105 dB |
| Flare material | Aluminum |
| Dim (Dia x Length) | 210 x 240 / 310 x 325 mm |
| Weight | 1.55 / 1.85 kg |
| Colour | Beige |



packing information

HS815 : 695 (W) x 465 (H) x 271 (D) mm
12 kg 6 uts per carton

HS830 : 665 (W) x 665 (H) x 355 (D) mm
10.6 kg 4 uts per carton



HS830



HS815

When a more directional sound projection is required, SP100 shall be the right choice, offering a clear and loud paging. Among applications are in corridors, tunnels, walkways or can be hanged from high ceiling to provide a more directional sound path.

SP100 is solidly constructed using aluminum casing which is surely able to withstand the harsh condition of environment.

Specifications

| | |
|---------------------------|----------------------------|
| Speaker driver | 5" speaker uni directional |
| Power rating | 10 watt 100V line |
| Impedance | 1K Ohm |
| Freq response (+/- 5 dB) | 180 ~ 15 KHz |
| SPL (1 W/m @ 1 KHz) | 88 dB (+/- 3 dB) |
| Body material | Aluminum |
| Dim (Dia x Length) | 140 x 195 mm |
| Bracket | 150 mm |
| Weight | 2 kg |
| Colour | White |

SP100 10W 100V LINE SOUND PROJECTOR



packing information

75 (W) x 75 (D) x 255 (H) mm
2.1 kg 1 uts per box



ENCLOSURES

- EC7012** : 70 x 120 mm Back enclosure for concealed mounting
- ES7012** : 70 x 120 mm Back enclosure for surface mounting
- EC9090** : 86 x 86 mm Back enclosure for concealed mounting
- ES9090** : 86 x 86 mm Back enclosure for surface mounting

All models with 60 mm depth, suitable for volume controllers with auto transformers. Enclosures are optional items and to be ordered separately from volume controllers / patch panels.



PATCH PANELS

- MR5000** : 5 Way rack mounted female XLR patch panel
- MR1000** : 10 Way rack mounted female XLR patch panel
- MP1000** : Single inlet wall mounted female XLR patch panel
- MP2000** : Double inlet wall mounted female XLR patch panel

Quality XLR connectors are used in the above series. Other brands of inlets are available upon request.

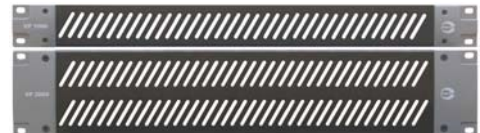


RACK PANELS

- BP1000** : 1 hu blank panel
- BP2000** : 2 hu blank panel
- VP1000** : 1 hu ventilation panel
- VP2000** : 2 hu ventilation panel

Available with standard Amperes mounting ears for harmonious look with other amperes equipments.

Panels are available in black powder epoxy coating.



POWER ADAPTORS

- PS1205** : 12V 0.5A ac / dc regulated power adaptor
- PS2405** : 24V 0.5A ac / dc regulated power adaptor

Regulated power adaptor for powering single unit of equipment. Equipments are not supplied with power adaptor and are to be ordered separately.

For larger system, we recommend that proper DC supply to be used with relay changeover for DC back up supply. ie. Amperes PS9400.



SEALED LEAD ACID BATTERIES

- 122600** : 12V 26 Ah Maintenance free SLA battery
- 124000** : 12V 40 Ah Maintenance free SLA battery
- 126500** : 12V 65 Ah Maintenance free SLA battery
- 121000** : 12V 100 Ah Maintenance free SLA battery

SLA batteries are sold in blocks of 24V (2 x 12V block). Above are common ratings widely used. Other ratings are available upon request.

We recommend that Constant Voltage with auto current reducing charger to be used, ie. Amperes BC9730.

NOTE :

We strongly advise against tapping power from batteries to supply to equipments requiring DC power supply as charging voltage may damage your equipments. Use separate power supply unit for the purpose.





In line with our product improvement policy, some models featured in previous catalogues shall differ as compared with this version. Improvements are made, new items are added and some models may be discontinued.

NEW MODELS INTRODUCED

- TD6240 - Rack mounted 24 zone data decoder
- MC2080 - 8 channel mic / source controller (Available Mid 2008)
- MB2000 - 60 / 120W 100V line basic mixer amplifiers (Available Mar 2008)
- PA310 - 10W 4 Ohm mini amplifier
- PA320 - 20W 4 Ohm mini amplifier
- PA360 - 60W 100V line remote booster amplifier
- SP100 - 10W 100V line sound projectors
- BS410 - 10W 100V line surface mount speakers
- CS Series co-axial ceiling speakers
- FS Series cabinet speakers

IMPROVED PRODUCTS

- PM1000 / 2000 Series desktop paging microphones
 - Introduction of new push button knobs
- ZS Series of speaker zone selectors
 - Introduction of new push button switches
- LS4600 speaker line surveillance
 - Improvement on the measuring and detection range & features (mid 2008)
- SQ9715 Switching power supply
 - Improvement on the processor software

DISCONTINUED OR TO BE DISCONTINUED ITEMS

- TD6800 - Data decoder to be replaced by TD6240
- CS810 - 8" 6W 100V line ceiling speaker



DEMO SET FOR MxP2188



the emerging preference

DM1010

inputs and data

DIGITAL MESSAGE RECORDER

DM1010 is a message recorder / playback unit which is an essential part of a Public Address system whenever a repetitive message is required for broadcasting, or whenever an automated announcement is initiated by external device.. ie. fire alarm monitoring system.

Among features available are multiple message storage bank which can store up to 6 different messages, external triggering mode and internal back up supply of up to 60 days.



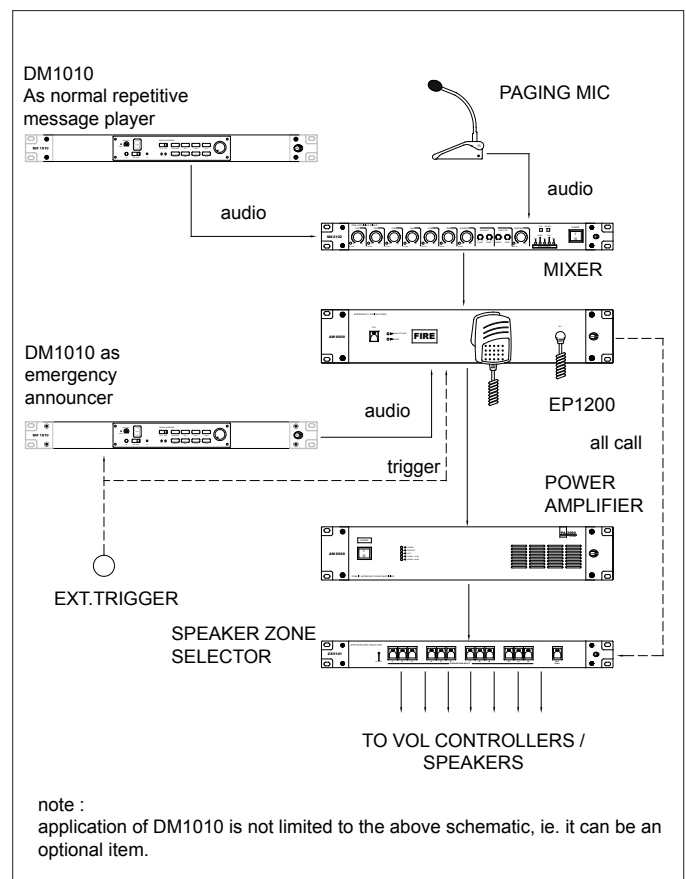
Features

- 16 KHz audio sampling frequency for acceptable sound quality
- 6 message recording bank
- Standard 16 MBits memory and expandable to 32 MBits for extended recording
- Recording directly from microphone via front of panel jack
- Repetitive (looping) playback and automatic external message triggering
- Back up battery of up to 60 days

Specifications

| | |
|----------------------|--|
| Operating voltage | 24V DC ; 0.5 A |
| Current consumption | 100mA operation ; 80 mA standby |
| Input | Mic : -50dB / 600 Ohm unbal Line : -10dB / 10 K Ohm unbal |
| Remote control input | 10 pin connector (M1 ~ M6 ; Start / Stop ; Repeat Busy) |
| Audio output | - 10dB unbal |
| Headphone output | 24 mW > 64 Ohm |
| Memory size | 16 Mbits sRM exp to 32 MBits |
| Message record time | Base : 4 min 28 secs total Extended : 8 min 56 secs total |
| Message back up | Max 60 days (16 MBits) |
| Sampling frequency | 16 KHz |
| Dimensions (WxHxD) | 482 x 44 x 130 mm |
| Weight | 1.8 kg |

Schematic Diagram



rear view



packing information

Qty per carton : 1 ut
 W x H x D : 540 x 105 x 270 mm
 Weight : 2.2 kg



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