Vocal Speaker
Speaks Volume

Speakers and volume controllers are usually inseparable pairs. Amperes has what you need for your hearing demands with varieties of speakers, from economical to cozier types. Also including the one which suits the specific needs such as application in tunnels, indoor and outdoor.

In meeting demands for looks that fits your environment, we have upgraded our popular volume controllers with dual tone design and we shall do more to blend aesthetically.

PR7400
Remote Paging Overriding Module

PR7400 is a module providing a relay contact whenever a paging is in progress, as well as converting the 100V line paging audio to line level, all in a box.

Relay contact : NO and NC relay of 1A contact allows local BGM source overriding which bypass local volume controller to allow central paging to pass through. This is useful during essential paging and whenever 24V DC overriding signal is not available in the cabling works.

100V to Line audio level converter : When it is required that the central paging to be broadcasted to local speakers utilizing the local amplifier / system, it provides an audio conversion with balanced line audio.
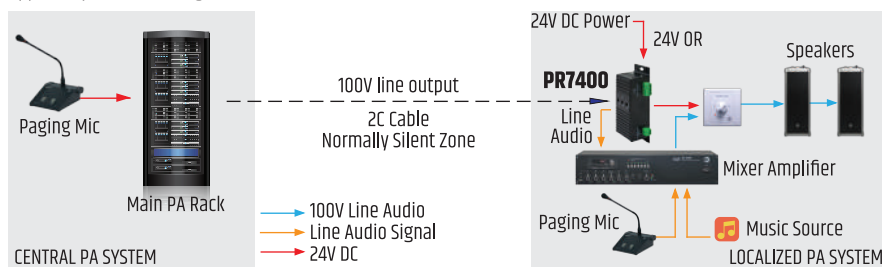
- 100V to line audio level **conversion**
- **Adjustable** line output volume
- Adjustable detection **sensitivity**, relay trigger **duration**
- DPDT with **NC** and **NO relay** for different output configuration
- **Modular** for flexible placement of unit such as in cabinets, risers, etc.
- Suitable for **remote overriding** for installations without 24V DC VC overriding cable
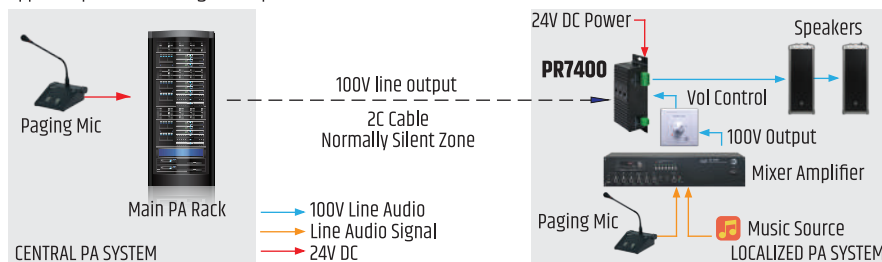
Technical Specifications

Voltage	24 DC via local adaptor
Consumption	2.1W (standby)
	2.5W (operating)
Paging input	50 / 70 / 100V line
Sensitivity threshold	5 ~ 80V rms
Detection frequency	80 ~ 5 KHz
Relay	NC and NO (DPDT)
Relay contact	1A @ 24V DC
Paging load / rating	100W @ 100V
Trigger duration	5 ~ 18 seconds
Audio output	line balanced
Output level	Mute -0 dB
Frequency response	150 ~ 18 KHz +/-3 dB
Isolation to 100V	37.5 dB
Indicators	Power, Relay trigger, Audio
Connections	Detachable Phoenix
Dimensions (W x H x D)	52 x 147 x 40 mm
Weight	200 g excl. adaptor

Application Schematic

App Example 1 : Overriding Local BGM Source

App Example 2 : Overriding Local Speaker

Packing Information

Carton size : 110 (L) x 85 (W) x 160 (H) mm

Gross weight : 0.75 kg (including adaptor)

1 unit per carton

VC7000 & VC8000 SERIES
Volume Controllers

NEW

Outlook !

VC7000 BLACK
version available

VC7000

VC7000A

VC8000

From contemporary to classic design, Amperes offers options for different installation needs. The variants are in three different designs and available in various ratings, ranging from 5 watts to 150 watts 100V line. They are suitable for 4 wire system installation with built in emergency overriding relay and overriding LED indicator.

Variants

VC7000 SERIES (86 x 86 mm)
VC7810	10W 8 OHM Resistive
VC7010	10W 100V Line Resistive
VC7030	30W 100V Line Auto Trans
VC7050	50W 100V Line Auto Trans
VC7100	100W 100V Line Auto Trans
VC7150	150W 100V Line Auto Trans

VC7000A SERIES (70 X 120 mm)
VC7010A	10W 100V Line Resistive
VC7030A	30W 100V Line Auto Trans
VC7050A	50W 100V Line Auto Trans
VC7100A	100W 100V Line Auto Trans

VC8000 SERIES (86 X 86 mm)
VC8010	10W 100V Line Resistive
VC8030	30W 100V Line Auto Trans
VC8050	50W 100V Line Auto Trans
VC8100	100W 100V Line Auto Trans

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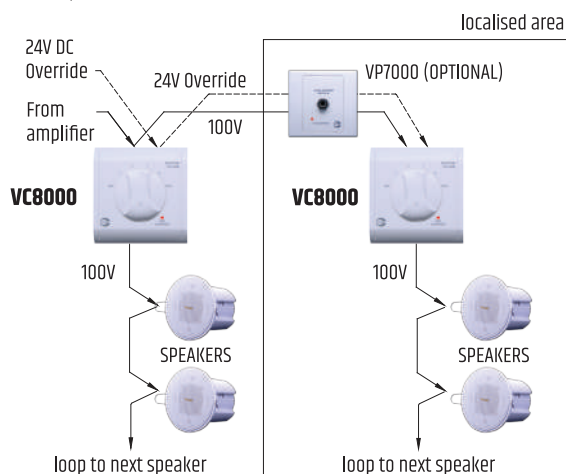
Technical Specifications

Power rating	Refer to variants
Overriding voltage	24V DC
Overriding current	15mA
Overriding indicator	Red LED
Attenuation	6 steps incl. OFF
Attenuation / step	6 dB / step (VC7010 with 3dB / step)
Attenuation method	VC7010 / 8010 - Resistive
	Others - Auto transformer
Colour	White RAL9016 / equivalent
Terminal cable	22 - 14 AWG
Size (W x H x D)	VC7000 / 8000 - 86 x 86 x 40 mm
	VC7000A - 70 x 120 x 40 mm
Weight	VC7810 / 7010 - 100 gms
	VC7030 / 7050 - 240 gms
	VC7100 / 7150 - 400 gms
	VC8010 - 140 gms
	VC8030 - 280 gms
	VC8050 - 280 gms
	VC8100 - 280 gms
Back Enclosure (Optional) :	
Conceal enclosure	77 x 77 x 60 mm (Part nbr : EA9090)
Surface enclosure	85 x 85 x 60 mm (Part nbr : ES9090)

Application Schematics

4 wire system installation

localised area

24V DC Override

24V Override

From amplifier

100V

VP7000 (OPTIONAL)

VC8000

VC8000

100V

100V

SPEAKERS

SPEAKERS

loop to next speaker

loop to next speaker

VP7501 VP7810
Speaker Patch

improved

VP7501 Local Speaker Patch Panel

VP7501 is used to isolate a group or a zone of speakers such as in meeting room, restaurant, outlets in shopping mall, etc., from central PA system to allow a separate localized PA amplifier to utilize those local speakers. However, during essential paging from central PA, VP7501 shall allow the broadcast to bypass the local audio by triggering an overriding relay at the panel through 24V DC sent by central system.

VP7810 100V - 8 Ohm Speaker Patch Unit

VP7810 works similarly as VP7501 but the local speaker shall be 8 Ohm. With essential broadcast from central PA together with 24V DC VC overriding signal, it shall trigger the overriding relay and step down the 100V audio to suit the 8 Ohm speaker to avoid damaging it.
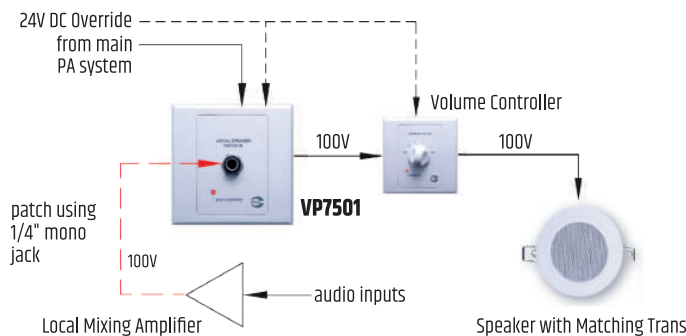
Among common application is in hotel TV music extension to bathroom speaker of 8 Ohm. VP7810 is used in between them for interface with central PA system.
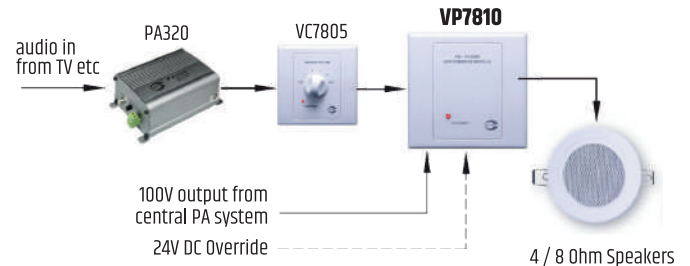
Technical Specifications

	VP7501	VP7810
Power rating	100W 100V Max	10W 8 Ohm
Overriding voltage	24V DC : 15 mA	
Patch connection	1/4" phone jack-front patch	Hardwired
Cabling	4 wire system (2 audio ; 2 overriding)	
Dimensions (W x H x D)	86 x 86 x 40 mm 70 x 120 mm face plate available upon request	
Weight	80 g	200 g
Optional back enclosure :		
Concealed (W x H x D)	77 x 77 x 60 mm	
Surface (W x H x D)	85 x 85 60 mm	

Application Schematic

Application for VP7501

24V DC Override from main PA system

Volume Controller

100V

100V

VP7501

patch using 1/4" mono jack

100V

Local Mixing Amplifier

audio inputs

Speaker with Matching Trans

Application for VP7810

audio in from TV etc

PA320

VC7805

VP7810

100V output from central PA system

24V DC Override

4 / 8 Ohm Speakers

Packing Information

Carton size : 550 (L) x 425 (W) x 220 (H) mm

Gross weight : VP7501 - 10.5 kg
                : VP7810 - 23.1 kg

90 units per carton

VR7600
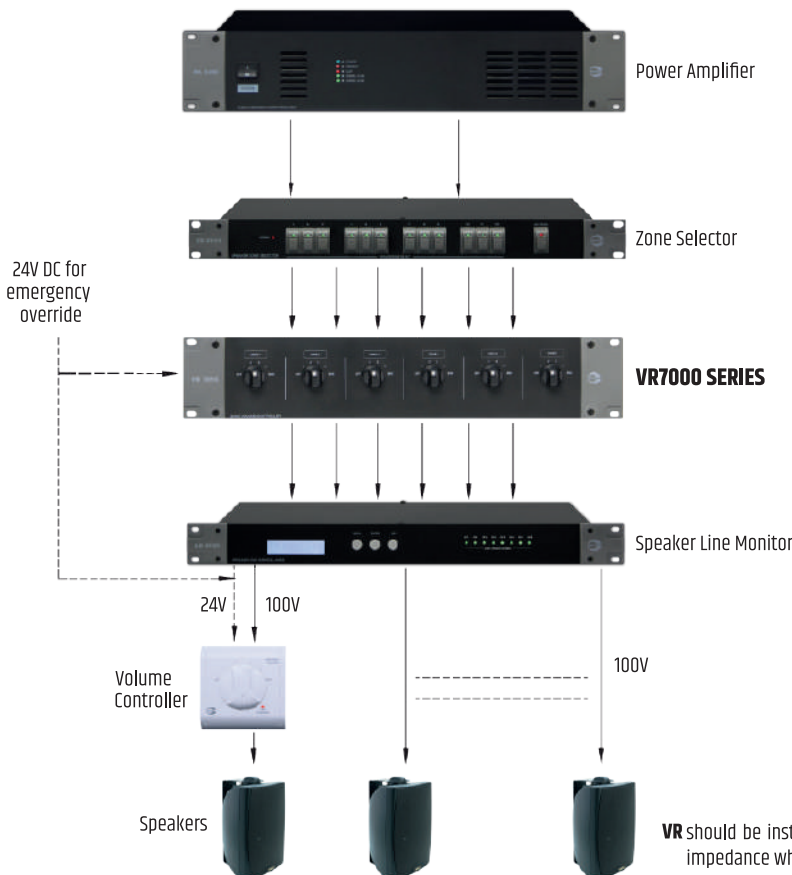## Rack Mounted Zone Volume Controller

VR7600 is a rack mounted, 6 zone volume controller which is normally installed at main rack to enable centralized zone volume settings. They are available in variants of 50W, 100W or 150W 100V as standard ratings. Customized zone rating is also available upon request.

- **- Customized** zone rating option available
- **-** Built in **overriding** relay for emergency volume bypass
- **- 6 zones** with 50 / 100 / 150W 100V line rating for each zone
- **-** Suitable for **4 wire system** : 2 for 100V audio & 2 for 24V DC overriding

Application Schematic

Power Amplifier

24V DC for emergency override

Zone Selector

VR7000 SERIES

Speaker Line Monitor

24V   100V

100V

Volume Controller

Speakers

VR should be installed before LS4808 / 4816 to avoid false fault detection due to variation of impedance whenever volume is adjusted.

Technical Specifications

VR7605 / VR7610 / VR7615

Power rating	50 / 100 / 150W 100V line / zone
Overriding voltage	24V DC
Overriding current	15mA per channel
Attenuation	6 steps incl. OFF
Attenuation / step	6 dB / step
Attenuation method	Auto transformer
Dimension (W x H x D)	482 x 88 x 60 mm
Weight	2.10 / 3.10 / 3.20 kg

Packing Information

Carton size : 560 (L) x 300 (W) x 175 (H) mm

Gross weight : 5.50 / 7.10 / 7.60 kg

2 units per carton

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CS210 CS510 CS610 CS610B
Dual Cone Ceiling Speakers

CS610 / CS610B
6" 6W 100V / 6" 10W 100V

CS610 FR - Fire Retardant Enclosure

CS510
5" 6W 100V

CS510 FR - Fire Retardant Enclosure

CS210
2" 6W 100V

CS210 / 510 / 610 are general purpose speakers suitable for paging and BGM applications which not only deliver the required audio quality but also fits into every installation with its contemporary outlooks. It is designed with slim edges for cozy appearance and the clamping mechanism that provide ease of installation works.

- **High quality** ABS enclosure
- **Spring clip** for ease of installations
- **Slim edge** design with low side profile
- Option for installation **without enclosure**
- **Fire retardant (FR)** grade materials available as an option

spring clip installation

Technical Specifications

	CS210	CS510	CS610	CS610B
Power rating	6W 100V line			10W 100V line
Diameter	2" (51 mm)	5" (125 mm)	6" (150 mm)	
Cone type	Single cone	Dual cone		
Impedance (Ohm)	8			
Freq response @ 1KHz +/- 3dB	160 ~ 15 KHz	150 ~ 19 KHz	120 ~ 19 KHz	
SPL @ 1W / m (+/-3dB) 1 KHz	90 dB	92 dB		
Dispersion angle (1KHz +/-3 dB)	120	160	165	165
Tapping (100V line)	1.5 / 3 / 6W			1 / 3 / 6 / 10W
Primary impedance (Ohm)	6.7k / 3.3k / 1.67k			10k / 3.3k / 1.67k / 1k
Secondary impedance (Ohm)	8			
Grille / enclosure	Aluminium grille / ABS enclosure		Metal grille / ABS enclosure	
Cutting hole diameter	85 mm	145 mm	185 mm	
Overall size (diameter x height)	110 x 110 mm	165 x 110 mm	205 x 110 mm	
Weight	500 g	780 g	840 g	850 g
Colour	White			

Packing Information

CS210 :
Carton size : 570 (L) x 230 (W) x 290 (H) mm
Gross weight : 11.30 kg
20 units per carton

CS510 :
Carton size : 690 (L) x 350 (W) x 400 (H) mm
Gross weight : 19.60 kg
24 units per carton

CS610 / 610B :
Carton size : 660 (L) x 440 (W) x 430 (H) mm
Gross weight : 19.50 / 19.75 kg
20 units per carton

CS343 CS515 CS516 CS606

Dual Cone Ceiling Speakers

CS515
5" 6W 100V Line

CS515 FR
Fire Retardant ABS
Material

CS515 is a general purpose ceiling speaker with ABS honeycomb grille and back enclosure . It is suitable for BGM and Paging applications. With ABS enclosure and baffle, issues on rust / chemical erosions is avoided. Fire retardant enclosures are available as an option (CS515FR)

CS343
4" 6W 100V Line

IP65 rated

CS343 is driven by a 4" dual cone speaker with dual taps for 3 and 6W 100V line. It is made of quality ABS enclosure and aluminium grille and is suitable for high humidity areas such as bathrooms and salty environment as well as clean room areas.

CS606
6" 6W 100V Line with metal enclosure

CS606 is 6" dual cone speaker with back metal enclosure, aluminium grille and has power taps of 1.5, 3 and 6W 100V line. This model shall be suitable for installations that demand fire resistant version of dome.

CS516
5" 6W 100V Line

CS516 FR
Fire Retardant ABS
Enclosure

CS516 is a general purpose surface mount speaker suitable for direct installations at ceiling slabs in which recessed type of speakers are not suitable.

Technical Specifications

	CS606	CS515	CS516	CS343
Power rating	6W 100V line nominal (max 10W)			
Diameter	6" (150 mm)	5" (125 mm)		4" (100 mm)
Cone type	Dual Cone			
Impedance (Ohm)	8			
Freq response @ 1KHz +/- 3dB	150 ~ 16 KHz	150 ~ 17 KHz		150 ~ 18 KHz
SPL @ 1W / m (+/-3dB) 1 KHz	91 dB	92 dB		90 dB
Power taps (100V line)	1.5 / 3 / 6W			3 / 6W
Primary impedance (Ohm)	6.7k / 3.3k / 1.67k			3.3k / 1.67k
Secondary impedance (Ohm)	8			
Grille / enclosure	Aluminium / mild steel	ABS Plastic		Aluminium / ABS
Cutting hole diameter	165 mm	145 mm	n/a	120 mm
Overall size (diameter x height)	200 x 70 mm	175 x 95 mm	222 x 65 mm	140 x 130 mm
Weight	780 g	620 g	660 g	850 g
Colour	White		White / Black	White

Packing Information

CS515 / CS515FR
Carton size : 705 (L) x 400 (W) x 190 (H) mm
Gross weight : 11.30 kg
16 units per carton

CS343
Carton size : 370 (L) x 370 (W) x 600 (H) mm
Gross weight : 16.30 kg
16 units per carton

CS606
Carton size : 590 (L) x 400 (W) x 310 (H) mm
Gross weight : 16.80 kg
20 units per carton

CS516
Carton size : 550 (L) x 420 (W) x 220 (H) mm
Gross weight : 11.40 kg
16 units per carton

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CS520
5" 20W 100V Co-axial with Power Taps

CS630
6" 30W 100V Co-axial with Power Taps

CS520 and **CS630** are both premium co-axial ceiling speakers, both available with metal back enclosure and with adjustable power taps. Suitable for the need of quality sound production, both in BGM and Paging.

Packing Information

CS520 Carton size - 510 (L) x 500 (W) x 420 (H) mm
Gross weight - 15 kg
8 units per carton

CS630 Carton size - 570 (L) x 560 (W) x 430 (H) mm
Gross weight - 23.30 kg
8 units per carton

CS620
6" 20W 100V Co-axial

CS840
8" 40W 100V Co-axial

CS620 and **CS840** are available in 6" and 8" fixed power ratings, offering more economical co-axial ceiling types while able to deliver satisfactory sound productions, both in Paging and BGM. Back enclosure is made of ABS.

Packing Information

CS620 Carton size - 540 (L) x 540 (W) x 375 (H) mm
Gross weight - 23 kg
8 units per carton

CS840 Carton size - 630 (L) x 630 (W) x 390 (H) mm
Gross weight - 21.4 kg
8 units per carton

CS518
5" 20W 100V Co-axial with Power Taps

CS518 matches other fittings at ceiling when all others are in square or rectangular shapes and thus blends nicely with exceptional sound reproduction. Suitable for boutiques, residences, offices etc.

Packing Information

Carton size - 580 (L) x 310 (W) x 510 (H) mm
Gross weight : 17 kg
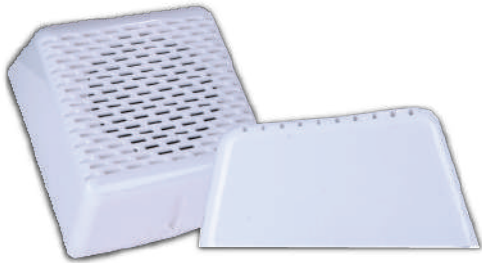8 units per carton

Technical Specifications

	CS520	CS630	CS620	CS840	CS518
Power rating	20W 100V	30W 100V	20W 100V	40W 100V	20W 100V
Diameter	5" (125 mm)	6.5" (165 mm)	6.5" (165 mm)	8" (200 mm)	5" (125 mm)
Cone type	Co-axial with 1" tweeter				
Driver impedance	8 Ohm				
Frequency response	100 ~ 18 KHz	75 ~ 18 KHz	80 ~ 18 KHz	90 ~ 19 KHz	100 ~ 18 KHz
Sensitivity @ 1 KHz/ W / m	86 dB	88 dB	88 dB	90 dB	85 dB
Max SPL at rated output	99 dB	102 dB	101 dB	106 dB	98 dB
Power taps (100V line)	2.5 / 5 / 10 / 20W	3.8 / 7.5 / 15 / 30W	20W 100V	40W 100V	2.5 / 5 / 10 / 20W
Primary impedance (Ohm)	4k / 2k / 1k / 500	2.6k / 1.3k / 667 / 334	500	250	4k / 2k / 1k / 500
Secondary impedance	8 Ohm				
Grille / enclosure	Aluminium / Metal		Metal / ABS		Metal / Metal
Cutting hole diameter	170 mm	185 mm	205 mm	240 mm	150 x 150 mm
Dimensions (diameter x height)	205 x 145 mm	230 x 150 mm	240 x 142 mm	280 x 142 mm	180 x 180 x 135 mm
Net weight	1.70 kg	2.15 kg	2.40 kg	2.10 kg	1.80 kg
Colour	White				

BS506
5" 6W 100V Line

BS506 is driven by 5" dual cone driver with power taps of 1, 3, 6W 100V. The enclosure is fully ABS thus eliminating the risk of rust for high humidity environment.
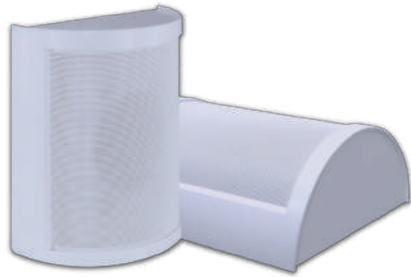
BS506 FR : Fire Retardant

BS508
5" 10W 100V Line

BS508 is powered by 5" dual cone driver with nominal power of 10W 100V line, available power taps are 1, 3, 6 and 10W. It is slimmer for better looks and has installation method which prevents vandalism.

BS508 FR : Fire Retardant

BS410
4" 10W 100V Line

BS410 is available in white and is suitable for installations in small areas. It is driven by 4" dual cone driver with power taps of 1, 3, 6 and 10W 100V, providing clarity of voice announcements as required in EVAC systems.

DV410
4" 6W 100V Line

DV410 is a favorite for its classic outlooks, suitable for small area installations and can be mounted vertical or horizontally. It is driven by 4" driver of 6W 100V with power taps of 1, 3 and 6W.

Technical Specifications

	BS506	BS508	BS410	DV410
Power rating	6W 100V	10W 100V	10W 100V	6W 100V
Diameter	5"		4"	
Cone type	Dual Cone			
Impedance (Ohm)	8			
Freq response @ 1KHz +/- 3dB	100 ~ 15 KHz	120 ~ 18 KHz	100 ~ 16 KHz	100 ~ 18 KHz
SPL @ 1W / m (+/-3dB) 1 KHz	93 dB	94 dB	92 dB	90 dB
Power taps (100V line)	1 / 3 / 6W	1 / 3 / 6 / 10W	1 / 3 / 6 / 10W	1 / 3 / 6W
Primary impedance (Ohm)	10k / 3.3k / 1.6k	10k / 3.3k / 1.6k / 1k	10k / 3.3k / 1.6k / 1k	10k / 3.3k / 1.6k
Secondary impedance (Ohm)	8			
Grille / enclosure	ABS Plastic	Aluminium / ABS	Metal / ABS	
Overall size (W x H x D)	172 x 195 x 105 mm	220 x 130 x 70	185 x 215 x 90 mm	195 x 215 x 105 mm
Weight	780 g	720 g	760 g	740 g
Colour	White			

Packing Information

BS506 :
Carton size : 550 (L) x 400 (W) x 180 (H) mm
Gross weight : 10 kg
12 units per carton

BS508 :
Carton size : 460 (L) x 460 (W) x 320 (H) mm
Gross weight : 22.25 kg
24 units per carton

BS410 :
Carton size : 460 (L) x 420 (W) x 410 (H) mm
Gross weight : 16.70 kg
20 units per carton

DV410 :
Carton size : 460 (L) x 420 (W) x 410 (H) mm
Gross weight : 16.70 kg
20 units per carton

FS425
4" 20W 100V

IP65 rated

FS425 is a compact full range speaker with IP65 rating suitable for indoor and outdoor installations. It is recommended for restaurants, pub or cafe, pool sides etc. It is available in black colour.

FS338
2 x 4" 40W 100V

FS338 is a multi purpose speaker, suitable for background music as well as speech. It is driven by dual 4" speakers arranged in curved enclosure, providing better vertical coverage, for both near and far.

NEW

FS650
6" 50W 100V

FS420 (B / W)
4" 20W 100V (Black / White)

FS640 (B / W)
6" 40W 100V Line

FS650 is available in black enclosure and powered by 6" driver and tweeter with 50W 100V line rating. With its higher power and wider frequency response, it shall fit to any environment that demands the sound of bass and loudness.

FS420 / FS640 are classic full range speakers available in two variants as well in black or white colour to suit installation area. Both versions have power tap rotary switch to provide suitable loudness to be coverage areas.

Technical Specifications

	FS425	FS420	FS640	FS338	FS650
Power rating	20W 100V		40W 100V		50W 100V
Diameter	4" (100 mm)		6" (150 mm)	2 x 4" (100 mm)	6" (150 mm)
Speaker type	2 way speaker with tweeter				
Impedance (Ohm)	8				
Freq response @ 1KHz +/- 6dB	105 ~ 18 KHz	100 ~ 18 KHz	70 ~ 18 KHz	70 ~ 16 KHz	70 ~ 17 KHz
SPL @ 1W / m (+/-3dB) 1 KHz	87 dB	89 dB	88 dB	87 dB	90 dB
Power tap (100V line)	10 / 20W	2.5 / 5 / 10 / 20W	5 / 10 / 20 / 40W	5 / 10 / 20 / 40W	5 / 15 / 30 / 50W
Primary impedance (Ohm)	1k / 500	4k / 2k / 1k / 500	2k / 1k/ 500 / 250	2k / 1k / 500 / 250	2k / 667 / 333 / 200
Secondary impedance (Ohm)	8			4	8
Grille / enclosure	ABS / Aluminium	ABS enclosure with metal grille			
Overall size w bracket (W x H x D)	165 x 270 x 170 mm	160 x 225 x 165 mm	215 x 284 x 190 mm	137 x 385 x 262 mm	230 x 200 x 340 mm
Weight	2.30 kg	1.95 kg	3.70 kg	3.50 kg	4.50 kg
Colour	Black	White and Black		Black	

Packing Information

FS425 :
Carton size : 370 (L) x 370 (W) x 600 (H) mm
Gross weight : 20.30 kg
8 units per carton

FS420 :
Carton size : 355 (L) x 340 (W) x 260 (H) mm
Gross weight : 8.70 kg
4 units per carton

FS338 :
Carton size : 555 (L) x 295 (W) x 165 (H) mm
Gross weight : 7.65 kg
2 units per carton

FS640 :
Carton size : 470 (L) x 420 (W) x 330 (H) mm
Gross weight : 16.40 kg
4 units per carton

FS650:
Carton size : 515 (L) x 490 (W) x 410 (H) mm
Gross weight : 20.60 kg
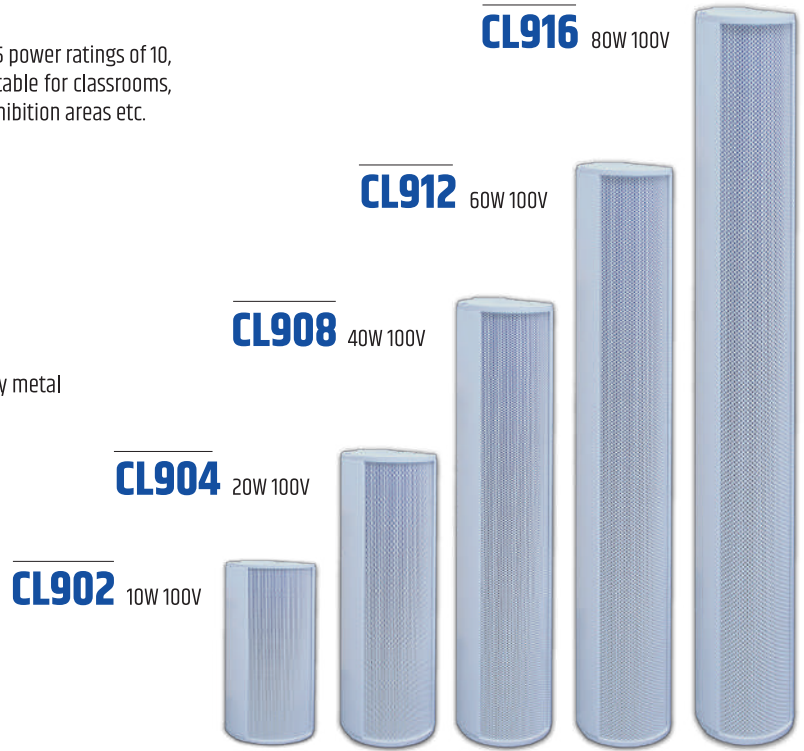4 units per carton

amperes

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63

CL900 SERIES
Slim Column Speakers

Built ruggedly with aluminium die extrusion housing and is available 5 power ratings of 10, 20, 40, 60 and 80W 100V line, each with dual power taps. They are suitable for classrooms, hyper markets, mosques, ballroom, factories, passenger terminals, exhibition areas etc.

- **Slim design** to match environment or to be hidden from view
- **Epoxy** coated grille
- **Engineered** for speech and BGM clarity
- **Multi-way mounting bracket** for CL902, CL904, CL908 and heavy duty metal bracket for CL912 and CL916.

CL916 80W 100V

CL912 60W 100V

CL908 40W 100V

CL904 20W 100V

CL902 10W 100V

Technical Specifications

	CL902	CL904	CL908	CL912	CL916
Power rating	10W 100V	20W 100V	40W 100V	60W 100V	80W 100V
Speaker components	2 X 2"	4 X 2"	8 X 2"	12 X 2"	16 X 2"
Transformer tapping (100V)	6 / 10W	10 / 20W	30 / 40W	50 / 60W	70 / 80W
Primary impedance (Ohm)	1.6k / 1k	1k / 500	330 / 250	200 / 166	143 / 125
SPL descriptions	87 +/- 3 dB		88 +/- 3 dB	89 +/- 3 dB	94 +/- 3 dB
Freq response @ 1KHz +/-3 dB	200 ~ 16 KHz	200 ~ 17 KHz	240 ~ 16 KHz	220 ~ 17 KHz	220 ~ 18 KHz
Dimensions (W x H x D)	79 x 190 x 89 mm	79 x 350 x 89 mm	79 x 567 x 89 mm	79 x 782 x 89 mm	79 x 1128 x 89 mm
Material	Aluminium body ; powder epoxy metal grille				
Weight with bracket	1.10 kg	1.50 kg	2.50 kg	3.20 kg	5.80 kg

Packing Information

CL902 :
Carton size : 255 (L) x 235 (W) x 170 (H) mm
Gross weight : 2.70 kg
2 units per carton

CL904 :
Carton size : 400 (L) x 235 (W) x 155 (H) mm
Gross weight : 3.90 kg
2 units per carton

CL908 :
Carton size : 605 (L) x 245 (W) x 175 (H) mm
Gross weight : 6.20 kg
2 units per carton

CL912 :
Carton size : 830 (L) x 245 (W) x 170 (H) mm
Gross weight : 7.80 kg
2 units per carton

CL916 :
Carton size : 1160 (L) x 240 (W) x 195 (H) mm
Gross weight : 13.00 kg
2 units per carton

IP65 rated

CL700 Series are available in variants of 40W and 80W 100V line with dual power taps. It is built ruggedly with aluminium housing and rust free front aluminum grille. With its IP65 rating, they are suitable for both indoor and outdoor installations.

They are driven by powerful 4" drivers and have been carefully designed and tuned to deliver low frequency and extra emphasis on the mid range, which is important to deliver announcement and EVAC messages.

With its wide range frequency response, it is suitable for applications in hall of prayers, lecture halls, community centers, theme parks and others which demand both music and paging sound quality.

- **Weatherproof** enclosure with certified IP65 rating
- Ruggedly built with **aluminum** body
- Epoxy coated aluminum grille for **rust free** installation
- **Engineered** for speech and BGM clarity
- **Contemporary design** to match environment
- **Heavy duty** mounting bracket with pan and tilt

CL780
80W 100V

CL740
40W 100V

Universal heavy duty speaker bracket

The heavy duty bracket allows the speaker to be mounted vertically or horizontally with Pan and Tilt adjustment.

Technical Specifications

	CL740	CL780
Power rating	40W 100V	80W 100V
Speaker components	2 x 4" + 1 tweeter	4 x 4" + 2 tweeter
Transformer tapping (100V)	30 / 40W	70 / 80W
Primary impedance (Ohm)	330 / 250	143 / 125
SPL descriptions	88 +/- 3dB	
Freq response @ 1 KHz +/- 3 dB	100 ~ 16 KHz	100 ~ 17 KHz
Dimension (W x H x D)	130 x 310 x 140 mm	130 x 620 x 140 mm
Material	Aluminium body, powder epoxy coated grille	
Weight with bracket	3.5 kg	6.1 kg

Packing Information

CL740 :

Carton size : 370 (L) x 220 (W) x 185 (H) mm
Gross weight : 4.10 kg
1 unit per carton

CL780 :

Carton size : 680 (L) x 230 (W) x 190 (H) mm
Gross weight : 7 kg
1 unit per carton

Projection / Clear Horn Speakers

HS725 and HS750 are both clear horns, delivering characteristics of horn speaker but with music clarity. They are suitable for both indoor and outdoor installations.

IP65 rated

Packing Information

HS725 : Carton size : 440 (L) x 250 (W) x 370 (H) mm
Gross weight : 4.90 kg
1 unit per carton

HS750 : Carton size : 565 (L) x 405 (W) x 420 (H) mm
Gross weight : 9.95 kg
2 unit per carton

HS725
30W 100V Weatherproof
Clear Horn Speaker

HS750
50W 100V Weatherproof
Clear Horn Speaker

SP219
15W 100V Unidirectional Projection
(Aluminium Enclosure)

SP220
20W 100V ABS Projection
(ABS Enclosure)

IP65 rated

SP319
20 / 40W 100V Bidirectional Projection
(Aluminium Enclosure)

SP219, 220, 319 sound projectors shall deliver more directional sound and wider frequency range as compared to horn speakers. They are suitable for installations at corridors, tunnels, walkways and car parks. They are certified IP65 rated, thus suitable for both indoor and outdoor installations.

Technical Specifications

	SP219	SP220	SP319	HS725	HS750
Power rating	15W 100V	20W 100V	40W 100V	30W 100V	50W 100V
Power Taps (100V line)	7.5 / 15W	7.5 / 15 / 20W	20 / 40W 100V	3.8 / 7.5 / 15 / 30W	15 / 30 / 50W
Speaker	5"		2 x 5"	5"	
Primary impedance (Ohm)	1.3 k / 667	1.3k / 670 / 500	500 / 250	2.6k / 1.3k / 667 / 333	667 / 333 / 200
Secondary impedance (Ohm)	8		4	8	
Freq response @ 1KHz +/-3 dB	130 ~ 15 KHz	90 ~ 15 KHz	150 ~ 18 KHz	100 ~ 10 KHz	90 ~ 17 KHz
SPL @ 1W / m (+/- 3dB) 1 KHz	91dB	90 dB	91 dB	90 dB	98 dB
Grille / enclosure	Mild steel / Aluminium	Mild steel / ABS	Mild steel / Aluminium	Aluminium / ABS	ABS
Overall size w bracket (W x H x D)	138 (Dia) x 192 (D) mm	140 (Dia) x 195 (D) mm	138 (Dia) x 195 (D) mm	366 x 172 x 272 mm	363 x 253 x 310 mm
Weight	2 kg	1.60 kg	3 kg	3.25 kg	3.60 kg
Colour	White			Light grey	Beige

Packing Information

SP219 :
Carton size : 370 (L) x 370 (W) x 600 (H) mm
Gross weight : 18 kg
8 units per carton

SP319 :
Carton size : 370 (L) x 370 (W) x 600 (H) mm
Gross weight : 25 kg
8 units per carton

SP220 :
Carton size : 550 (L) x 425 (W) x 180 (H) mm
Gross weight : 11.30 kg
6 units per carton

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HS815 HS830 HS820 HS822
Horn Speakers

IP65 rated

HS830
12" 30W 100V Line (Aluminium)

HS815
8" 15W 100V Line (Aluminium)

HS815 & HS830 constructed using rounded aluminium flare of 8" (HS815) and 12" (HS830) with multiple power selection via rotary switch. Suitable for for schools, mosques, car parks, factories at indoor or under shade installations that requires omni direction sound broadcast.

HS822
11" x 8" 30W 100V Line (ABS)

HS820
6" x 8" 15W 100V Line (ABS)

HS820 & HS822 contructed with high impact ABS flares rectangular shape to suit installation sites where pattern of broadcast shall be controlled, such as low level car parks, corridors, etc. It is suitable for indoor or outdoor sites with IP65 rating.

Technical Specifications

	HS815	HS830	HS820	HS822
Power rating	15W 100V	30W 100V	15W 100V	30W 100V
Power taps (W / 100V)	1 / 3 / 5 / 10 /15	3 / 5 / 10 / 15 / 30	1 / 3 / 5 / 10 /15	3 / 5 / 10 / 15 / 30
Primary Impedance (Ohm)	10 k	3.3 k	10 k	3.3 k
	3.3 k	2 k	3.3 k	2 k
	2 k	1 k	2 k	1 k
	1 k	670	1 k	670
	670	330	670	330
Secondary impedance (Ohm)	8			
Frequency response @ 1 KHz +/- 3 dB	350 ~ 7 KHz	400 ~ 7 KHz	250 ~ 8 KHz	400 ~ 8 KHz
SPL (1W / m @ 1 KHz)	103 dB	110 dB	105 dB	
Coverage angle, horizontal (1 KHz +/- 6 dB)	110°	70°	90°	90°
Flare material	Aluminium		ABS	
Flare dimension	8" round	12" round	220 x 160 mm	285 x 205 mm
Driver enclosure	ABS			
Overall size (dia x height) mm	210 x 240	310 x 345	222 (W) x 162 (H) x 232 (D)	285 (W) x 212 (H) x 290 (D)
Weight	1.40 kg	2.40 kg	1.50 kg	2.15 kg
Colour	Beige		White cream	

Packing Information

HS815 :
Carton size : 680 (L) x 475 (W) x 520 (H) mm
Gross weight : 20.50 kg
12 units per carton

HS830 :
Carton size : 655 (L) x 655 (W) x 380 (H) mm
Gross weight : 13.30 kg
4 units per carton

HS820 :
Carton size : 550 (L) x 480 (W) x 520 (H) mm
Gross weight : 21.30 kg
12 units per carton

HS822 :
Carton size : 535 (L) x 320 (W) x 650 (H) mm
Gross weight : 20.20 kg
8 units per carton

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67

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High Power Horn Speakers

NEW

IP65 rated

HS810 50W 100V / 100W 8 Ohm Clear Horn Speaker

HS810 is specially made to deliver clear sound close to dual cone speaker but having horn characteristics, for long throw in indoor and outdoor applications, such as beach warning system, highway or urban paging system, mosques, school fields, etc.

It is constructed using high quality aluminium housing with 14" rounded flare for frontal omni directional throw.

IP65 rated

HS880 80W 100V 20" Horn Speaker

HS880 constructed using rounded aluminium flare of 20" with multiple power selection. It is suitable for schools, factories, mosques, fencing perimeters etc, which requires loud and clear broadcast.

Drivers are detachable from the flare mounting, connected with 1 3/8" throat. The high power driver is enclosed in die cast housing, enabling it to withstand rough environment such as outdoor environment.

LH100

100W 100V Long Throw / Tunnel Horn Speaker

IP54 rated

LH100 is a specially but built long throw directional horn speaker suitable for niche installations such as in tunnels where sound direction is important to minimize reflections and echoes. It is driven by high power driver to overcome high ambient noises such as ventilation fans and moving vehicles.

- Specially **designed for** tunnels and other similar applications
- **High directional horn** of asymmetric output with high SPL and speech intelligibility
- **100W 100V line** voice driver with max SPL at 135 dB @ 1m, 1 KHz
- **Fire retardant fiber glass** construction with rust free mounting accessories
- **Covered flare opening**, a prevention of habitation by animals

Technical Specifications

	HS810	HS880	LH100
Power rating	50W 100V	80W 100V	100W 100V
Power taps (W)	50 / 25 / 12.5 / 80 (8 Ohm)	20 / 40 / 60 / 80	50 / 75 / 100
Max power	100W at 8 Ohm	100W 100V	120W 100V
Driver	Combination	Detachable driver with 1 3/8" thread	
Primary impedance (Ohm)	200 / 400 / 800 / 8	500 / 250 / 160 / 125	200 / 133 / 100
Secondary impedance (Ohm)	8	16	
Freq response @ 1kHz +/- 3 dB	200 - 6 kHz	160 - 6 kHz	350 - 7 kHz
SPL @ 1W / m (+/- 3 dB), 1 kHz	103	110	115
Max SPL	123	129	135
Horizontal dispersion (1 kHz)	70°	70°	56°
Vertical dispersion (1 kHz)	70°	70°	25 (top); 60 (bottom)
Body material	Aluminium		FR rated fiberglass
Mounting	Wall / ceiling		Ceiling
IP ratings	IP65		IP54
Mix / Max ambient temperature	-10° to 60°		
Overall size w bracket (WxHxD) mm	360 dia x 465	504 dia x 335	730 x 585 x 1565
Weight including driver	3.75 kg	4.0 kg	13.6
Colour	Beige		Black

PS820 SG320
Pendant / Garden Speakers

PS820 20W 100V Pendant Ball Speaker

PS820 is the right choice for installations at high ceiling areas without columns, such as warehouses, hypermarkets and large showrooms that require even sound distributions. It is built with 8" speaker of 20W 100V rating, delivering powerful and evenly projected sound with 360° dispersion.

- **Omni** coverage
- **Safety cable** included
- **5 / 10 / 20W 100V** power taps
- **8" driver** with 20W 100V ratings

SG320 20W 100V Outdoor Garden Speaker

IP65 rated

SG320 is the preferred choice for outdoor ground speaker installations such as parks, pool sides, etc., providing excellent music for listening pleasure. With its green outlooks, it blends perfectly to the shrubs, or hidden by leaves or grass. Thereby, its the right candidate to hide the sound source unlike the bulky speakers suspended at poles which may affect the aesthetic value of the environment.

- **20W 100V** powerful speaker
- **360° sound dispersion** for evenly distributed
- Built for all environment with **robust enclosure**
- **Dual purpose speaker** for outdoor music and paging

Technical Specifications

	PS820	SG320
Power rating	20W 100V	
Power tapping (100V line)	5 / 10 / 20W	10 / 20W
Speaker diameter	8" (200 mm)	5" (125 mm)
Speaker type	Co-axial	
Primary impedance (Ohm)	2k / 1k / 500	1k / 500
Freq response @ 1 KHz +/- 3dB	80 ~ 18 KHz	70 ~ 16 KHz
SPL (1 w/m @ 1 KHz)	91 dB	84 dB
Construction material	ABS	
Colour	White	Green
Dimensions (mm)	254 diameter	320 dia x 360 height
Weight	2.20 kg	3.60 kg

Packing Information

PS820 :
Carton size : 320 (L) x 320 (W) x 300 (H) mm
Gross weight : 3.10 kg
1 unit per carton

SG320 :
Carton size : 350 (L) x 410 (W) x 355 (H) mm
Gross weight : 4.70 kg
1 unit per carton

NEW

In compliance with EN54-24 requirements, Amperes introduces the standards' compliant speakers wtih common types such as box, ceiling and horn versions. They are made with fire resistance enclosures and fitted with ceramic connectors with thermal fuses.

BS508FR-E
10W 100V Line Surface Mount Speaker

FLAME RETARDANT

It is powered by 5" dual cone driver with nominal power of 10W 100V line, with available power taps at 1, 3, 6, and 10W. It is slimmer for better looks and has installation method which prevents vandalism. The enclosure is made from Fire Retardant ABS materials with front alumimum grilles. Connections are terminated at ceramic connectors with thermal fuse.

CS606FR-E
6W 100V Line Ceiling Speaker
with Metal Enclosure

FLAME RETARDANT

Available in 6" dual cone speaker with back metal enclosure and front epoxy coated grille with power taps available at 1.5, 3 and 6W 100V line. Connections are made internally at ceramic connectors equipped with thermal fuse. Suitable for hospitals, factories, etc.

Technical Specifications

	BS508FR-E	CS606FR-E
Power rating	10W 100V	6W 100V
Cone type	Dual cone	
Impedance (Ohm)	8	
Freq response @ 1KHz +/- 3dB	120 ~ 18 KHz	150 ~ 16 KHz
SPL @ 1W / m (+/-3dB) 1 KHz	94 dB	89 dB
Power tapping (100V line)	1 / 3 / 6 / 10W	1.5 / 3 / 6W
Primary impedance (Ohm)	10k / 3.3k / 1.6k / 1k	10k / 3.3k / 1.6k
Secondary impedance (Ohm)	8	
Grille / enclosure	Aluminium / ABS FR	Metal
Connection	Ceramic terminals	
Protection components	Thermal fuse protection	
Dimensions (W x H x D)	220 x 130 x 70 mm	200 x 94 mm (Include hook - 119 m)
Weight	720 g	1.20 kg
Colour	White	White / Red

EX-HS830-E
30W 100V Line

FLAME RETARDANT **ex-proof** **IP65 rated**

It is robustly constructed with rounded aluminium flare with multiple power selection built to IP65 rating and explosion proof rated. It is suitable for every installation sites, indoor or outdoor and for this model in particular, at hazardous areas.

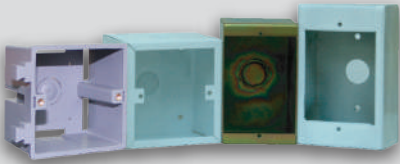## Technical Specifications

Power rating	30W 100V
Power tapping (W / 100V)	5 / 10 / 15 / 30W
Freq response @ 1 KHz +/- 3dB	300 ~ 5 KHz
SPL (1W / m @ 1 KHz)	105 dB
Flare material	Aluminium
Driver enclosure	Metal
Dimensions (W x H x D)	180 x 230 x 130 mm
Weight	4.90 kg
Colour	Red

Back Enclosures

Back enclosures with 50 mm depth for volume controllers and patch panels. Available in ABS and metal for concealed or surface mounting.

EC7012 : 70 x 120 mm conceal (steel)

ES7012 : 70 x 120 mm surface mounting (steel)

EA9090 : 86 x 86 mm conceal mounting (ABS)

ES9090 : 86 x 86 mm surface (steel)

Rack Panels

Amperes harmonious mounting ears blank and vent panels with black powder epoxy coating.

BP1000 : 1 hu blank panel

BP2000 : 2 hu blank panel

VP1000 : 1 hu ventilation panel

VP2000 : 2 hu ventilation panel

Patch Panels

XLR patch panel for rack and wall mount.

MR5000 : 5 way rack mount female XLR

MR1000 : 10 way rack mount female XLR

MP1000 : Single inlet female XLR panel

MP2000 : Double inlet female XLR panel

SLA Batteries

SLA battery bank for back up supply. Recommend battery charger is Amperes BC9740.

VT1226 : 26Ah

VT1240 : 40Ah

VT1265 : 65Ah

VT12100 : 100Ah

Power Supply

Regulated power adaptor and switching PSU for powering loose equipment.

PS1205 : 12V 0.5A AC/DC adaptor

PS2405 : 24V 0.5A AC/DC adaptor

PS9000 : 24V 4.5A DC switching power module

Fiber Optic Converters

Single mode / multi-mode Ethernet - Fiber converter of IP paging applications. Available in 2 core and single core transceiver.

HTB110 : Multi-mode with SC / ST connectors

HTB110S : Single mode with SC connectors

HTB114S : Single mode with 4 way switch

HTBGS-03 : Single mode 10/ 100/ 1000 Base T

Surge Arrestors

Suitable for surge protection of external speaker installations. Protects horn speakers against harmful surge.

HP175VL : 175V peak surge arrestor