# VOICE ALARM SYSTEMS



# CATALOG 2024

EN 54 4 EN 54 16 EN 54 24

# MAJORCOM:



# **MAJORCOM**:

## A story, a know-how

MAJORCOM, founded 50 years ago and based in Toulouse, is the leading French company and a major European player in the field of professional sound systems, public address and voice alarm.

MAJORCOM was the first specialized company in Voice Alarm systems to be certified in France. Through being at the forefront of the development of the most advanced technologies, MAJORCOM is commited to always providing products of the latest generation.

MAJORCOM mastery of production offers you the manufacturer's warranty on Public Address products and guarantees the compliance of its security systems with European EN 54 and International ISO standards.

## A team, an expertise

MAJORCOM places customer service at the heart of its business model thanks to its dedicated business team.

Our systems are custom-designed by our engineering department which is staffed with acousticians and electronic engineers, with the expert support of our R&D department, and an after-sales department with highly involved support functions.

To our partners, we offer systems that are truly adapted to the reality of their technical needs and to the needs of the end users.

## Values that stand the test of time

TO LISTEN AND WORK CLOSELY WITH OUR CUSTOMERS : we devote our full attention and expertise to informing, securing and offering an outstanding customer experience.



A FOCUS ON QUALITY : optimize your profitability rate thanks to reliable systems supervised by our quality department (Customer service < 0.3%).



A CULTURE OF INNOVATION : our systems feature every innovation that enhances technical, energetic and connectivity performances.



EXPERTISE : our engineering relies on innovative technical resources, on the adaptability of our teams and their unconditional dedication to your projects to fully satisfy your every need.

# MAJORCOM:

## A wide range of products and services

MAJORCOM provides expert advice, studies, estimates, editing, commissioning, maintenance and VAS guickly and efficiently on a selection of products from:



- Sources & microphones
- Mixers
- Amplifiers
- Audio over IP
- Loudpeakers
- PPMS, POI, PPI
- Conference system
- Induction loops...

Line Array

Source

Processors

Amplifiers

• Mixers

MAJORCOM has built its notoriety on the success of thousands of completed projects.

+ 50,000 **On-site installations** +1,000

Loval installers



## Information at your disposal

To accompany you in the success of your projects.



TECHNICAL DOCUMENTATION: check out our data sheets, application samples, videos and catalogues on our website: www.majorcom.fr

website: www.majorcom.fr



NEWSLETTER: recommendations, innovations, invitations to trade shows... To keep up with all the MAJORCOM news, subscribe to our newsletter at www.majorcom.fr



## **Our references**



## INN

**Engineering consulting partners** 

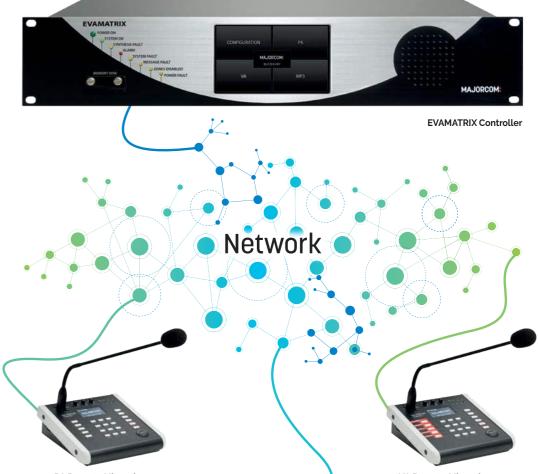
WEBSITE: learn more about our services and products, accessible through any device, on our

MAJORCOM is proud to present EVAMATRIX, its brand-new EN 54-16 certified PA sound and evacuation system, with cuttingedge technology and excellent audio quality in both modes of use. EVAMATRIX is very simple to use and allows for great operation flexibility with its touchscreen on the front-pannel or via an intuitive multi-platform web browser and no software constraints [smartphone, tablet, PC, MAC]

EVAMATRIX is an economically advantageous system, fully connected for easy installation and integration. It uses Dante® technology with redundancy for seamless availability in both centralized and decentralized architecture.

MAJORCOM's more than 50 years of experience in the VA and PA sound industry has made it possible to offer such a highquality system, which is extremely simple to install and configure using its very intuitive interface.

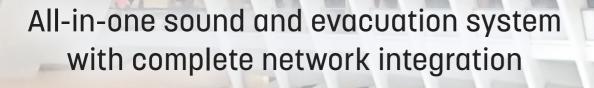
## A fully connected architecture





**EVAMATRIX** 

# **NO NEED TO CHOOSE BETWEEN PUBLIC ADDRESS** & VOICE ALARM SYSTEMS ANYMORE!



-EN 54

@Dante"

Airports · Metro Stations · Hotels Hospitals · Stadiums Shopping malls

Exhibition parks **Educational establishments** Buildings and industrial sites **High-rise buildings** 

EVAMATRIX

## **EVAMATRIX** - A high-performance system, stable and secure









Dante SPOKEN HERE

## **PN** Series

Compact digital power from single to quadruple channel DPN-240S: 1 x 240W · DPN-480S: 480W · DPN-240D: 2 x 240W DPN-480D: 2 x 480W · DPN-240Q: 4 x 240W

EOL

#### End-of-line element The reliable solution for controlling the integrity

of the 70V and 100V speaker line.



#### **AES Series** EN54-4 certified power supply units AES 24V/MS40: Maximum current for all outputs = 40A AES 24V/MS150: Maximum current for all outputs = 150A

## Connected digital amplifiers



EN 54 16

EN 54 4

### **EVAMATRIX - A SAFE AND ECONOMICALLY ADVANTAGEOUS SYSTEM**

## **EVAMATRIX - A COMPLETE SYSTEM FOR ALL KINDS OF APPLICATIONS**



256-bit security and encryption



Wiring and installation simplified through IP



Perfectly meets market demands and needs



Reduced installation costs and commissioning



Save time and money

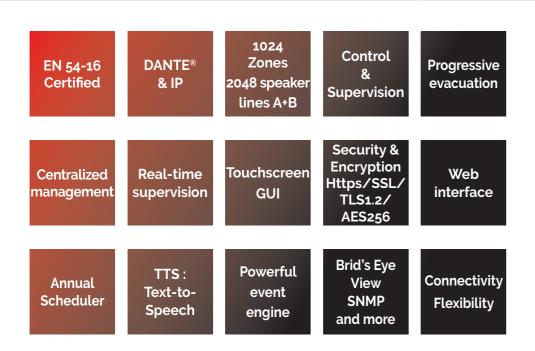


Interfacing and multiple compatibilities including SNMP V2c

· An intuitive graphical interface for user comfort, with integrated security functions.

- · A system with reduced operational and maintenance costs.
- Modern design with reduced power consumption, minimal heat loss and reduced rack congestion.

### **EVAMATRIX - A COMPLETE SYSTEM FOR ALL KINDS OF APPLICATIONS**



## EN 54-16 certification

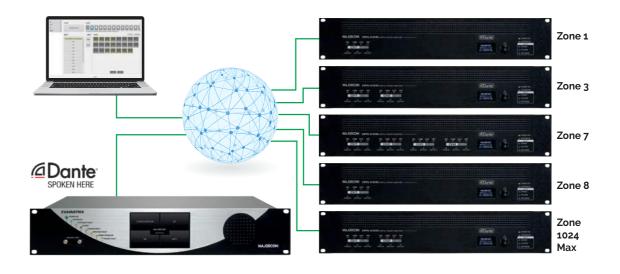
The EVAMATRIX system is EN 54-16 certified and can be installed in any rack in accordance with regulatory recommendations.

## Dante<sup>®</sup> & IP

The EVAMATRIX system runs entirely over IP networks, providing full flexibility and optimal scalability, integrating the latest and most recognized technologies such as Dante®. The system can be easily deployed with both centralized and decentralized configuration. All components of the system offer redundant Gigabit Ethernet network connectivity that combines security and reliability.

## 1024 Zones / 2048 speaker lines A+B 512 alarm zones

The EVAMATRIX system is designed to handle 1024 PA zones and 2048 A+B speaker lines. It can also handle up to 512 alarm zones.





### **EVAMATRIX - A COMPLETE SYSTEM FOR ALL KINDS OF APPLICATIONS**

## System control and supervision

EVAMATRIX is a system designed to deliver the best sound of PA and VA in one product. All system components are controlled in real time with indication and deferral of defects, for reliable and seamless supervision.

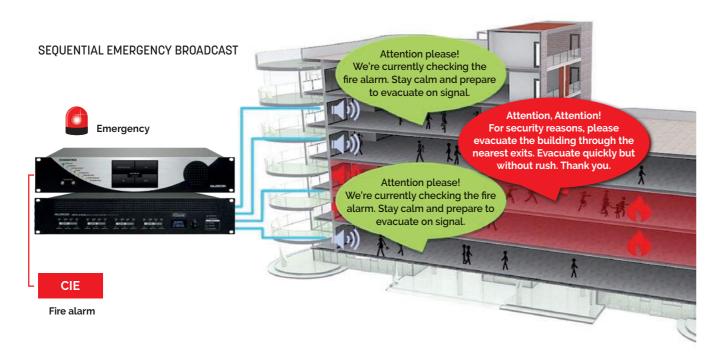


PA [music, animation and microphone announcements]



## Progressive evacuation

EVAMATRIX is equipped with two security message readers that can be used to simultaneously broadcast the alarm message to one alarm zone group and a warning message to another alarm zone group. This allows an easier and gradual evacuation through CIE.



## Centralized and remote management

With the EVAMATRIX system, it's never been easier to configure, set up, use and manage a comfort and evacuation sound system, whether your facility is located in a single site or decentralized.

EVAMATRIX doesn't require any heavy software or additional hardware, only a simple web browser from any PC, MAC or tablet.



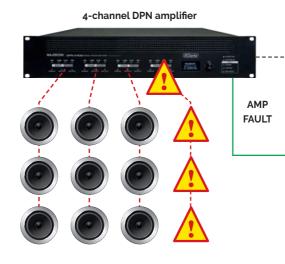
- The DPN amplifier series directly integrates speaker line control technology.
- Integrated DSP for sound processing.
- Additional connectivity: audio input, dry input/output, UGA

## **DPN Digital amplifiers**

The DPN amplifier series offers a wide range of capacities and channels:

240 W, 2 x 240 W, 4 x 240 W, 480 W, 2 x 480 W. Emergency amplifier management has been simplified. It is also possible to assign any amplifier channel as backup for one or more amplification units, and one or more channels can be dedicated as backup for the entire rack. This design saves energy and batteries, reduces heat emission and congestion in the bay.

#### Amplifier defect detection



Each amplifier channel has two independently monitored, controlled and protected speaker line outputs.

All DPN amplifiers offer a multitude of connections: alternate audio input, event inputs/outputs, UGA inputs and Gigabit Ethernet redundancy...

A DSP is embedded to allow all audio signal processing necessary for your facility.



EVAMATRIX

## **EVAMATRIX - A COMPLETE SYSTEM FOR ALL KINDS OF APPLICATIONS**

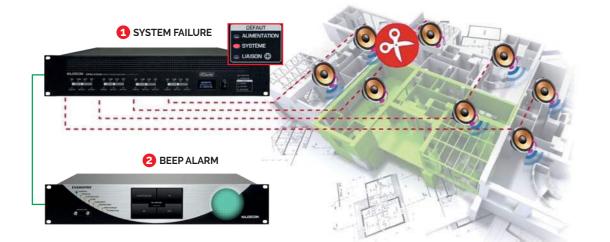
## Real-time supervision

EVAMATRIX continuously controls and monitors all units and connections in the system, signals and audio streams, emergency functions, network redundancy, power supplies and speaker lines. Abnormalities and defects are detected in less than 100 seconds in accordance with relayed EN 54-16 standard. The detected defects are reported to the EVAMATRIX controller, recorded in the log files and relayed to the CIE fire alarm interface:

- Short circuit fault, line opening, impedance variation, earth fault below 50kΩ.
- Power failure: emergency 54-4, 230VAC power supplies, AC/DC fuses.
- Failure and monitoring of contact connections and UGA link interface to the CIE.
- Amplifier Fault and backup amplifier auto-switching.
- Evacuation memory disk fault and emergency function.
- Failure of network connections with redundancy management.
- Emergency PTT microphone and remote microphone fault.

Etc...







## Monitor your VA System via SNMP

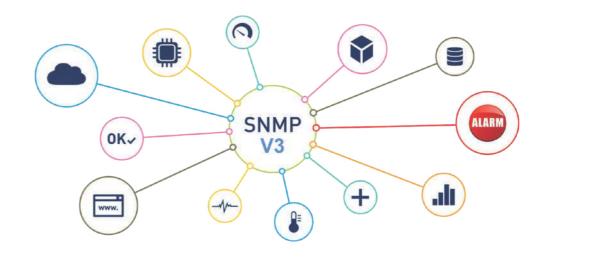
Thanks to the integration of the SNMP V3 (Simple Network Management Protocol) in the EVAMATRIX system, the status of sound equipment and all sorts of defects can be instantly detected and reported through a network monitoring and management software.

The functions supported by the SNMP protocol are:

- requesting and retrieving data,
- setting or writing data,

TLS

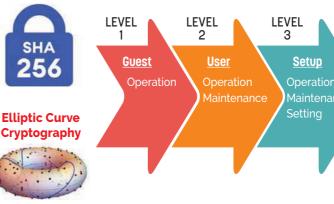
• SNMP alerts that signal the occurrence of events (speaker line fault, amplifier fault, CPU, alarm, etc.). The SNMP protocol allows a management application (such as Centreon, PRTG for example) to request information from a managed unit (EVAMATRIX, DPN, RM) which is equipped with a software that sends and receives SNMP information called an SNMP agent.



· EVAMATRIX components offer integrated network redundancy for complete security to compensate for any failure.

## Seamless security

EVAMATRIX provides a secure user environment, protected from hacking. The data exchange is highly secure with 256-bit encryption. The accounts offer four levels of access to minimize confusion between different profiles.



LEVEL 4 Admin Advanced setting ENCRYPTION EVAMATRIX

### **EVAMATRIX - A COMPLETE SYSTEM FOR ALL KINDS OF APPLICATIONS**

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## Touch interface GUI

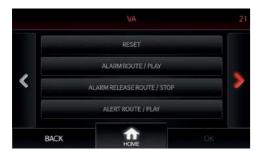
The EVAMATRIX system can be easily managed and configured using the 5" color LCD touchscreen and its very intuitive navigation. All the selected functions and operator choices are highlighted and the status information is instantaneously displayed on-screen. Some functions are accessible according to access levels and permissions.

- Main screen: configuration, comfort, security, MP3.
- Configuration: language, network, system information, date & time.
- PA: source volume, area volume, preset, assignment and source routing.
- VA: reset, acquit, launch and stop alarm/alert, microphone and emergency call, faults, journal, test..
- MP3: PA MP3 player.















## User-friendly, ergonomic and intuitive web interface

EVAMATRIX is the one and only system on the market that offers you in its standard version :

- a powerful annual event planner,
- a multilingual TTS engine,

- the "Bird's-Eye View" plan function. Thus, EVAMATRIX can adapt to any type of installation without additional licensing and module costs.

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Vocal synthesis





Plan mode



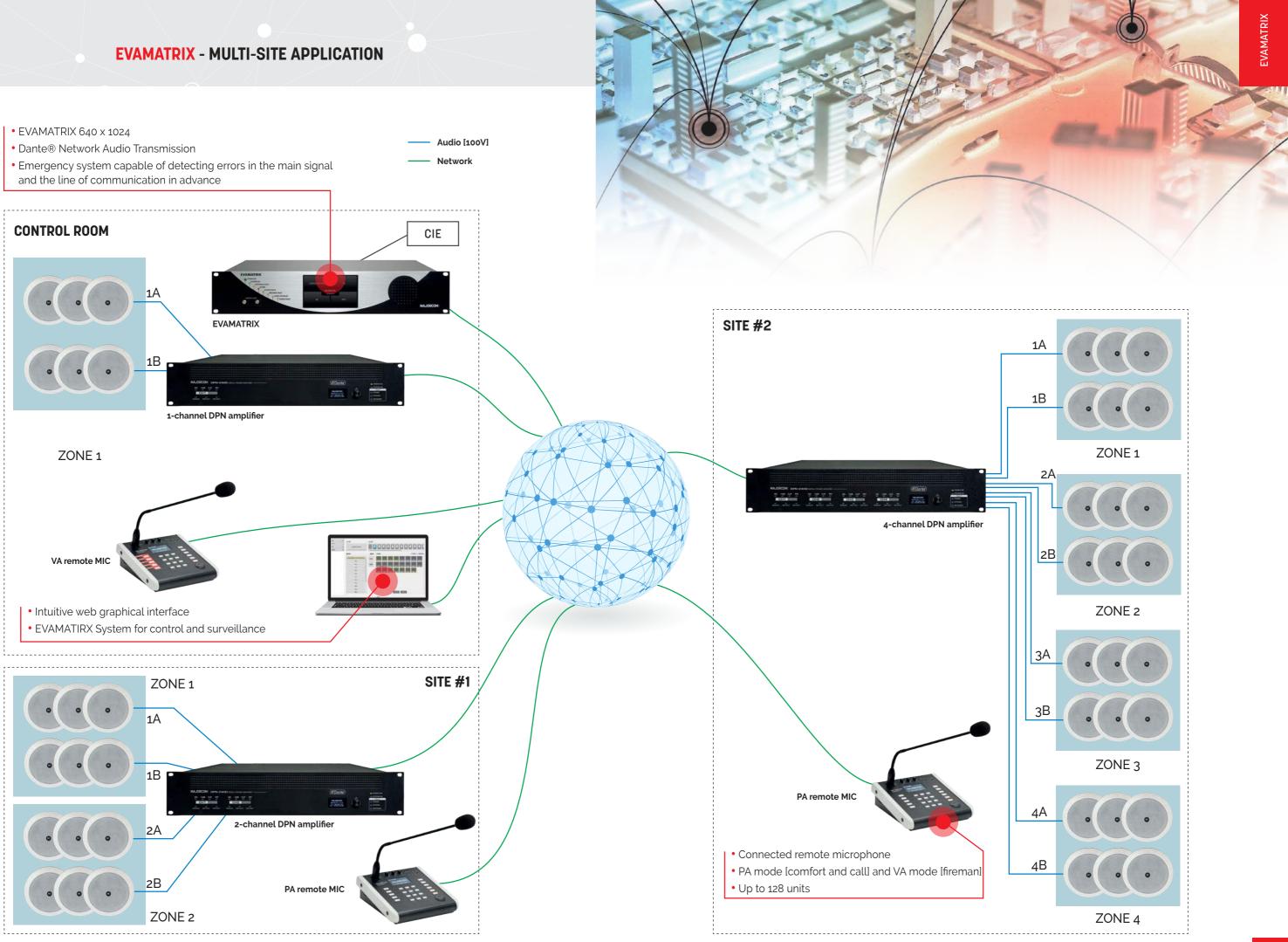
with multi-plan management



#### Plain Interface for great simplicity of use

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## **LEN 54** 16 : Optional functions with requirements

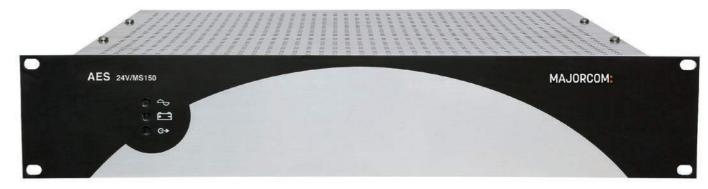
The EVAMATRIX system includes the following optional functions as well as their requirements in accordance with the EN54-16 standard

OPTION	EN54-16 SECTION/SUBSECTION	YES	YES/NO	
Audible warning	7.3	Yes		
Delay(s) to entering the voice alarm condition	7.4	Yes		
Phased evacuation	7.5	Yes		
Manual silencing of the voice alarm condition	7.6.2	Yes		
Manual reset of the voice alarm condition	7.7.2	Yes		
Voice alarm conditions output	7.9	Yes		
Indication of faults related to voice alarm zones	8.4	Yes		
Disabled condition	9	Yes		
Voice alarm manual control	10	Yes		
Emergency microphone(s)	12	Yes		
Redundant power amplifiers	13.14	Yes		
Interface to external control device(s)	11	Yes		

## **EVAMATRIX Special Functions**

- Redundant powerful amplifier
- PTT microphone and table
- Sound and visual indication
- Progressive evacuation
- Voice alarm delay and timing
- Stop the alarm while remaining in emergency mode
- Manual alarm reset
- Monitored and controlled fire alarm system output
- Voice alarm exit mode

- Manual voice alarm control
- Defect indication of the CIE communication protocol
- Indication of a malfunction related to the voice alarm zones
- External control device interface
- Annual scheduler
- TTS [Voice Synthesis]
- View with "Bird's-Eye View" plan
- Etc.



The EN 54-16 standard, which now governs Sound Security Systems (SSS), refers to the EN 54-4 standard according to which the different Power Supplies of our EVAMATRIX System are certified.

Our two BPS models comply with several EC directives: CPD (in compliance with EN 54-4/A2), LVD, EMC,WEEE and RoHS.

AES 24V/MS40: maximum current for all outputs is 40A. AES 24V/MS150: maximum current for all outputs is 150A.

#### **QUICK AND EASY TO SET UP**

- Simple: all you need is "1 pair of pliers and 1 screwdriver".
- Quick: plug-in connectors on the rear panel. Ready-touse connection kit.
- Safe: a totally sealed box prevents any risk of damaging the internal electronics due to falling conductive parts.
- Light: the weight of the 2U rack is 3.1kg for the AES 24V/MS40 and 5.4kg for the AES 24V/M150.





#### **Backup power supply AES:** a certified range



AES 24V/MS150



#### **OPTIMAL PERFORMANCE**

- In normal operation mode: the BPS power supply controls and recharges the batteries and keeps them charged from the power supply. It can provide the sound security system with standby current.
- In security operation mode: the total operating current (including the current of the amplifiers of the sound security system) is supplied by the batteries.

#### **BACKUP BATTERIES**

Stationary Batteries Sealed Lead Acid gas valve controlled by maintenance :

- 12V 17Ah : **BAT12V17AH**
- 12V 25Ah : BAT12V25AH
- 12V 38Ah : BAT12V38AH
- 12V 65Ah : BAT12V65AH
- 12V 78Ah : BAT12V78AH
- 12V 100Ah : BAT12V100AH
- 12V 120Ah : BAT12V120AH
- 12V 150Ah : BAT12V150AH
- 12V 180Ah : BAT12V180AH
- 12V 210Ah : BAT12V210AH

#### **COFFRET RM-VA**: 4U Wall mounted rack for RM-VA 1000

	MAJORCOM:	
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• This 19" wall-mount cabinet allows the RM-VA 1000 voice alarm mic to be deported while maintaining access levels required by EN 54-16 standard.

• It can hold one RM-VA 1000 microphone. • Front glass door with lock provided with 2 keys.

- Removable top and bottom panels, making it easier for cable entry.
- The RM-VA 1000 is sold separately.

Model	COFFRET RM-VA
Reversible front door	yes
Wall mounting	4 x fixing holes for wall mounting
Color	Black powder paint RAL 9005
Accessories	2 keys, caged nuts and screws for rack mounting
Outside dimensions (WxHxD)	600 x 288 x 150 mm



The RM-VA 1000 is sold separately.



### RACK 19" 22U EX / 32U EX / 37U EX / 42U EX : 22 / 32 / 37 / 42 units 19" rack mounted, tested RACK 19" 22U EX CAB / 32U EX CAB / 37U EX

CAB / 42U EX CAB :

22 / 32 / 37 / 42 units 19" rack mounted, tested & wired

• 22U / 32U / 37U racks : removable side panels with key lock, front glass door & rear door with key lock.

- Rack 42U rack : removable rear & side panels, front glass door with key lock.
- Supplied with fans, electrifications, wheels and brackets.

Model	RACK 19" 22U	RACK 19" 32U	RACK 19" 37U	RACK 19" 42U
Number of units	22	32	37	42
Dimensions (D x W x H with wheels)	800 x 600 x 1 169 mm	800 x 600 x 1613 mm	800 x 600 x 1 835 mm	800 x 600 x 2 074 mm
Number of fans	2	2	2	2
Color	RAL 9005			RAL 9004

### **19" RACK ACCESSORIES**



#### **TIROIR 2U RACK 800** Lockable drawer with handle

Depth : 550 mn.

### **EVAMATRIX SYSTEM COMPONENTS**





#### **PLATEAU RACK 800**

Fixed shelf Depth : 550 mm. Max. charge : 90kg



#### **PLATEAU RENF BAT**

Reinforced fixed shelf Depth : 550 mm. Max. charge : 120kg



#### **PLAT GLISSIERE 800**

Sliding shelf Depth : 550 mn. Max. charge : 35 kg



#### 640 Sources x 1024 Zones Matrix Controller



EVAMATRIX is the first networked public address system co-developed by MAJORCOM and INTER-M that can be used in both centralized and decentralized locations.

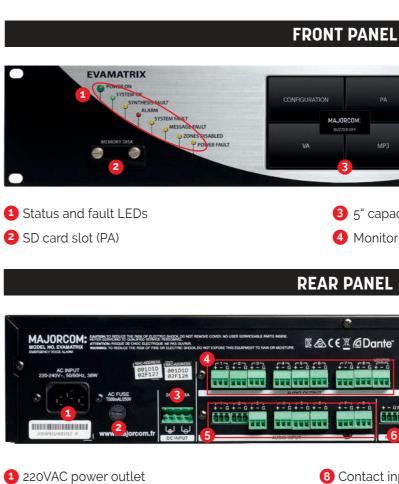
EVAMATRIX is a powerful and scalable EN54-16 VA (Voice Alarm) and PA (Public Address) PA system for versatile PA configurations.

#### **FEATURES**

- Complete control of the EVAMATRIX system components and audio routing 640 Sources / 1024 Zones / 2048 speaker lines in A&B.
- A wide range of Class-D digital amplifiers, DPN range available in single or multi-channel and on network.
- Emergency PTT microphone monitored on the central, included.
- Supervised and integrated storage of ALARM & ALERT security message files on 2 drives.
- Support for Dante® and ana-logical audio input streams on EVAMATRIX, DPN and RM-VA 1000.
- A maximum of 128 networked microphone consoles RM-VA1000 (security and comfort).
- Redundant IP connections (Primary and Secondary) for audio and controls.
- Control and supervision of all system functions and faults. All data is centralized, reported and archived.
- Powerful DSP on the EVAMATRIX control unit and DPN amplifiers.
- MP3 player to play your audio contents on the SD card in the front panel of the EVAMATRIX.
- Automated announcements programmable by schedule (daily, weekly, yearly, vacations).
- Powerful multi-language and multi-channel TTS engine programmable by calendar.
- Bird's-eye view feature to import your shots in PNG or JPG to make your user experience more personalized.

- A wide choice of connections and interfaces with the CIE\* (UGA inputs and monitored dry contact in inputs and outputs).
- Ergonomic and user-friendly interface with a 5" LCD capacitive touch screen on the front panel.
- Multi-platform setup, management and control via web page (thin client) depending on the access level.
- Additional network security implemented using AES-256-bit encryption, with real-time authentication and audio over IP encryption against malicious attacks.
- Internal real-time clock for event scheduler; support for Network Time Protocol (NTP) with automatic daylight saving time (DST).
- Internal fault and event log.
- Integrated web server for configuration, parameterization and client use depending on the access level.
- The EVAMATRIX system integrates the SNMP V3 protocol (Simple Network Management Protocol) which allows a management and monitoring software to report any type of defect and status of the sound equipment.
- The EVAMATRIX system integrates seamless security (HTTPS, TLS1.2, SHA256, SSL, AES256 encryption and elliptic curve cryptography)

\* Control and Indicating Equipment



- 2 Fuse 220VAC (T 0.5 A/250VAC) O Trigger REMOTE MESSAGE (1 ~ 8) Fault 3 24VDC power supply input (EAE backup) Synthesis outputs (1 ~ 5) 4 PA audio outputs (1 ~ 8 & MONITOR) 1 Dry contact outputs (1 ~ 16)
- 5 PA audio inputs (1 ~ 8)
- 6 PTT microphone input on the front panel

**7** UGA inputs (1 ~ 5) monitored Dry

4 RJ45 network ports RM-VA1000VA/PA Microphone Console (Dante® Primary)



EN 54 16

MAJORCOM

- 3 5" capacitive touch screen
- 4 Monitor speaker

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- 8 Contact inputs (1 ~ 8) monitored
- 12 Monitored memory cards (security)
- 13 RJ-45 network ports Dante® (Primary & Secondary)

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MODEL	MICRO PTT
Microphone	Dynamic capsule
Impedance	Omnidirectional
Sensitivity	-74dB @ 1kHz
Frequency response	300 to 5,000Hz
Dimensions (WxHxD)	50 x 90 x 45mm
Connector	DIN 6-pole lockable
Weight	210g
Sustainability	100.000 cycles
Standard	EN 54-16



## 

#### 640 Sources x 1024 Zones Matrix Controller

-EN 54 16

#### **TECHNICAL CHARACTERISTICS**

MODEL	EVAMATRIX		
Power supply	220 - 240VAC, 50/60Hz, 24VDC		
Consumption	Less than 38W		
Frequency response	20Hz - 20kHz (relative level @ 1kHz ±3dB)		
Signal to Noise Ratio	> 70dB		
Harmonic distortion rate (THD)	< 0,02%		
Gain adjustment per channel	-75dB ~ -0dB, about 0.4dB per 1 step		
DSP audio processing	48kHz, 32-bit CAN/CNA conv	verters - DSP (294 MIPS)	
Virtual MATRIX	640 × 10	024	
Audio inputs	$eq:mic_mic_mic_mic_mic_mic_mic_mic_mic_mic_$		
Audio outputs	AUDIO OUT (1 ~ 8) 0 Monitor odBV (		
Ethernet (LAN)	RJ45, TCP/IP protocol 10	0/100/1000 Base-T	
Extension (LAN)	Output to EVAMATRIX on RJ45 (Dante®) - Input from EVAMATRIX on RJ45 (Dante®) CAT5 cable Maximum distance: 100m		
PTT microphone	Supervised, 6-pin DIN connector		
UGA inputs	Inputs UGA 1 ~ 5: Triggering on a voltage Min/Max trigger voltage ALARM/ALERT: 21VDC to 60VDC UGA supervision: -3VDC + 3VDC		
Dry contact inputs	lnputs 1 ~ 8 10kΩ : in triggering 20 kΩ : in supervision Open or short-circuited: connection fault	REMOTE MESSAGE: 1 ~ 8 short-circuit triggerable	
Dry contact outputs	Outputs 1 ~ 16 : re	elay outputs	
Synthesis output	Dry contact outputs 1	~ 5 : relay output	
Protections	Current protection, temperature pr	rotection, voltage protection	
MTTF availability	Average failure time great	er than 100,000 hours	
MTTR availability	Average repair time les	s than 20 minutes	
DC input power supply	24VD0	2	
Touch screen	5"LCE	)	
Operating temperature	-10°C ~ +40°C - Hun	nidity: 5 ~ 95%	
Weight	4.5kg		
Dimensions (WxHxD)	482 x 88 x 280n	nm (2U 19")	
Accessories	2x Micro SD / 1x SD Card / Euroblock Connect Screws / Use		
Protocol and security encryption	TCP/IP, Http, Https, SNMP V2c, IPv4, TLS1.2, SHA2	56, SSL, AES-256, Elliptic curve cryptography	
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### <u>⊿</u>Dante<sup>™</sup> EN 54 16

#### **FEATURES**

- The DPN series offers a wide choice of single or multi-channel power ratings, in line 70V/100V with galvanic isolation.
- The amplifiers are EN54-16 certified and designed to work with the EVAMA-TRIX security PA system.
- All system components are fully IP networked (audio & control) using Dante® technology.
- Dual primary and secondary network connection for total redundancy.
- Low power consumption, low heat dissipation for energy savings and gains in battery capacity and backup power.
- Complete supervision of the operation of the amplifiers and all connections. Faults are reported locally on the EVA-MATRIX and archived.
- Control and supervision of the loudspeaker lines WITHOUT audio interruption with the EOL-20 end of line element
- Control and supervision of the network link with audible and visual indication on the amplifier unit and EVAMATRIX.
- Integrated backup amplifier channel dynamically assignable from the EVAMATRIX web interface with automatic switchover
- 2 A/B outputs on each amp channel. The 2 outputs are supervised and individually disabled in case of failure.
- Audio over IP, Dante® and AES67 compatible; audio sample rate is of 48kHz with a sample size of 24 bits.
- High signal to noise ratio, wide audio bandwidth, very low distortion and crosstalk.
- DSP, digital signal processing on all amp channels from the EVAMATRIX control unit web server, including equalization, levels to optimize and customize the sound in each speaker zone.





Statements in the local division in the
MAJORCOM: DI
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SEVERAL POWERS FROM SINGLE TO QUADRUPLE CHANNEL 1 x 240 W: DPN-240S 2 x 240 W: DPN-240D 4 x 240 W: DPN-240Q 1 x 480 W: DPN-480S 2 x 480 W: DPN-480D

- Dry contact inputs for local feedback of third party faults (CIE\*, EAE, GTC...) in case of decentralized use.
- Local fault outputs customizable as desired and by alarm zone.
- An additional local analog audio input on each DPN amplifier that will be converted and made available to the entire EVAMATRIX system.
- The system integrates the SNMP V2c protocol (Simple Network Management Protocol) which allows a management and monitoring software to report any type of fault and status of the sound equipment.

\* Control and Indicating Equipment

## **Digital Network Amplifiers** DPN-240S · DPN-240D · DPN-240Q · DPN-480S · DPN-480D

• Local UGA and dry contact inputs monitored for triggering of alarm conditions, alarm... Ideal for decentralized systems.

 The system incorporates seamless security (HTTPS, TLS1.2, SHA256, SSL, AES256 encryption and elliptic curve cryptography).

<u>⊿</u>Dante<sup>™</sup> **Digital Network Amplifiers** DPN-240S · DPN-240D · DPN-2400 · DPN-480S · DPN-480D

EN 54 16

<u>⊿</u>Dante<sup>™</sup>

#### **TECHNICAL CHARACTERISTICS**

MODEL		DPN-240S	DPN-240D	DPN-240Q	DPN-480S	DPN-480D	
Power supply			220	- 240VAC, 50/60Hz, 24	VDC		
Power	@ 70V/100V         @ 70V/100V         @ 70V/100V         @ 70V/100V         @ 70V/100V           ower         Class D         Clas         Class D         Clas         <			1 x 480W RMS @ 70V/100V Class D Load Min 41.6Ω, Capacity Min 0.01uF	2 x 480W RMS @ 70V/100V Class D Load Min 41.6Ω, Capacity Min 0.01uF		
	Max	313W	595W	1 254W	583W	1,191W	
Consumption	1/8 power	135W	140W	280W	135W	240W	
	Standby	58W	75W	89W	59W	82W	
Frequency resp	onse		20	Hz - 20kHz to (±3dB @ 1	W)		
Signal / Noise			> (	91dB (20kHz LPF, A-WT	D)		
T.H.D			< 0	.45% at 1kHz Power rat	ing		
Audio input			Type: Balanced Euro	terminal / Input sensit	vity: 5dBV (1.78 Vrms)		
Ethernet (LAN)			RJ45, TC	P/IP protocol 100/100	o Base-T		
Extension		Output to EVAMATRIX on RJ45 (Dante®) - Input from EVAMATRIX on RJ45 (Dante®) CAT5 cable Maximum distance: 100m			®) CAT5 cable		
UGA inputs			UGA inputs 1 ~ .	4 : triggerable on a volt	age (22V ~ 60V)		
Dry contact inp	outs		Dry contact inputs fro	om (1 ~ 4) : triggerable o	on dry contact NO/NF		
Dry contact out	tputs	Dry contact outputs from (1 ~ 4) : Relay output					
Speaker line ou	Itputs		4-pin cc	onnector, (1ch) for chan	nels A+B		
Backup amplifi	er input		1 input per ch	annel, for amplifier with	n equal power		
Protection		Current	t protection, temperatu	re protection, DC volta	ge output protection, o	verload	
MTTF availabili	ty		Average fail	ure time greater than 10	00,000 hours		
MTTR availabili	ty		Average	repair time less than 20	) minutes		
AES/EAE emerg input	jency power			24VDC			
FAULT-IN input			Supervised fault inp	ut for remote fault repo	orting (e.g. AES/EAE)		
Screen		1.3" OLED screen					
Operating temp	erature		-10°C	~ +40°C / Humidity: 5 /	~ 95%		
Weight		8,59kg	9,1kg	10,1kg	8,56kg	9,7kg	
Dimensions (W	xHxD)			482 x 88 x 450mm			
Accessories		A	C power cord, Eurobloc	k connectors, Rack mo	ount screws, User manu	Jal	
Protocol and er	ncryption	TCP/IP, Http.	Https, SNMP V2c, IPv4	, TLS1.2, SHA256, SSL, A	AES-256, Elliptic curve	cryptography	

		FRONT PA	NEL		
300000000000000000000000000000000000000					
MAJORCOM DPN-24	OG DIGITAL POWER AMPLIFIER			(Dante <sup>®</sup> )	POWER ON
SIG -10dB CLIP PRT			SIG -10dB CLIP PRT		SYSTEM OK
SIG -10dB CLIP PRT	SIG -10dB CLIP PRT	SIG -10dB CLIP PRT	SIG HUGB CLIP PRI	MAJORCOM	FAULT

- 1 Status LEDs: system, power, network LEDs
- 2 Audio signal level and protection
- **3** Status LEDs: amplifier fault, speaker line fault, zone out of order
- 4 OLED information display and control wheel

#### **REAR PANEL**



- 220VAC power outlet
- **2** 24VDC power supply input (EAE backup)
- **3** AMP OUTPUT: A&B speaker line output terminal
- 4 100V input emergency amplifier
- **5** Fault IN : monitored and programmable drycontact inputs (e.g. EAE fault)

- 6 DRY CONTACT IN: monitored dry contact inputs and Programmable (e.g.: Alarm/Alerts...)
- **7** DRY CONTACT OUT: programmable dry contact outputs (e.g.: defect carry-over...)
- 8 UGA IN: monitored UGA inputs for alarm/alert triggering
- 9 Dante® Primary & Secondary Ethernet Ports
- 10 AUDIO IN: line level audio input
- 11 Air exhaust vent

EN 54 16

### **Digital Network Amplifiers** DPN-240S · DPN-240D · DPN-240Q · DPN-480S · DPN-480D

#### **EVAMATRIX technical specifications - RM-VA 1000**

#### **EVAMATRIX technical specifications - RM-VA 1000**

<u>⊿</u>Dante<sup>™</sup> EN 54 16

#### Microphone Call Station for VA & PA

### <sup>(a)</sup>Dante

Microphone Call Station for VA & PA



The RM-VA1000 call station is intended for use with EVAMATRIX VA or PA sound systems.

It can be configured in security mode (VA) via the supplied kit (sticker and rear cable protection cover) or in public address mode (PA).

It is easy to install and simple to use with its LCD screen that provides clear feedback on the configuration of a call.



The RM-VA 1000 only requires a connection to an IP network with a power supply via Ethernet 24VDC from EAE for use in or a simple 230VAC/24VDC adapter supplied for use in comfort mode.

In VA mode, the call station is fully supervised and allows you to launch an emergency call, ALARM, ALERT. The LCD screen gives the operator optimal control and constant feedback.



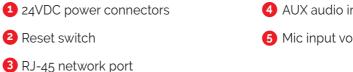
### **REAR PANEL**

#### **FEATURES**

- The RM-VA1000 call station can be configured for VA or PA.
- Connection to the IP network via a shielded Cat5e cable
- The 2.3" LCD display (with function menu navigation key) provides instructions and comments during the emergency call process, pre-recorded messages (ALARM/ALERT).
- Built-in monitor speaker with volume control.
- Local audio line input (mono) for connecting an external audio source in comfort mode only. The audio channel is available on the network and can be assigned to any speaker zone.
- Up to 128 microphone consoles can be connected to the EVAMATRIX system, of which up to 4 are VA consoles.

- The call station is fully compliant with EN54-16 standards for evacuation applications.
- All critical alarm functions are accessible according to access levels. The 2.3" display provides information on the system status.
- Control of all critical functions; signal and audio assignment is controlled, as well as communication with the network.
- The EVAMATRIX system integrates the SNMP V3 protocol (Simple Network Management Protocol) which allows a management and monitoring software to report any type of fault and status of the sound equipment.
- The EVAMATRIX system integrates seamless security (HTTPS, TLS1.2, SHA256, SSL, AES256 encryption and elliptic curve cryptography).





EN 54 16

#### **FRONT PANEL**

- Microphone input on XLR socket
- **2** OLED display
- 3 Emergency buttons in safety mode (VA) & PRESET buttons in comfort mode (PA)
- 4 12-key keypad
- 5 "Talk" Button (call)
- 6 Menu Buttons
- 7 Vumeter (LED)
- 8 Microphone status LED Volume
- 9 Potentiometer



- 4 AUX audio input jack (only in comfort mode)
- 6 Mic input volume potentiometer

#### **EVAMATRIX technical specifications - RM-VA 1000**

<sup>(a)</sup>Dante

Microphone Call Station for VA & PA

EN 54 16

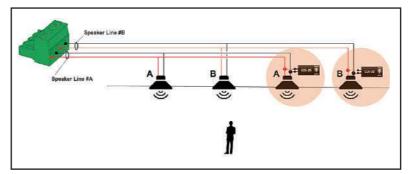
End of line element **EOL-20** 



#### **FEATURES**

- The operation is based on the detection of the amplifier's pilot signal with feedback to the amplifier via the same speaker line.
- No additional wiring is required for fault or status reporting.
- The end of line element must be connected at the end of the line and on each speaker line.
- The two wires have no polarity and can be connected in either direction.
- The A/B outputs of a DPN amplifier channel are individually supervised with separate end-of-line units.

#### WIRING OF THE EOL-20 ON A SPEAKER LINE



The EOL-20 must be connected at the end of the line and on each speaker line.The two wires have no polarity and can therefore be connected in either direction.

### **TECHNICAL CHARACTERISTICS**

MODEL	RM-VA 1000			
Power supply	24VDC (VCC)			
Consumption	Max. 10W			
Frequency response	100Hz - 18kHz to -3dB @ 1kHz			
Signal to Noise Ratio	>65dB			
Harmonic distortion rate (THD)	< 0.1%			
	міс			
AUX input sensitivity	-50dBV			
Output sensitivity	odBV			
Signal-to-noise ratio (< 20kHz LPF, A-WT.)	70dB or more			
T.H.D (< 22kHz LPF)	0,1% or less			
Frequency response 100Hz ~ 18kHz Input: -50dBV, 1kHz based	odB ± 3dB			
	AUX			
AUX input sensitivity	-10dBV			
Output sensitivity	odBV			
Signal-to-noise ratio (< 20kHz LPF, A-WT.)	80dB or more			
T.H.D (< 22kHz LPF)	0,1% or less			
Frequency response 100Hz ~ 18kHz Input: -50dBV, 1kHz based	odB ±3dB			
	General			
Ethernet (LAN)	RJ45, TCP/IP protocol 100/1000 Base-T			
LAN Extension	Output to EVAMATRIX on RJ45 (Dante®) - Input from EVAMATRIX on RJ45 (Dante®) CAT5 cable Maximum distance: 100m			
MTTF availability	Average failure time greater than 100,000 hours			
MTTR availability	Average repair time less than 20 minutes			
AES/EAE emergency power input	24VDC			
OLED screen	2,42"			
Operating temperature	-10°C ~ +40°C - Humidity: 5 ~ 95%			
Weight	1,29kg			
Dimensions (WxHxD)	200 x 73 x 206mm			
Accessories	AC power cord, Adapter, Gooseneck microphone, Euroblock termina			
Protocol and encryption	TCP/IP, Http, Https, SNMP V2c, IPv4, TLS1.2, SHA256, SSL, AES-256, Elliptic curve cryptography			



This module is a reliable solution for checking the integrity of the loudspeaker line, which is mandatory for VA sound systems.

The EOL-20 is connected at the end of the line after the last speaker.

It communicates with the DPN amplifier channel that drives the speaker line to confirm the integrity of the speaker line.

Where impedance measurements may not detect a disconnected loudspeaker (depending on the number of loudspeakers and the type of cable), the EOL-20 provides a highly reliable solution to always report the correct status of the loudspeaker lines.

The EOL-20 housing is IP30 and fits most cable junction boxes.

- The switch allows a more accurate measurement of the loudspeaker line depending on its load:
- HIGH: speaker line load greater than 150 W
- LOW: speaker line load less than 150 W
- To reduce power consumption, the DPN amplifier channels use pilot signal modulation.
- The audibility of the pilot signal is practically zero due to the low amplitude of the pilot signal (20kHz frequency) which is far beyond the range of humanhearing, even in young children.

#### **TECHNICAL CHARACTERISTICS**

Model	E0L 20
Operating temperatures	-10°C ~ +40°C Humidity : 5 ~ 95%
LOW position	Speaker line load less than or equal to 150W
HIGH position	Loudspeaker line load greater than 150W
Weight	150g
Dimensions (WxHxD)	100 x 35 x 30mm
Accessories	no

#### SWITCH EVA 8P+SFP M :

8-Port Gigabit Managed Industrial Ethernet Switch with 2 SFP ports

SWITCH EVA 8P+SFP M is a 10-port gigabit managed industrial Ethernet switch with 8 gigabit PoE RJ45 ports and 2 gigabit optical SFP ports. Each POE port can provide up to 30W and can be used for IEEE802.3af/ at compatible Powered Devices (PDs). Supports dual DC power source backup.



#### 120W 48VDC Industrial power supply (included)

- Universal AC input / Full range • Protections : Short circuit, overload, over voltage, over temperature Cooling by free air convection Can be installed on DIN rail TS-35/7.5 or 15
- UL 508 (industrial control equipment) approved

EN61000-6-2 5EN50082-2) •

industrial immunity level

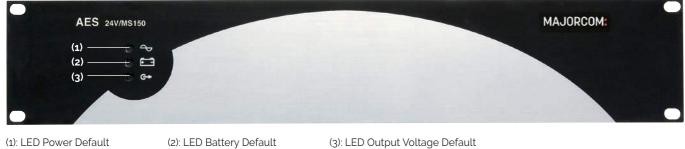
• 100% full load burn-in test

#### **TECHNICAL CHARACTERISTICS**

General	SWITCH EV	A 8P+SFP M			
Network Interface	• 10/100/1000Mbps RJ45 ports x8 • 10/100/1000Mbps SFP ports x2	• Console ports x1			
Network Protocol		IEEE802.3, IEEE802.3il, EEE802.3ul, EEE802.3ab, IEEE802.3z, IEEE802.3ad, IEEE802.3x, IEEE802.3af/at, IEEE802.1pl, EEE802.1ql, EEE802.1wl, EEE802.1d, IEEE802.1s			
Performance	• Bandwidth : 20Gbps (Non-Block • Throughput : 14.9Mpps • MAC table : 8K	Port cache : 4.1Mb     Forwarding model : Store and forward			
LED Indicator	Power Indicator : P1,P2     System Indicator : SYS     Alarm Indicator : ALM	SFP Port Indicator : Link&Act F1~F2     RJ45 Port Indicator : POE&Link&Act 1~8			
POE Pin	1/2 (+),	3/6/(-)			
Casing	Corrugated high-streng	Corrugated high-strength metal housing, IP40			
Installation	DIN-Rail				
Dimensions (LxWxH)	163mm×110mm×46.5mm				
Operating Temperature	-40~	-40~75°C			
Storage Temperature	-40~	-85°C			
Operating Humidity	5%~95% RH (nc	on-condensing)			
Storage Humidity	0%~95% RH (nc	on-condensing)			
Certification	CE/ROI	HS/FCC			
Compliance	<ul> <li>EMS :         <ul> <li>IEC61000-4-2 (ESD) : ±8kV (contact), ±15kV (air)</li> <li>IEC61000-4-3 (RS) : 10V/m (80MHz-2GHz)</li> <li>IEC61000-4-4 (EFT) : Power Port: ±4kV; Data Port</li> <li>IEC61000-4-5 (Surge) : Power Port: ±2kV/DM, ±4 Data Port: ±6kV</li> <li>IEC61000-4-6 (CS) : 3V (10kHz-150kHz); 10V (150 80MHz)</li> <li>IEC60068-2-6 (Vibration)</li> </ul> </li> </ul>	kV/CM; • EN IEC 61000-6-2:2019 • EMI :			

Power supply			
Input voltage	48-5	6V DC	
Input port		(supports dual DC power source backup, built-in ports anti-reverse connection)	
No-load power	6W@	52V DC	
Full load power	246W@52V DC (PC	DE full load output)	
Max. power for single port	30	W	
Software			
Protocol	<ul> <li>IEEE 802.3 : Ethernet Media Access Control (MAC) protocol</li> <li>IEEE 802.3i : 10BASE-T Ethernet</li> <li>IEEE 802.3u : 100BASE-TX fast Ethernet</li> <li>IEEE 802.3ab : 1000BASE-T gigabit Ethernet</li> <li>IEEE 802.3z : 1000BASE-X gigabit Ethernet(fiber)</li> <li>IEEE 802.3ad : Comply link aggregation standard</li> <li>IEEE 802.3x : Flow control</li> </ul>	<ul> <li>IEEE 802.1p : About the traffic priority of the second layer of Qos / Cos protocol (multicast filtering)</li> <li>IEEE 802.1q : VLAN Bridge operation</li> <li>IEEE 802.1d : STP spanning tree</li> <li>IEEE 802.1s : MSTP spanning tree</li> <li>IEEE 802.1w : RSTP spanning tree</li> <li>IEEE 802.3af</li> <li>IEEE 802.3at</li> </ul>	
Al Button	Al Loop Protect     Al PoE	• AI VLAN • AI Extend	
DHCP		Snooping	
VLAN	• 4K VLAN • 802.1Q VLANMAC VLAN ,IP VLAN	Voice VLAN	
MAC Table	<ul> <li>IEEE 802.1d</li> <li>Supports MAC address automatic learning and aging</li> </ul>	• Support static, dynamic, filtering address table	
Security	<ul> <li>Password protection</li> <li>Decline user access by port number, IP address and MAC address</li> <li>HTTPS, SSL V3, TLS V1, SSH V1/V2</li> <li>ARP Protection, IP source Protection, DoS Protection</li> </ul>	<ul> <li>Supports DHCP Snooping and DHCP attack protection</li> <li>Supports 802.1X authentication, AAA</li> <li>Supports port security, port isolation</li> <li>Supports CPU protection</li> <li>Supports IP-MAC-PORT ternary binding</li> </ul>	
PoE Management	<ul> <li>Supports PoE total power limit</li> <li>Supports PoE chip status view</li> </ul>	<ul> <li>Supports PoE port priority setting</li> <li>Supports PoE power time period setting</li> </ul>	
ACL	<ul> <li>Supports L2 (Layer 2) ~ L4 (Layer 4) packet filtering</li> <li>Supports port mirroring, port redirection, flow rate</li> </ul>		
QoS	<ul> <li>Supports 8 port queues</li> <li>Supports port priority, 802.1P priority, DSCP priority</li> </ul>	• Supports SP, RR, WRR, priority scheduling algorithm	
Spanning Tree	Supports STP (IEEE 802.1d) RSTP (IEEE 802.1w) and     Supports loop protection, root bridge protection, T		
Multicast	Supports IGMP v1/v2 Snooping     Supports multicast VLAN	<ul> <li>Supports multicast filtering, packet statistics, and unknown multicast discards</li> </ul>	
Storm Suppression	<ul> <li>Multicast suppression</li> <li>Broadcast suppression</li> </ul>	Unknown unicast suppression	
Link Aggregation	<ul> <li>Static aggregation</li> <li>Dynamic aggregation</li> </ul>	<ul> <li>Supports IP, MAC, and hybrid load balancing modes</li> <li>Up to 32 aggregation groups</li> </ul>	
IPv6	Pv6 Ping, IPv6 Tracert, IPv6	6 Telnet, IPv6 SSH, IPv6 SSL	
Management and Maintenance	WEB managementHTTPHTTPSSSL V3     CLITelnet, SSH V1/V2, Local serial port     SNMP V1/V2/V3     LLDP, RMON	<ul> <li>CPU monitoring, memory monitoring</li> <li>System log, grading warning</li> <li>Supports Ping, Tracert detection, cable detection</li> <li>ARP protection, IP source protection, DoS protection</li> </ul>	





(1): LED Power Default

(2): LED Battery Default

Model	AES 24V/MS 40	AES 24V/MS 150
Power voltage	195 - 264V	AC, 50-60Hz
Primary Current	1A @ 195VAC	2A @ 195VAC
	Breaker Circuit (D curve) ne	ed to be provided Upstream
Outputs		oltage 24VDC load and at25°C: 27.2V +/- 0.5%
	<ul> <li>2 "Amplifiers" Outputs with a current of 20A maximum per Output on connectors 16mm2</li> <li>2 "Controllers" Outputs with a current of 5A maximum per Output on connectors 2.5mm2</li> <li>The maximum current for all ouputs is 40A</li> </ul>	6 "Amplifiers" Outputs with a current of 40A maximum per Output on connectors 16mm2 3 "Controllers" Outputs with a current of 5A maximum per Output on connectors 2.5mm2 The maximum current for all ouputs is 150A
Outputs Relays	Output Relay without any	ny voltage Battery Default voltage Main Power Default voltage 24V Ouput Default
Battery Capacity	Between 24 and 110Ah	Between 38 and 225Ah
Operating Temperature		at 100% of load at 75% of load
Relative Humidity	20 tr	0 95%
Dimensions (W x D x H)	483 × 39	5 x 89mm
Weight	3,1kg	5.4kg



AES 24V/MS40 rear panel



AES 24V/MS 150 rear panel

## **EXEO** - Digital Voice Alarm System

EN 54 4 -EN 54 16 . EN 54 24

#### A MODULAR AND CUSTOMISABLE SYSTEM



#### **EVOLUTION OF THE NORM**, MAJORCOM REVOLUTION

In response to European standards EN 54-16, EN 54-24, EN 54-4, Majorcom offers a comprehensive, powerful and technologically innovative sound and voice evacuation system, which leaves no room for uncertainty. EXEO equips Retail, Industrial, Schools, Healthcare, Transportation, Corporate..., regardless of their volume, requirements or characteristics.

#### LATEST-GENERATION **USER-FRIENDLINESS**

AND SECURE SYSTEM

EXEO can host up to 128 units.

2048 Lines Speakers in A / B.

EXEO allows up to 40 audio inputs.

expandable.

An all-in-one solution with built-in amplifiers, 2U rack-mountable and

Management is performed via a 4.3" color LCD touch screen. The software gives you intuitive access a wide range of functions in a clearly visible manner, adapted to your needs. Its network configuration means that the system can be run locally by PC. Benefit from our teams' technical skills and availability, on site or by remote maintenance.



EXEO continuously controls the operation of its power stations and peripherals: control of amplifiers, control of Speakers Lines, control of security remotes stations. The certification of the EXEO range is a "product" certification which allows an implementation in any type of rack.



#### **COMFORTABLE AND ERGONOMIC STATIONS**

The EXEO Master control unit MVA-8120 allows the management of 8 broadcast zones and 8 alarm zones expandable with the addition of extensions units. Stations are interconnected by an FlexNET/Cobranet network via an Ethernet cable (Cat5/6) up to one hundred meters, beyond which the units are connected by optical fiber. The 4.3" LCD screen placed on the front of the Master unit provides the user with simple touch screen. management. It can monitor and operate audio sources and zones from the front panel. EXEO is equipped with 2 message players up to 99 MP3/WAV messages (Max 12h) controlled via the user interface on the 4.3" LCD screen or remotely via the microphone consoles.

#### **NO COMPROMISE ON SECURITY**

### TOTAL FREEDOM OF ACTION

EXEO is a compact system whose numerous functionalities EXEO is configured from a PC with the EXEOconfigurator are easily accessible. You identify the number of administra- software. The system is operated locally via the HMI intertors required and allocate the appropriate access level to face thanks to its 4.3" color touch screen on the front panel. each of them.

#### A TECHNOLOGICAL JEWEL, A LITTLE ERGONOMIC GEM

Equipped with state-of-the-art technology, EXEO also of- face, is conducive to intuitive navigation. Users can adminisfers you quality ergonomics. Everything, from the 4.3" touch ter what they want, when and how they want. screen to the extremely user-friendly graphical user inter-

#### Route sources in zones



#### Load Presets



#### Messages Player



 Control Inputs, Outputs Amplifiers and Zones Volumes



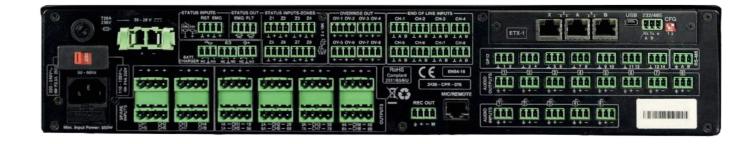
PA	123	AUDIO	OUTPU	TS 3 2	<sup>1</sup> RESET
DIS	1	2		Vumeter	ACK
FLT	3	4	ttt	Gain 100dB	
EMG	5	6	3dB	+	ОК
	7	8	•(X)	-	
TEST	SEL + A	DJ&O	K TO C	ONFIRM	



" The highly intuitive interface has been designed to respond to all functions used for the Public Address and Voice Evacuation System "

#### EN 54 16

MVA-8120: A CONCENTRATION OF HIGH TECHNOLOGY



#### **INPUTS - OUTPUTS**

#### **VOICE ALARM SYSTEM**

- Each station can manage 4 or 8 Alarm Zones (1024 in total for a 128-station system).
- 2 message players (Evacuation & Pre-Alert) common to the entire installation.
- On each Alarm Zone, it is possible to configure a prealert device with the evacuation.
- A PTT Safety Desk on the front of the Master unit and Controlled EVS Stations. Possibility of extending the number of calling Alarm Zones via the EVS/E interfaces (64 Max).
- 8 Normally Open Dry Contact inputs Controlled by the unit (1 per alarm zone) + a general input for an evacuation trigger. Voltage trigger inputs 24/60VDC via the UGA (Alarm Management Units) card.
- 3 Monitored Dry Contact inputs for Main Power, Battery and Presence Output of the emergency power supply.
- 1 default synthesis output on each station.
- An EMG (EMERGENCY) output.

#### **MESSAGES**

- EXEO offers 2 message players MP3/WAV with a total of 99 messages, maximum 12 hours.
- These messages can be triggered by dry contact, on a scheduler, from the Remote Mic Call Stations EVP or by dry contact.



#### PUBLIC ADDRESS

- The EXEO master unit MVA-8120 hosts 5 line inputs. Priority management between sources is managed by presets on ducking fonction.
- 32 sources can be added to the network via Cobranet DCO-22 audio interfaces.
- 16 Speakers Lines Outputs in A/B maximum per unit so you can have 2048 peakers Lines total on a complete installation.
- 14 GPIO programmable input / output for preset management or report of an event.
- Up to 8 Remotes Microphone Station (EVP) can be connected and 8 VCC-64Volume and Channel Controllers
- Audio outputs available on each equipment to insert external amplifiers.
- 8 outputs for level recovery for attenuators.

 Adjustable volume for each broadcast zone output or input and amplifier.

EXEO control units incorporate Class D digital power amplifiers offering several power -EN 54 16 channels.

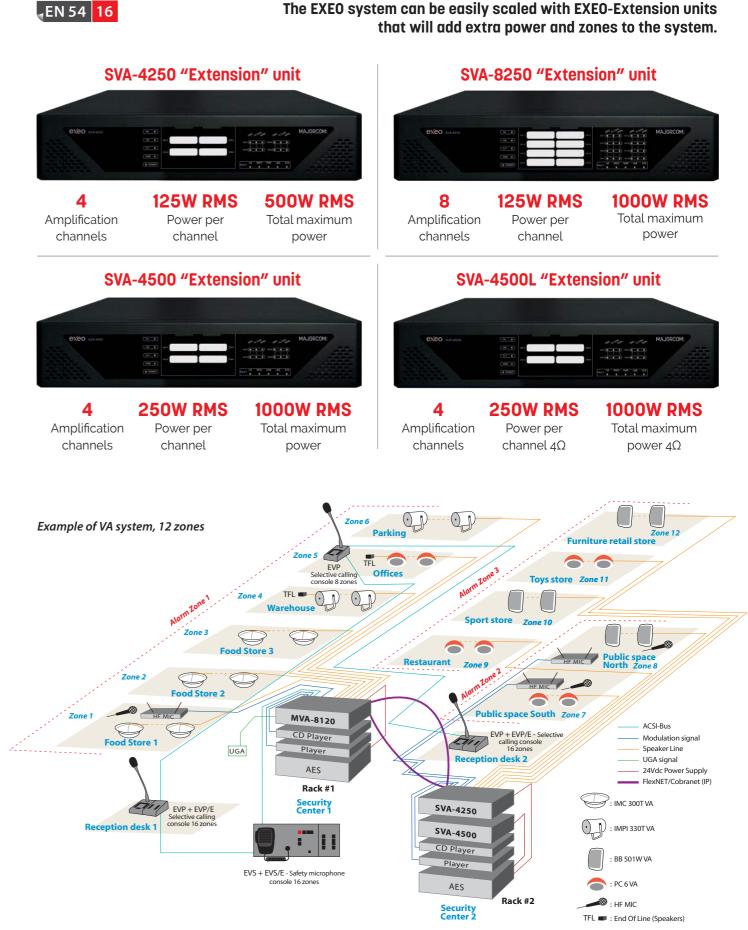
These amplifiers are protected against short circuits, overheating or earthing.

#### MVA-8120 "Master" Unit



EVS + EVS/E - Safety microp

## **EXEO SYSTEM COMPONENTS**



EXE0

## The EXEO system can be easily scaled with EXEO-Extension units



Exeo Control is a software to control the EXEO system from a Windows

PC connected in TCP/IP. It allows you to manage volumes in zones, stamp sources in zones, and manage input volumes. It is also possible to launch events such as triggering messages, presets...

Very easy to use, its interface allows to insert and customize one or more graphics cards of the site to control.



Zone volume management

- Easy to use and install
- Source assignment control
- Volume control of sources and zones
- Total supervision of the system by zones (fault, evacuation, etc.)
- Allows adding the installation plan (jpg, png)
- Synchronization with the EXEO system
- Exclusive for EXEO systems (MVA 8120 and EXEO extension unit)
- An EXEO system can accept up to 5 EXEO **CONTROL** connections



Stamp sources in areas, manage input volumes



Launch events, manage presets



PC Server for EXEO system

Compact but so powerful!



- Powerful: optimized by 6th generation Intel® Core <sup>™</sup> processors.
- Multitasking fluid: up to 16GB of DDR3 memory for smooth workflow across multiple applications.
- Supports two screens: DisplayPort, HDMI and VGA connectivity (optional) provides better visibility of your tasks.

Model	PC SERVEUR EXEO
PC	
Туре	Dell OptiPlex 3040 - Core i3 6100T 3.2 GHz - 4GB - 500GB
Processor	1 x Intel Core i3 (6th generation) 6100T / 3.2 GHz (Dual core)
RAM	4GB DDR3L SDRAM
HDD	1 x 500GB - SATA
Graphics Controller	Intel HD Graphics 530
Network	GigE
Dimensions (WxHxD)	489.4 x 197.6 x 362.7mm
Weight	3kg
MONITOR	
Form factor	16:9
Native resolution	Full HD (1080p) 1920 x 1080 @ 60Hz
Contrast	600:1 / 5000000:1 (dynamic)
Input connectors	DVI-D, VGA



Exeo Control also reports the status of EXEO: faults, deactivated or in evacuation zone



- LED Monitor 22" 16:9 with resolution of 1920 x1080, 5ms of response time, VGA DVI-D connexion and VESA fixation.
- Keyboard and mouse provided.

### **EXEO SYSTEM COMPONENTS**

#### **MICROPHONE CONSOLES:** A RELIABLE SOURCE



MAJORCOM has developed two categories of EXEO consoles: selective calling console (EVP) and safety microphone console (EVS).

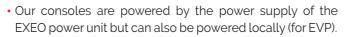
#### **TECHNOLOGY AND ERGONOMICS**

The extended range of our consoles – EVP and EVS with extensions – has been designed to respond as accurately as possible to your needs in terms of sound system and evacuation, in compliance with the EN 54-16 standard. They provide excellent speech intelligibility.

Each console is directly connected from the EXEO station via a CAT5/6 cable.

#### **IN SHORT**

- EXEO Microphones consoles can manage up to 64 broadcast zones or 64 alarm zones (Z.A.) on EVS with the addition of EVP/E or EVS/E extensions.
- All Keys can be configured as zone calls, zone groups or to trig messages and presets.
- EVP Stations offer the "recording" function, making possible delayed or repetitive calls.
- Our safety microphones are controlled and monitored by the EXEO. In accordance with the EN 54-16 standard, the link is controlled in open circuits, short circuits and grounded.



EVP

- Every Call or Alarm Zone key can be configured. Our customer enjoys total usage flexibility.
- LEDs are used to control the chime broadcast, speech and occupation (calling from another console).
- The design optimizes the product's efficiency and user comfort.

## EN 54 16

EVP/E

#### **Microphone accessories**

#### COFFRET EVS 6U

#### 6U Wall-mounted Rack for remote EVS

- This 19" wall-mount cabinet allows the voice alarm panel EVS and its extensions to be deported while maintaining access levels required by EN 54-16 standard.
- It can contain up to 1 EVS and 2 EVS/E extension.

#### **COFFRET EVS 4U**

#### 4U Wall mounted Rack for remote EVS

- This 19" wall-mount cabinet allows the voice alarm panel EVS and its extensions to be deported while maintaining access levels required by EN 54-16 standard.
- It can contain up to 1 EVS and 2 EVS/E extension.

#### EVS/E BLANK Expansion blanck block for EVS

Accessory for 19" mounting of EVS micro security console









#### **EXEO SYSTEM COMPONENTS**



#### SWITCHES & INTERFACES

#### Industrial Switch 4 ports 10/100 + 2 sfp 100x

SWITCH EXEO is a new Industrial Ethernet Switch that can operate under WIDE-TEM-PERATURE environment ranging from -40 up to 75 degrees C and is equipped with two 100Base-FX SFP slots. With two mini-GBIC 100Base-FX SFP (Small-Form Factor Pluggable) interfaces supported, the deployed distance of the SWITCH EXEO can be extended from 2 kilometers (via multi-mode fiber) up to above 60 kilometers (via single-mode fiber), respectively. In other words, SWITCH EXEO provides more flexibility for master slave deport of the EXEO security system suitable for deploying long or short distance network.

#### SWITCH EXEO

Copper Cat5/6

Optic fiber multimode or monomode via mini-Gbic SFP



#### Fiber module SFP Minigbic monomode [10km]

**MINIGBIC SFP MONO** Used to establish a Gigabit 1000LX link in 9/125 Singlemode Fiber up to 10km. Operates on the wavelength 1310 nm.

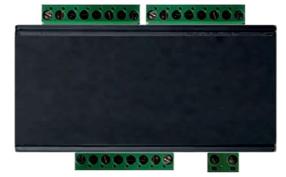
#### **UGA Interface**

**EXEO-INT-UGA** is an interface for EXEO system to control from a

voltage up to 4 alarm zones as well as the error feedback to the CIE\*. It allows you, depending configuration, to raise a fault on a separate cable (dry contact via RFL resistor) or on a UGA connection (RFL resistor reading).

It is provided with an EXEO system ordered in a wired rack (RACK 19" 22/32/37/42U EX CAB). Strong metal case with rail DIN mount provided.

Lockable connectors.



EXEO-INT-UGA

#### Audio Interface

DC0-22 is an audio DSP matrix based on the COBRANET over Ethernet market standards. It has 4 channels of audio input and 4 channels of audio output being these configured by



software as channel input or output. It may have up to four channels of input or output so be able to send the audio over Ethernet using the COBRANET Standard.



system as it uses an RS-485 interface. be assigned to the same zone.

#### 12VDC Power Supply for VCC-64

The 12VCC VCC-64PSK power supply allows the power supply of the Volume and Channel Controller VCC-64 in the system, with a CAT5/6 cable for the entire Bus.

### End of Line Device [EOL]

The End Of Line Device TFL-2 provides an accurate measurement of the impedance of the speaker line (400R/200R configurable load, in order to test the line integrity between the speaker and the system. This allow to supervise the line until the last speaker without return cable, even the line have smaller loads with just 1 or 2 speakers. The EXEO system allows the Loudspeaker lines to be monitored in two complementary ways, by measuring the line impedance and / or with the end-of-line device TFL-2 (EOL).

\* Control and Indicating Equipment

TFI -2

### INTERFACE ET ACCESSOIRES

DC0-22

### Volume and Channel Controller

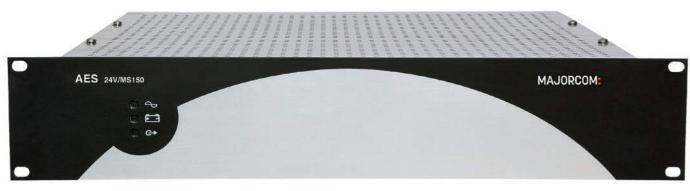
- VCC-64 allows the volume control of the zone where it is located and the routing of audio inputs (channels) from the system to that zone.
- Unlike an attenuator, VCC-64 has a direct communication with the EXEO
- Up to 8 zones can be controlled in the same bus and several VCC-64 units can



VCC-64PSK



#### **BACKUP POWER SUPPLY AES: A CERTIFIED RANGE**



AES 24V/MS150

The EN 54-16 standard, which now governs Sound Security Systems (SSS), refers to the EN 54-4 standard according to which the different Power Supplies of our EXEO System are certified.

Our two BPS models comply with several EC directives: CPD (in compliance with EN 54-4/A2), LVD, EMC,WEEE and RoHS.

**AES 24V/MS40**: maximum current for all outputs is 40A.

**AES 24V/MS150**: maximum current for all outputs is 150A.

#### **OUICK AND EASY TO SET UP**

- Simple: all you need is "1 pair of pliers and 1 screwdriver".
- Quick: plug-in connectors on the rear panel. Ready-touse connection kit.
- Safe: a totally sealed box prevents any risk of damaging the internal electronics due to falling conductive parts.
- Light: the weight of the 2U rack is 3.1kg for the AES 24V/MS40 and 5.4kg for the AES 24V/M150.





#### **OPTIMAL PERFORMANCE**

- In normal operation mode: the BPS power supply controls and recharges the batteries and keeps them charged from the power supply. It can provide the sound security system with standby current.
- In security operation mode: the total operating current (including the current of the amplifiers of the sound security system) is supplied by the batteries.

#### **BACKUP BATTERIES**

Stationary Batteries Sealed Lead Acid gas valve controlled by maintenance :

- 12V 17Ah : BAT12V17AH
- 12V 25Ah : BAT12V25AH
- 12V 38Ah : BAT12V38AH
- 12V 65Ah : BAT12V65AH
- 12V 78Ah : BAT12V78AH
- 12V 100Ah : BAT12V100AH
- 12V 120Ah : BAT12V120AH
- 12V 150Ah : BAT12V150AH
- 12V 180Ah : BAT12V180AH
- 12V 210Ah : BAT12V210AH

#### RACK 19" 22U EX / 32U EX / 37U EX / 42U EX :

22 / 32 / 37 / 42 units 19" rack mounted, tested RACK 19" 22U EX CAB / 32U EX CAB / 37U EX CAB / 42U EX CAB:

22 / 32 / 37 / 42 units 19" rack mounted, tested & wired

• 22U / 32U / 37U racks : removable side panels with key lock, front glass door & rear door with key lock.

- Rack 42U rack : removable rear & side panels, front glass door with key lock.
- · Supplied with fans, electrifications, wheels and brackets.

Model	RACK 19" 22U	RACK 19" 32U	RACK 19" 37U	RACK 19" 42U
Number of units	22 32		37	42
Dimensions (D x W x H with wheels)	800 x 600 x 1 169 mm	800 x 600 x 1613 mm	800 x 600 x 1 835 mm	800 x 600 x 2 074 mm
Number of fans	2	2	2	2
Color		RAL 9005		RAL 9004

#### **19" RACK ACCESSORIES**

#### PB 9100 / PB 9200 / PB 9300 / PB 9400

1/2/3/4U - 19" rack blank panels





Depth : 550 mn.





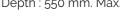
#### **PLATEAU RACK 800**

Fixed shelf Depth : 550 mm. Max. charge : 90kg



Reinforced fixed shelf Depth : 550 mm. Max. charge : 120kg





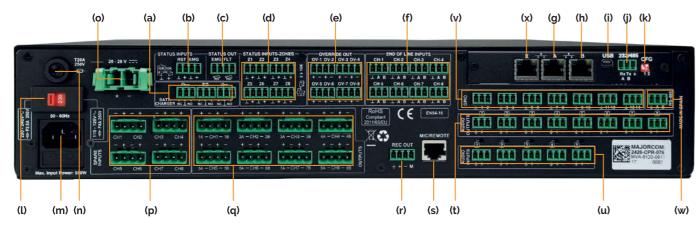


Sliding shelf Depth : 550 mn. Max. charge : 35 kg



#### EN 54 16





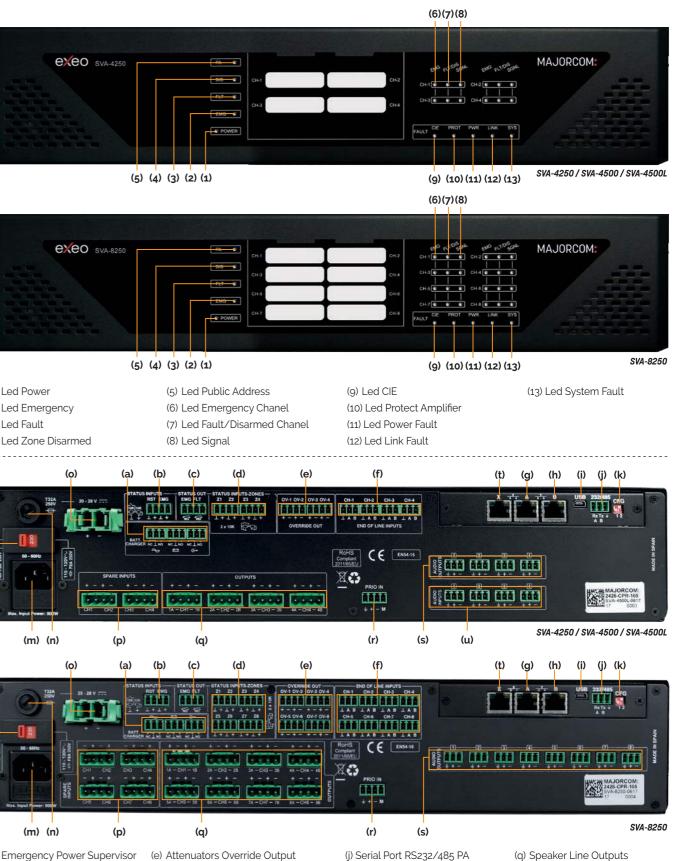
(a) Emergency Power Supervisor Input

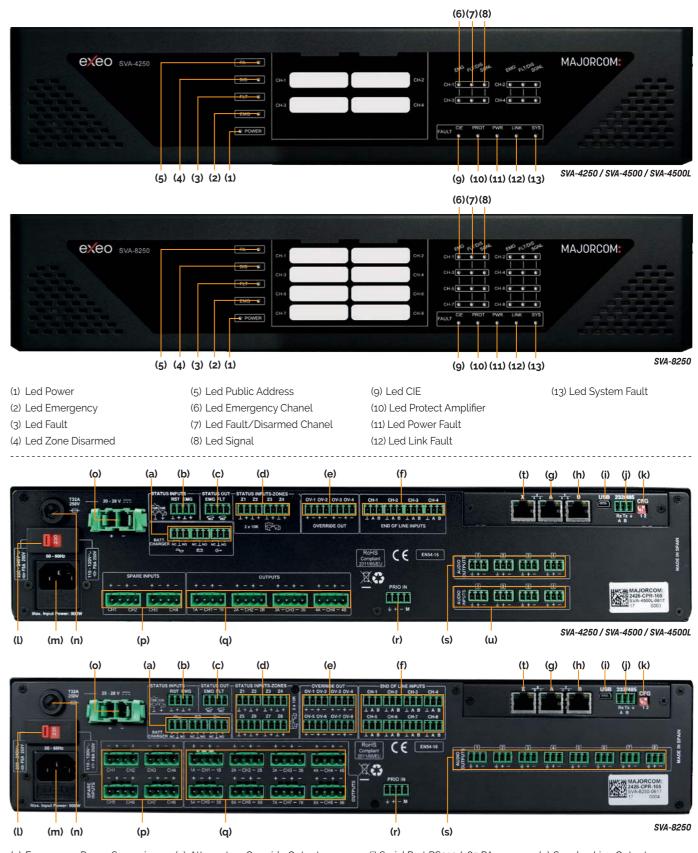
- (b) General Emergency Mode Activation Input
- (c) Status Supervision Outputs
- (d) Emergency Zone Mode Activation Input
- (e) Attenuators Override Output
- (f) End Of Line Inputs
- (g) Interface Connection To System A FlexNet / Cobranet
- (h) Interface Connection To System B FlexNet / Cobranet

(i) USB Port (reserved) (j) Serial Port RS232/485 PA (k) System Connection configuration Switch (I) Main Power supply Switch (m) Main Power supply Input (n) Emergency Power Supply Fuse

- (o) Emergency Power Supply Input 24Vdc (p) Spare Channels Inputs
- (q) Speaker Line Output
- (r) Record Output

- (s) Paging Microphones And System Devices Input ACSI Bus (t) Audio Line Output (P.A Amplifiers) (u) Audio Source Input
- (v) Input Output Port GPIO (w) Emergency Port RS485 (x) Ethernet Port





- (a) Emergency Power Supervisor Input (b) General Emergency Mode Activation Input
- (c) Status Supervision Outputs (d) Emergency Zone Mode Activation Input
- (f) End Of Line Inputs
- (g) Interface Connection To System A FlexNet / Cobranet
- (h) Interface Connection To System B FlexNet / Cobranet
- (i) USB Port (reserved)

### **EXEO technical specifications - SVA Extensions**

(j) Serial Port RS232/485 PA (k) Configuration Switch (I) Main Power supply Switch (m) Main Power supply Input (n) Power Supply Fuse (o) 24VDC Power Supply Input (p) Spare Channel Inputs

(q) Speaker Line Outputs (r) Priority Input (on P.A mode) (s) Audio Line Outputs (t) Port Ethernet (u) Audio Line Balanced Inputs [only SVA-4500L]

EXE0



EN 54 16

Selecting calling

console

Model	MVA-8120	SVA-8250	SVA-4250	SVA-4500	SVA-4500L
AC Power	115/230VAC 50/60Hz				
Consumption max power	550W max		1,100	√ max	
Frequency response		80 - 20,000Hz +/-3dB 40 - 20,000Hz +,			
Signal to noise ratio			> 95dB		
Distortion factor			< 0,05%		
Gain adjustment per channel	-100dB · 0dB, 1dB Steps				
DSP		Integral	ted 24 bits 48kHz - 344 MI	PS	
FlexNET/Cobranet	3 x FlexNe	t Redundant (automatic s	witching)/ Cobranet,Ether	net10/100Mbits. Female	RJ-45
Audio inputs	5 x Balanced audio 7Vrms- 0dBV. 10kΩ, 3Pin, Euroblock		Audio Interface DCO-22		4 x Balanced audio 1Vrms-0dBV. 10kΩ, 3Pin, Euroblock
ACSI Bus input	1 x Balanced audio Input 0.7Vrms-0dBV. 10kΩ, RJ45 Female, 800m Maxi	-			
PRIO audio inputs	-	1 X	Balanced audio 0.7Vrms	odBV. 10kΩ, 3Pin, Eurobla	ock
Pre-amp Audio Outputs	8 x Balanced audio 0.7Vrms	s. 100Ω, 3Pin, Euroblock	4 x Balanced	ł audio 0.7Vrms. 100Ω, 3Pi	n, Euroblock
REC Out	1 x Balanced audio 0.7Vrms. Sortie 0 - 5Vdc, 4 Pin Euroblock	-			
Attenuators over-ride	8 x Override 24Vdc, 40mA, 2	, 2 Pin (4 Pin Euroblock) 4 x Override 24Vdc, 40mA, 2 Pin (4 Pin Euroblock)			
Emergency control inputs	10 x 0-5Vdc, Monitored input	ts, 2 Pin (4 Pin Euroblock) 6 x 0-5Vdc, Monitored inputs, 2 Pin (4 Pin Euroblock)			
Emergency control outputs		2 x Relay contact I	solated Output, NO, Max 6	60Vdc 130mA	
Virtual Audio Matrix	40 × 1024		-	-	
Port GPIO	14 x Inputs/Outputs 0-5Vdc 3 Pin (4 Pin euroblock)		-	-	
Class D Amplifiers	8 x 60 W RMS @ 100 V	8 x 125 W RMS @ 100 V	4 x 125 W RMS @ 100 V	4 x 250 W RMS @ 100 V	4 x 250 W RMS @ 4 Ω
Speakers outputs	16 (2x8) 100V, 2 Pin (2	4 Pin Euroblock)	8 (2x	4) 100V, 2 Pin (4 Pin Eurob	lock)
Speakers loop inputs	16 (2x8) No Voltage Cont	act, 3 Pin euroblock	8 (2x4) CN	lo Voltage Contact, 3 Pin e	euroblock
Back-up amplifiers inputs		1 Input per cha	anel, for amplifier with equ	al power	
Protection		Over-temperature, infr	asonic, short circuit, slow s	start-up, overload	
Emergency Power Input	20 - 28VDC, 20A Fused, 2 Pin Euroblock		20 - 28VDC, 32A Fu	sed, 2 Pin Euroblock	
Emergency Power Status Input		3×1	NO - NC, 3 Pin Euroblock		
Display Screen	Tactile TFT 4.3" 480*272			-	
Operating conditions		-5°C to +45°C ∕ 5 to 9	95% Relative humidity (No	condensation)	
Weight	12kg	14kg		8kg	
Dimensions			483 x 88 x 455mm		
IP Protection			IP30		
Accessories	2 rack	brackets, male Furobloci	k connectors, 1 Mains cabl	e 2m, 1 Ethernet cable 2m	1





Model	EVP	EVP/E	EVS	EVS/E
Power Supply	4.5- 5.5VDC, 1 x miniUSB type AB	-	4.5- 5.5VDC, 1 x miniUSB type AB	-
Power Consumption	230mA max	40mA max	200mA	40mA max
Frecuency Response	200 - 15,000Hz (+/-2dB)	_	200 - 12,000Hz (+/-2dB)	-
S/N ratio	> 98dB	-	> 98dB	-
Sensitivity	-43dB (1kHz)	-	-43dB (1kHz)	-
Туре	Condenser	-	Dynamic	-
DSP	Integrated 48kHz, 24bits, 172MIPS	-	Integrated 48kHz, 24bits, 172MIPS	-
External microphone input	Unbalanced audio 15mV, 47kΩ, 3Pin, 3.5mm miniJack type for dynamic microphone	-	-	-
ACSI Bus	2 x Identical ACSI ports: Balanced audio 1Vp, 0.7Vrms. 10kΩ, female RJ-45, Total 1000m.	-	2 x Identical ACSI ports: Balanced audio 1Vp, 0.7Vrms. 10kΩ, female RJ-45, Total 1000m.	-
Gooseneck/Cable length	350mm	-	500mm	-
Dimensions w/o gooseneck	86 x 65 x 190mm	86 x 65 x 190mm	259 x 132 x 50mm	86 x 132 x 50mm
Operating conditions	-5 to +45°C / 5% to 95% Relative Humidity (no condensation)			
Weight	1kg			
Accesories	1 x miniUSB AB male to USB A male 1 cable CAT5 2m 1 x Pop filter 1x Power Supply USB connector Type C	-	1 x miniUSB AB male to USB A male 1 cable CAT5 2m 2 x accesories for rack installation 1x Power Supply USB connector Type C 1 x block accessory for wall instalation	-





#### Safety microphone console



EVS Rear panel

### **EXEO technical specifications - Switch**

### **EXEO technical specifications - Interfaces**

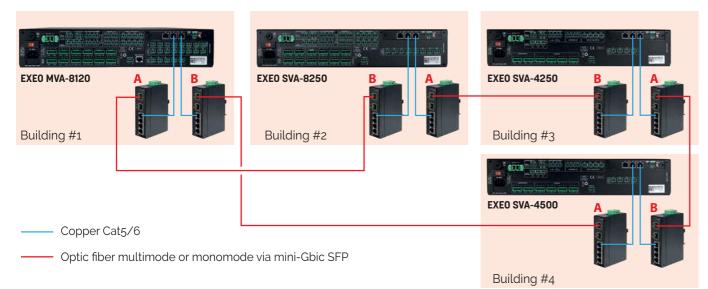


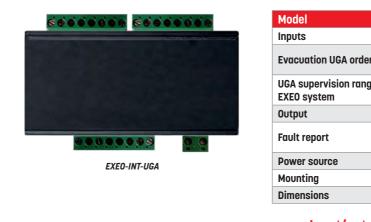
Sanan

751	Redundant Power	IDM IDDM	IDDFX Fiber Optical	Auto MDI/ MDI-X	IP Code 30	
100		_	and the second se		-	

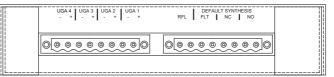
SWITCH EXEO

Model	SWITCH EXEO
Copper Interface	Ports: 4 x 10/100Base-TX, auto negotiation, auto-MDI/MDI-X Cable 10Base-T: 2-pair UTP Cat. 3, 4, 5 cable (100m, max.) 100Base-TX: 2-pair UTP Cat. 5, 5e, 6 cable (100m, max.)
Optical Interface	Port / Type: 2 x 100Base-FX / LC interfaces Cable Multi-mode: 50/125µm / 62.5/125µm fiber Single-mode: 9/125µm fiber
Dimensions (W x D x H)	135 x 97 x 32mm
Weight	442g
Power Requirements	12 ~ 48V CC, Redundant power with polarity reverse protection
<b>Power Consumption / Dissipation</b>	Max. 16 W / 54 BTU
Installation	DIN rail kit / wall mount ear
Alarm	Provides one relay output for power failure Alarm relay current carry ability: 1A @ DC 24V
Switch Processing Scheme	Store-and-Forward
Address Table	2K entries
Buffer	1Mbit
Flow Control	Retour de pression pour half-duplex IEEE 802. 3 x cadre de pause pour full-duplex
Switch Fabric	1.2Gbps
Throughput (Packet Per Second)	0.89Mpps @ 64Bytes
Standards Compliance	IEEE 802.3 Ethernet, 10Base-T IEEE 802.3u Fast Ethernet, 100Base-TX, 100Base-FX IEEE 802.3 x Flow Control
Regulation Compliance	FCC Part 15 Class A, CE
Stability Testing	IEC60068-2-32 (Free fall) // IEC60068-2-27 (Shock) // IEC60068-2-6 (Vibration)
Temperature	Operating: -40 ~ 75°C // Storage: -40 ~ 85°C
Humidity	Operating: 5 ~ 90% // Storage: 5 ~ 90% (non-condensing)





#### Input/output view

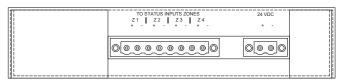


exeo	DCO- VIRTUAL AUD
0000000	

Model	DC0-22
Power source	110 - 240V ~ 50/60Hz
Consumption	<20W
Phantom power supply	12V (in all inputs, configurable)
Frequency response I/O	20Hz-20kHz +/-0.05dB
Input sensibility	1Vp, 0.707Vrms
Audio input	Analog, balanced
Sensibility adjustment	+20dB / 0dB / -10dB
S/N	>94dB @1Vrms
Audio Connectors	Euroblock connector
DSP Resolution	48kHz 24bits
GPIO	16 I/O configurable TTL 5V
Ethernet y Cobranet Interface	2 x RJ-45. Redundant
ATT output	24V 50mA, Monitored and protected
Weight	1kg
Processing unit dimensions	218 x 155 x 42mm (1U height, width ½ rack unit)
Finish	Black RAL9005



	EXEO-INT-UGA
	UGA x4
er range	24 ~ 60VDC
ge from	-20 ~-3VDC / +3 ~+20VDC (deactivated)
	Supervised alarm release contact x4 (2x10kΩ)
	Dry contact: NC & NO, fault synthesis output (FLT) via resistance reading RFL.
	24VDC from AES
	Rail DIN
	144 x 83 x 31mm



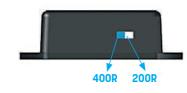


DCO-22 Rear panel

## **EXEO technical specifications - Accessories**

EN 54 4





Model	TFL-2
Input	100V or 70V PA line input. MAX. consumption 15mA , 2 pin Euroblock type
Selector	2 positions 400R/200R
Enclosure	ABS, Black RAL 9005
Weight	35g
Dimensions (WxHxD)	66.3 x 20 x 50mm
Accessories	Male Euroblock Connector



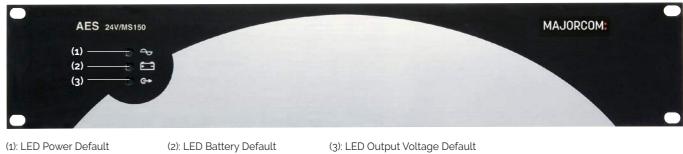
Model	VCC-64
Power source	12VDC
Consumption	1.2W max. (100mA)
Bus	RS-485 connects to the System's interface, Max. communication distance is 1200m (Max distance to power source is 500m) 4P Terminal Board.
Address setting	DIP switch
Display	2x8 characters LCD
Environmental Conditions	Temperature -5 to 55°C, relative humidity 15%-80%. Anti-interference, confirms EN 55103-2, CE, CCC certified.
Dimensions (WxHxD)	86 x 56 x 40mm
Appearance	ABS Material, White
Weight	110g



VCC-64PSK

00

Model	VCC-64PSK
Marking	12V === ⊙
Description	12V power source
Туре	Input
Signals	+ -
Activation	12VCC, 1 to 1,5A



Model	AES 24V/MS 40	AES 24V/MS 150
Power voltage	195 - 264VAC, 50-60Hz	
Primary Current	1A @ 195VAC	2A @ 195VAC
	Breaker Circuit (D curve) nee	ed to be provided Upstream
Outputs	Nominal Voltage 24VDC Floating Voltage Set at half-load and at25°C: 27.2V +/- 0.5%	
	<ul> <li>2 "Amplifiers" Outputs with a current of 20A maximum per Output on connectors 16mm<sup>2</sup></li> <li>2 "Controllers" Outputs with a current of 5A maximum per Output on connectors 2.5mm<sup>2</sup></li> <li>The maximum current for all ouputs is 40A</li> </ul>	<ul> <li>6 "Amplifiers" Outputs with a current of 40A maximum per Output on connectors 16mm<sup>2</sup></li> <li>3 "Controllers" Outputs with a current of 5A maximum per Output on connectors 2.5mm<sup>2</sup></li> <li>The maximum current for all ouputs is 150A</li> </ul>
Outputs Relays	Output Relay without any voltage Battery Default Output Relay without any voltage Main Power Default Output Relay without any voltage 24V Ouput Default	
Battery Capacity	Between 24 and 110Ah Between 38 and 225Ah	
Operating Temperature	-10 to +45°C at 100% of load -10 to +55°C at 75% of load	
Relative Humidity	20 to 95%	
Dimensions (W x D x H)	483 x 395 x 89mm	
Weight	3.1kg 5.4kg	





## **EXEO technical specifications** - Backup power supply

AES 24V/MS40 Rear panel

AES 24V/MS 150 Rear panel

500Hz

1kHz

2kHz 4kHz

EN 54 24

#### **IMC 300T/VA** 2-way Omnidirectional speaker - 30W

#### Patented omnidirectionality

Created by MAJORCOM and protected by an international patent, this powerful omnidirectional speaker is specifically adapted to the sound systems of large and very large volumes with loud noise levels: shopping centres, sports halls, ice rinks, swimming pools, airports, etc. Equipped with a heavy-duty, 16cm 2-way speaker and 30W a high-performance 100V line transformer, the IMC 300T/VA has a near Hi-Fi quality.

#### **AUDIO QUALITY**

It broadcasts quality sound without any frills.

#### **SOUND COVERAGE**

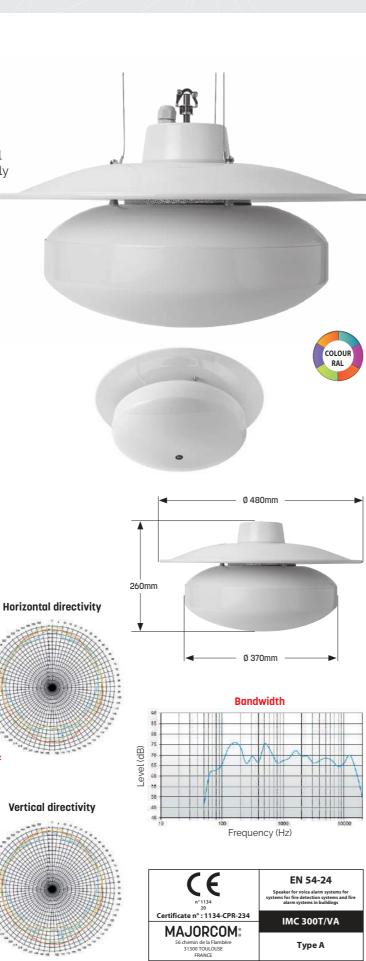
The patented reflector has earned the reputation of being the most efficient solution for achieving a large and homogeneous coverage zone (3 to 5 times larger than traditional enclosures, sound projectors, etc.).

#### **OPTIMAL INTELLIGIBILITY**

RASTI measurements have shown that our products respond in all cases to the intelligibility requirements of safety standard EN-5424 (Type A).

- 3 steel mounting slings (80cm) make it possible to suspend it securely.
- Optional specific RAL painting available : PEINT OMNI (minimum 6 pcs).

Model	IMC 300T/VA
Body & grill	Metal
Nominal power	30W
Nominal Impedance	330Ω
Power 100V Line	30/20/10W
Impedance	330 / 500 / 1,000Ω
Bandwidth	60Hz - 20kHz
Sensitivity (1W/1m)	84dB
SPL MAX 1m	98.8dB
Directivity (H-V) @ 500Hz	360° - 360°
Directivity (H-V) @ 1kHz	360° - 360°
Directivity (H-V) @ 2kHz	200° - 200°
Directivity (H-V) @ 4kHz	275 <sup>°</sup> - 275 <sup>°</sup>
Speaker	6.5" - 2 ways
Cone	Protected paper
Dimensions [mm]	Ø480/Ø370 x (H)260
Weight	4.5kg
Operating temperature	-15 to +55°C
Protection Index	IP54
Color	White



#### **B 420T VA**

EN 54 24

#### **20W Design Pendant Speaker**

- The 20W pendant speaker is equipped with a 100mm 2-way bass reflex system and offers powerful sound with a wide and homogeneous dispersion.
- The B 420T VA has a 100V transformer with 4 power adjustments, these can be easily adjusted by a rotary switch on the top of the sphere. Low impedance operation is also possible.
- The impact-resistant, UV-resistant ABS plastic housing in RAL 9016 guarantees lasting stability.
- Additional operational safety is provided by the 2x2-pole ceramic terminal block, a thermal fuse, a PG screw connection integrated into the canopy and the moisture impregnation of the loudspeaker.
- The loudspeaker is protected against the risks of environmental influences with protection class IP65.

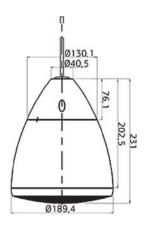
Model	B 420T VA
Body & grill	ABS, Aluminium
Nominal power	20W
Nominal Impedance	500Ω
Power 100V Line	20 / 10 / 5 / 2,5W
Impedance	500 / 1,000 / 2,000 / 4,000Ω
Bandwidth	70 - 22,000Hz
Sensitivity (1W/1m)	83.9dB
SPL MAX 1m	96.9dB
Directivity (H-V) @ 500Hz	360°
Directivity (H-V) @ 1kHz	160°
Directivity (H-V) @ 2kHz	102°
Directivity (H-V) @ 4kHz	86°
Speaker	4"
Cone	PP polypropylene
Dimensions	Ø 189,4 x H 231mm
Weight	2,02kg
Operating temperature	-10 to +55°C
Protection Index	IP65
Color	RAL 9016



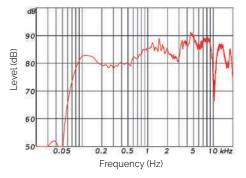
### MAJORCOM loudspeakers for Voice Alarm Systems



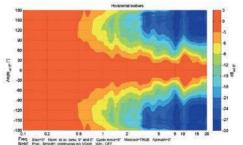




Bandwidth





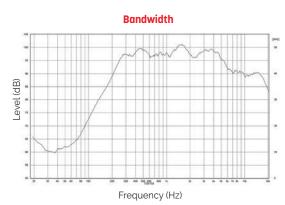


EN 54 24

#### **CU 320T VA** 20W Sound Column

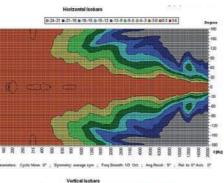
- The 20W powered speaker is equipped with four 77mm full-range loudspeaker chassis and a 100V transformer with 4 power adjustments.
- The powder coated and shock-resistant aluminium housing in RAL 9006 guarantees long-term stability.
- For additional reliability, a 2 pin-ceramic block, a thermal fuse is provided and the speaker chassis is impregnated against wetness.
- Furthermore sturdy cable glands 2 x PG9 are also provided.
- The speaker is also secured with the high protection class IP66 against the security risks of environmental influences.
- Optional specific RAL painting available : **PEINT CU** (minimum 25 pcs).

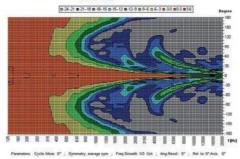
Madal	
Model	CU 320T VA
Body & grill	Aluminium
Nominal power	20W
Nominal Impedance	500Ω
Power 100V Line	20 / 15 / 10 / 5W
Impedance	500 / 667 / 1,000 / 2,000Ω
Bandwidth	147 - 23,500Hz
Sensitivity (1W/1m)	92,5dB
SPL MAX 1m	100,3dB
Directivity (H-V) @ 500Hz	360° - 124°
Directivity (H-V) @ 1kHz	188° - 65°
Directivity (H-V) @ 2kHz	149° - 38°
Directivity (H-V) @ 4kHz	86° - 14°
Speaker	4 × 3"
Dimensions (WxHxD)	510 x 100 x 92 mm
Weight	2,9kg
Operating temperature	-25°C ~+70°C
Protection Index	IP66 - IK08
Color	RAL 9006





#### **Polar diagrams**





<b>f</b> <sup>n°1438</sup>	EN 54-24 Speaker for voice alarm systems for systems for fire detection systems and fire alarm systems in buildings
Certificate n° : 1438-CPR-0867	CU 320T VA
MAJORCOM:	C0 3201 VA
56 chemin de la Flambère 31300 TOULOUSE FRANCE	Туре В

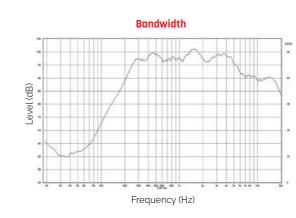
## **CU 350T VA**

EN 54 24

#### **50W Sound Column**

- The 50W powered speaker is equipped with four 77mm full-range loudspeaker chassis and a 100V transformer with 4 power adjustments.
- The powder coated and shock-resistant aluminium housing in RAL 9006 guarantees long-term stability.
- For additional reliability, a 2 pin-ceramic block, a thermal fuse is provided and the speaker chassis is impregnated against wetness.
- Furthermore sturdy cable glands 2 x PG9 are also provided.
- The speaker is also secured with the high protection class IP66 against the security risks of environmental influences.
- Optional specific RAL painting available : PEINT CU (minimum 25 pcs).

Model	CU 350T VA
Body & grill	Aluminium
Nominal power	50W
Nominal Impedance	200Ω
Power 100V Line	50 / 30 / 15 / 7.5W
Impedance	200 / 333 / 667 / 1,333Ω
Bandwidth	110 - 18,000Hz
Sensitivity (1W/1m)	94.7dB
SPL MAX 1m	111.7dB
Directivity (H-V) @ 500Hz	360° - 73°
Directivity (H-V) @ 1kHz	186° - 33°
Directivity (H-V) @ 2kHz	173 <sup>°</sup> - 17 <sup>°</sup>
Directivity (H-V) @ 4kHz	98° - 6°
Speaker	8 x 3"
Dimensions (WxHxD)	100 x 971 x 92mm
Weight	5,2kg
Operating temperature	-25°C ~+70°C
Protection Index	IP66 - IK08
Color	RAL 9006

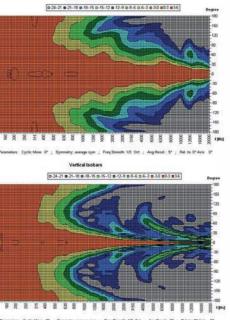


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### MAJORCOM loudspeakers for Voice Alarm Systems











EN 54 24

EN 54 24

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ments.

enduring stability.

Nominal Impedance

Power 100V Line

**MS 530TB VA - MS 530TW VA** 

2-Way Wall Speakers - 30W

ted design and by its powerful sound.

gnation of the speaker is provided.

the risks of environmental influences.

• The MS Serie compact wall speakers impress by a sophistica-

• Perfectly suitable for installations where high sound quality is

• The 30W powered speaker is equipped with a high quality 2-way system and a 100V transformer with 3 power adjust-

• For additional reliability, a thermal fuse and a wetness impre-

• The speaker is also secured with protection class IP65 against

MS 530TB VA - MS 530TW VA

ABS

30W

333Ω

30 / 15 / 7,5/ 3,75W

#### BB 501 B/VA - BB 501 W/VA 24W Wall Speakers

Ideal for small and moderate volumes (reception halls, restaurants, pubs, conference rooms, shopping centres, swimming pools etc.), this white or black wall speaker guarantees very high-quality sound.

#### **AESTHETICS**

Equipped with a compact and robust ABS box, discrete and with an elegant finish, it blends in with all surroundings. Available inWhite (BB 501W VA) and Black (BB 501B VA).

#### **EXCEPTIONAL AUDIO QUALITY**

Equipped with a 12cm diameter loudspeaker and a tweeter, its Hi-Fi music quality will satisfy the most demanding listeners.

#### **ADJUSTABLE MOUNTING BRACKET**

The enclosures can be mounted horizontally to direct the loudspeaker upwards or downwards, or vertically to enable a left and right rotation using a U-shaped wall bracket made of steel (supplied).

Madal	
Model	BB 501 B/VA - BB 501 W/VA
Body & grill	ABS metal
Power nominal	24W
Impedance nominal	416Ω
Power 100V line	24 / 12 / 6W
Impedance	416 / 833 / 1,600Ω
Bandwidth	63 - 20,000Hz
Sensitivity (1W/1m)	85dB
SPL MAX 1m	98dB
Directivity (H-V) @ 500Hz	210° - 190°
Directivity (H-V) @ 1kHz	195° - 165°
Directivity (H-V) @ 2kHz	98° - 124°
Directivity (H-V) @ 4kHz	77° - 77°
Speaker	5" + tweeter
Cone	Plastic
Dimensions (mm)	200 x 261 x 155mm
Weight	2,5kg
Operating temperature	-15°C ~+55°C
Protection index	IP55
Color	BB 501 B/VA: Black / BB 501 W/VA: White

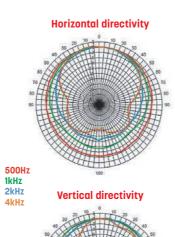


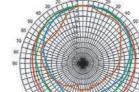


BB 501 W/VA (White)

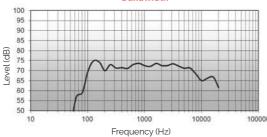


BB 501 B/VA (Black)

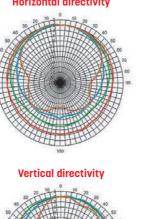




#### Bandwidth



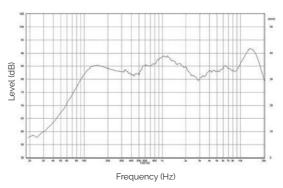




Model Body & grill Nominal power

333 / 667 / 1,333 / 4,000Ω
50 - 23,500Hz
85dB
105,6dB
360° - 360°
200° - 160°
130° - 100°
120° - 40°
5"
160 x 262 x 153 mm
2,5kg
-25°C ~+70°C
IP65 - IK09
MS 530TB VA: Black / MS 530TW VA: White

Bandwidth





### MAJORCOM loudspeakers for Voice Alarm Systems

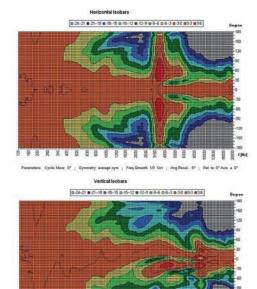


• The impact-resistant, UV-resistant ABS plastic housing assures





MS 530TW VA (White)







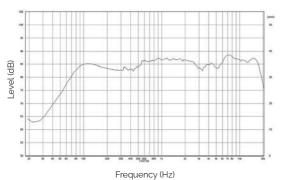
EN 54 24

#### **MS 650TB VA - MS 650TW VA** 2-Way Wall Speakers - 50W

- The MS Serie compact wall speakers impress by a sophisticated design and by its powerful sound.
- Perfectly suitable for installations where high sound quality is needed.
- The 30W powered speaker is equipped with a high quality 2-way system and a 100V transformer with 3 power adjustments.
- The impact-resistant, UV-resistant ABS plastic housing assures enduring stability.
- For additional reliability, a thermal fuse and a wetness impregnation of the speaker is provided.
- The speaker is also secured with protection class IP65 against the risks of environmental influences.

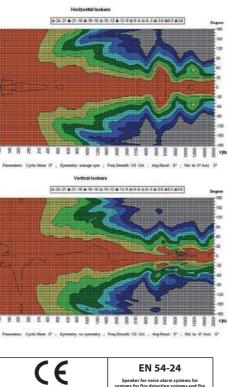
Madal	
Model	MS 650TB VA - MS 650TW VA
Body & grill	ABS
Nominal power	50W
Nominal Impedance	200Ω
Power 100V Line	50 / 25 / 12,5 / 6,25W
Impedance	200 / 400 / 800 / 1,600Ω
Bandwidth	52 - 25,000Hz
Sensitivity (1W/1m)	88,8dB
SPL MAX 1m	105,1dB
Directivity (H-V) @ 500Hz	360° × 360°
Directivity (H-V) @ 1kHz	200° × 155°
Directivity (H-V) @ 2kHz	110° × 120°
Directivity (H-V) @ 4kHz	80° x 25°
Speaker	6"
Dimensions (WxHxD)	205 x 330 x 192 mm
Weight	3,65kg
Operating temperature	-25°C ~+70°C
Protection Index	IP65 - IK09
Color	MS 650TB VA: Black / MS 650TW VA: White

Bandwidth



WHITE DE MS 650TB VA (Black) MS 650TW VA (White)

#### **Polar diagrams**





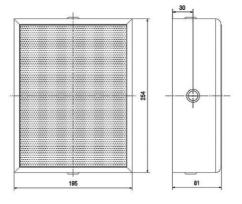
#### **CB 56T VA**

EN 54 24

#### **6W Wall mounted Speaker**

- The 6W powered speaker is equipped with a 165mm fullrange loudspeaker and a 100V transformer with 3 power adjustments 6/3/1.5W.
- The high-density, shock-resistant MDF wood housing in white provides a low resonance sound. A sturdy front grille made of steel guarantees enduring stability.
- For additional reliability, a 2 pin-ceramic block, a thermal fuse is provided and the speaker chassis is impregnated against wetness.
- The speaker is also secured with the high protection class IP54 against the security risks of environmental influences.
- The proven spring clamp on the rear plate ensures a quick mounting on walls.

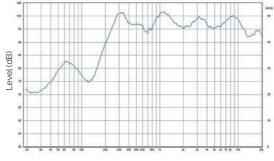
Model	CB 56T VA
Body & grill	MDF, Steel
Nominal power	6W
Nominal Impedance	1667Ω
Power 100V Line	6 / 3 / 1.5W
Impedance	1667 / 3.333 / 6,667Ω
Bandwidth	197 - 21,900Hz
Sensitivity (1W/1m)	93dB
SPL MAX 1m	100.8dB
Directivity (H-V) @ 500Hz	180°
Directivity (H-V) @ 1kHz	160°
Directivity (H-V) @ 2kHz	125°
Directivity (H-V) @ 4kHz	89°
Speaker	5"
Cone	Paper
Dimensions (WxHxD)	254 x 195 x 81mm
Weight	1,95kg
Operating temperature	-10 to +55°C
Protection Index	IP54
Color	White



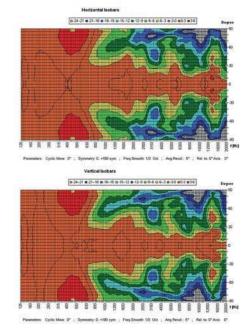
### MAJORCOM loudspeakers for Voice Alarm Systems



#### Bandwidth



Frequency (Hz)





EN 54 24

#### **CS-651WTBS 6W ABS Wall mounted Speaker**

#### Wall mounted speaker suitable for a wide range of applications

Recommended in particular for offices and small areas, this wall mount speaker can be used to display messages as well as play music, and blends in well with most types of decor. Excellent performance for the price.

#### **COMPLIANT WITH EVACUATION STANDARDS**

With its ceramic connection and thermal fuse, the CS-651WTBS complies with evacuation standards and provides an additional level of safety in case of emergency. This wall mount speaker meets the international standards relative to public address and evacuation installations.

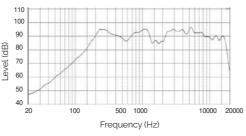
Model	CS-651WTBS
Body & grill	ABS fireproof - Steel
Nominal power	6W
Nominal Impedance	1,667Ω
Power 100V Line	6 / 3 / 1.5W
Impedance	1,667 / 3,333 / 6,667Ω
Bandwidth	150Hz - 20,000Hz
Sensitivity (1W/1m)	92dB
SPL MAX 1m	99dB
Directivity (H-V) @ 500Hz	180° - 180°
Directivity (H-V) @ 1kHz	120° - 150°
Directivity (H-V) @ 2kHz	150° - 180°
Directivity (H-V) @ 4kHz	40° - 70°
Speaker	6.5"'
Cone	Paper composite
Dimensions (LxHxP)	204,5 x 254,5 x 87,5mm
Weight	1,6kg
Operating temperature	-10 to +55°C
Color	White

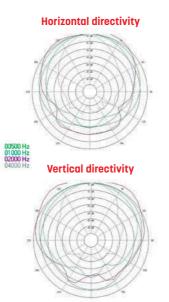












### CSE 56T VA

#### **6W Ceiling Speaker**

- The 6W powered speaker is equipped with a 130mm full-range loudspeaker and a 100V transformer with 3 power adjustments 6W, 3W and 1.5W.
- Thanks to an innovative air flow system, the CSE 56T VA provides sound characteristics which are attributed to a conventional bass speaker.
- An extremely flat construction method allows a low mounting depth of only 70mm, with less than 1kg product weight.
- For additional reliability the speaker is impregnated against wetness.
- Quick and easy mounting with spring clamps and short tension distance. Perfectly suitable for installations where the installation depth is very limited. This speaker is suitable for a ceiling strength of about 3 – 45mm.
- Optional specific RAL painting available : PEINT PLAFONNIER (minimum 14 pcs).
- Optional metalic fire dome available: FD CSE 56T VA

Model	CSE 56T VA
Body & grill	Metal, plastic PET contact protection
Nominal power	6W
Nominal Impedance	666Ω
Power 100V Line	6 / 3 / 1,5W
Impedance	1,667 / 3.333 / 6,667Ω
Bandwidth	104 - 17 200Hz
Sensitivity (1W/1m)	86,8dB
SPL MAX 1m	98,3dB
Directivity (H-V) @ 500Hz	180°
Directivity (H-V) @ 1kHz	180°
Directivity (H-V) @ 2kHz	140°
Directivity (H-V) @ 4kHz	85°
Speaker	5"
Cone	Coated paper
Dimensions	Ø 181,5 x D 65mm (181,5 x 91,5mm fire de
Ceiling Cut-out	Ø 156mm
Weight	0,51kg (0,71kg with fire dome)
Operating temperature	-10°C ∕ +55°C
Protection Index	IP21C
Color	RAL 9016

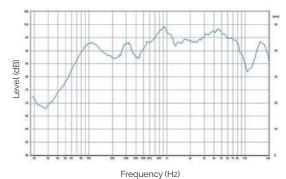


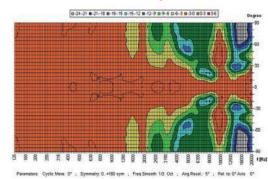


FD CSE 56T VA

### MAJORCOM loudspeakers for Voice Alarm Systems









EN 54 24

#### **CSE-5206EN 6W Ceiling Speaker**

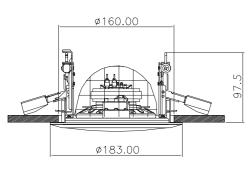
#### Quick-installation ceiling speaker

This ceiling speaker can be used to display messages and to play music. It has a ceramic terminal block and tool-free installation system, making it quick and easy to install. It is perfectly suited for most low-rise buildings with a false ceiling.

#### **IMMEDIATE INSTALLATION**

This ceiling speaker is quick and easy to install. Thanks to its patented installation system, it can be attached to the ceiling in a matter of seconds, thereby reducing set-up time.

CSE-5206EN is designed for use in EN 54-24 (Type A) P.A and Voice Alarm Systems.

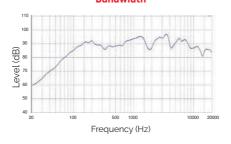




Model	CSE-5206EN
Body & grill	Metal
Nominal power	6W
Nominal Impedance	1667Ω
Power 100V Line	6 / 3 / 1,5W
Impedance	1,667 / 3,333 / 6,667Ω
Bandwidth	80Hz - 20,000Hz
Sensitivity (1W/1m)	92dB
SPL MAX 1m	99dB
Directivity (H-V) @ 500Hz	160°
Directivity (H-V) @ 1kHz	150°
Directivity (H-V) @ 2kHz	150°
Directivity (H-V) @ 4kHz	40°
Speaker	5"
Cone	Paper composite
Dimensions	Ø183 x (H)97,5mm
Ceiling Cut-out	168mm
Weight	1kg
Operating temperature	-10°C ∕ +55°C
Protection Index	IP21

**Ouick and easy** 







### PC6 VA 2-way Ceiling Speaker - 12W

This recessed ceiling speaker is equipped with a 16cm, 2-way loudspeaker made of fibreglass and a 100V line transformer. It also has a steel cover to prevent fire from spreading across the ceiling.

#### DYNAMIC SOUND

EN 54 24

Its large bandwidth offers remarkable sound quality and perfectly reproduces high and low sounds to take full advantage of music and speech.

#### **COMPLIANT WITH EVACUATION STANDARDS**

With its ceramic connection and thermal fuse, the PC6 VA complies with evacuation standards and provides an additional level of safety in case of emergency. This high-quality ceiling light meets the international standards relative to public address and evacuation installations.

#### IMMEDIATE INSTALLATION

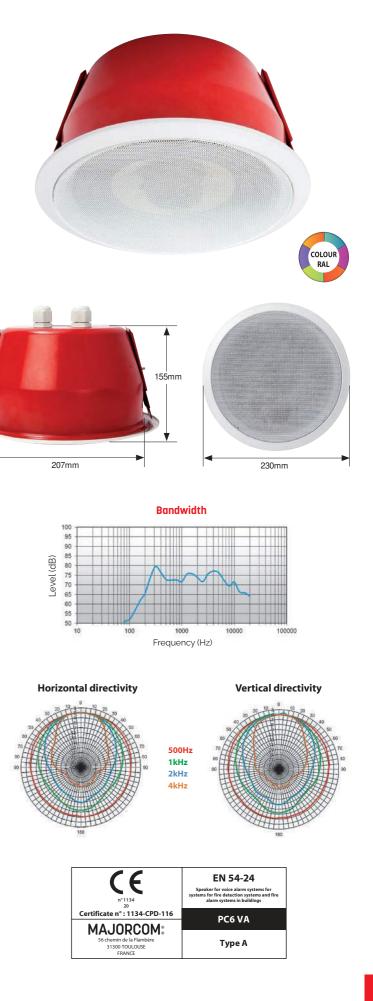
Its fastening system makes it easy to mount on most ceilings.

 Optional specific RAL painting available : PEINT PLAFONNIER (minimum 14 pcs).

Model	PC6 VA
Body & grill	Metal
Nominal power	12W
Nominal Impedance	830Ω
Power 100V Line	12 / 6 / 3 / 1,5W
Impedance	830 / 1,600 / 3,300 / 6,600Ω
Bandwidth	160 - 20,000Hz
Sensitivity (1W/1m)	87dB
SPL MAX 1m	97dB
Directivity (H-V) @ 500Hz	215° - 360°
Directivity (H-V) @ 1kHz	140° - 155°
Directivity (H-V) @ 2kHz	94 <sup>°</sup> - 102 <sup>°</sup>
Directivity (H-V) @ 4kHz	70° - 70°
Speaker	2-way - 16cm
Cone	Fiberglass
Dimensions	Ø 230 x P 155mm
Ceiling Cut-out	Ø 207mm
Weight	1,8kg
Operating temperature	-15 to +55°C
Protection Index	IP33

68

### MAJORCOM loudspeakers for Voice Alarm Systems



EN 54 24

EN 54 24

### MAJORCOM loudspeakers for Voice Alarm Systems

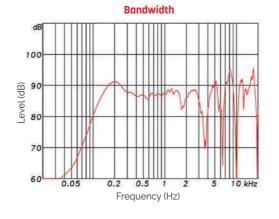
#### **P 515T VA** 2-Way Ceiling Speaker - 15W

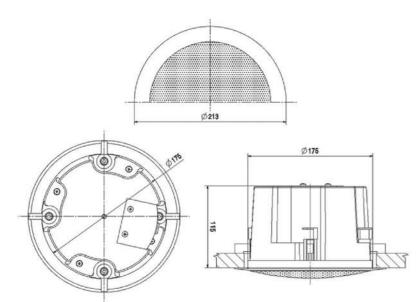
- P 515T VA is a 2 way bass reflex ceiling speaker suitable for high quality installation.
- Fitted with a 5" speaker, a neodymium tweeter and a 100V transformer with 4 power taps, it offers a very high sound quality.
- Easy installation via screw mounting system.
- Optional specific RAL painting available : **PEINT PLAFONNIER** (minimum 14 pcs).

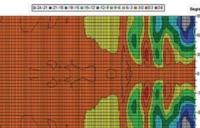
Model	P 515T VA
Body & grill	ABS
Nominal power	15W
Nominal Impedance	667Ω
Power 100V Line	15 / 7.5 / 3.75 / 1.9W
Impedance	667 / 1,333 / 2,667 / 5,263Ω
Bandwidth	100 - 22.800Hz
Sensitivity (1W/1m)	86,2dB
SPL MAX 1m	98dB
Directivity (H-V) @ 500Hz	180°
Directivity (H-V) @ 1kHz	180°
Directivity (H-V) @ 2kHz	145°
Directivity (H-V) @ 4kHz	95°
Speaker	5"
Dimensions (mm)	Ø 213 x P 152
Ceiling Cut-out	Ø 178mm
Weight	1,73kg
Operating temperature	-10°C ~+55°C
Protection Index	IP21C
Color	RAL 9016











Polar diagrams

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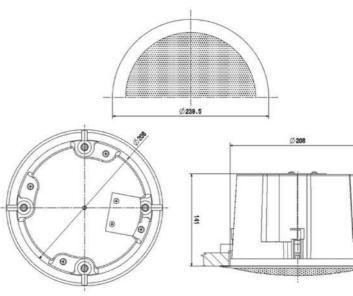


#### P 630T VA

#### 2-Way Ceiling Speaker - 30W

- P 630T VA is a 2 way bass reflex ceiling speaker suitable for high quality installation.
- Fitted with a 6.5" speaker, a neodymium tweeter and a 100V transformer with 4 power taps, it offer a very high sound quality.
- Easy installation via screw mounting system.
- Optional specific RAL painting available : **PEINT PLAFONNIER** (minimum 14 pcs).

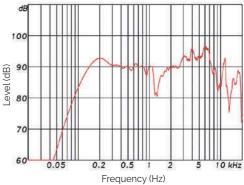
Model	P 630T VA	
Body & grill	ABS	
Nominal power	30W	
Nominal Impedance	333Ω	
Power 100V Line	30 / 15 / 7,5 / 3,75W	
Impedance	333 / 667 / 1,333 / 2,667Ω	
Bandwidth	87 - 19 300Hz	
Sensitivity (1W/1m)	89,8dB	
SPL MAX 1m	110,2dB	
Directivity (H-V) @ 500Hz	180°	
Directivity (H-V) @ 1kHz	180°	
Directivity (H-V) @ 2kHz	115°	
Directivity (H-V) @ 4kHz	62°	
Speaker	6.5"	
Dimensions (mm)	Ø 239,5 × D 176,5	
Ceiling Cut-out	Ø 210mm	
Weight	2,27kg	
Operating temperature	-10°C ~+55°C	
Protection Index	IP21C	
Color	RAL 9016	

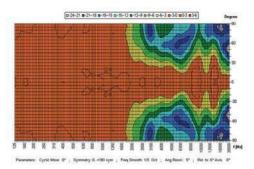






Bandwidth









68

EN 54-24

P 860T VA

Type A



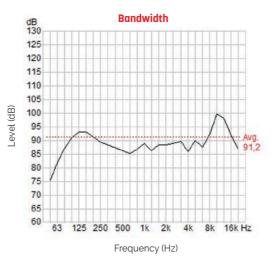
#### **P 860T VA** 2-Way Ceiling Speaker - 60W

- P 860T VA is a 2 way bass reflex ceiling speaker suitable for high quality installation.
- Fitted with a 8" speaker, a neodymium tweeter and a 100V transformer with 4 power taps, it offers a very high sound quality.
- Easy installation via screw mounting system.
- Optional specific RAL painting available : PEINT PLAFONNIER (minimum 14 pcs).

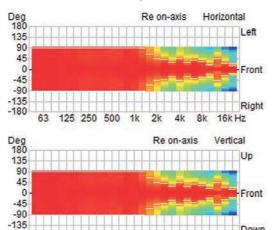
Model	P 860T VA	
Body & grill	Metal	
Nominal power	60W	
Nominal Impedance	167Ω	
Power 100V Line	60 / 30 / 15 / 7,5W	
Impedance	167 / 333 / 667 / 1,333Ω	
Bandwidth	50 - 24,000Hz	
Sensitivity (1W/1m)	91,2dB	
SPL MAX 1m	110,7dB	
Directivity (H-V) @ 500Hz	180°	
Directivity (H-V) @ 1kHz	165°	
Directivity (H-V) @ 2kHz	130°	
Directivity (H-V) @ 4kHz	80°	
Speaker	8"	
Dimensions (mm)	Ø 319 × D 254	
Ceiling Cut-out	Ø 302mm	
Weight	4.7kg	
Operating temperature	-10°C ~+55°C	
Protection Index	IP21C	
Color	RAL 9016	







#### **Polar diagrams**



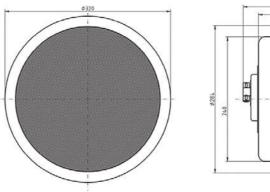
Down -180 63 125 250 500 1k 2k 4k 8k 16k Hz

## **PSUB 120T**

#### 120W Ceiling subwoofer

- This 120W powered subwoofer is equipped with a 200mm highperformance system featuring 4 power adjustments 120/60/30/15W.
- PSUB 120T offers an amazing deep bass response which gives your voice alarm installation a rich sound quality.
- Power tappings are easily set at the front of the speaker, a low impedance operation at 40hm is also possible. The crossover frequency is set to 135Hz. You can change the phase 180° by a switch at the front. To make things perfect the metal housing in RAL 9016 guarantees long-term durability.
- Protection class IP21C secures the speaker against the risks of environmental influences. The speaker chassis is impregnated against wetness. Easy installation via screw mounting system.
- Perfectly suitable for installations where high sound quality is demanded.
- Optional specific RAL painting available : PEINT PLAFONNIER (minimum 14 pcs).

Model	PSUB 120T
Body & grill	ABS / Metal
Nominal power	120W
Nominal Impedance	83Ω
Power 100V Line	120 / 60 / 30 / 15W
Impedance	83 / 167 / 333 / 667Ω - 4Ω
Bandwidth	32 - 280Hz
Sensitivity (1W/1m)	87dB
SPL MAX 1m	107,8dB
Dimensions (mm)	Ø 319 x P 250
Ceiling Cut-out	Ø 302mm
Weight	6,4kg
Operating temperature	-10°C ~+55°C
Protection Index	IP21C
Color	RAL 9016



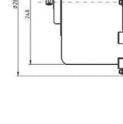
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CE

n° 1438 22 Certificate n° : 1438-CPR-0854

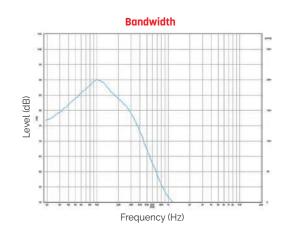
MAJORCOM:

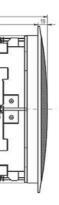
31300 TOULOUS FRANCE











EN 54 24

### MAJORCOM loudspeakers for Voice Alarm Systems

#### **IMPI 330T VA** Indoor/outdoor sound projector - 10W

Compliant with the international standards relative to public address and evacuation installations (EN54-24 Type B and ISO 7240-24), this sound projector is recommended for the equipment of all types of public places such as train stations, pedestrian streets, car parks etc.

#### **QUALITY SPEECH AND MUSIC** REPRODUCTION

Equipped with a 12cm diameter loudspeaker, its frequency response makes it possible to broadcast high-quality music and information messages.

#### **EASY TO INSTALL**

A solid aluminium bracket is provided to facilitate the installation and orientation of the projector in almost all positions. It is possible to mount the bracket first and then the sound projector.

#### WITHSTANDS ALL KINDS OF WEATHER

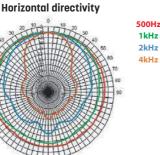
Made of extruded aluminium, it can be installed indoors or outdoors (IP55) and blends in with most surroundings.

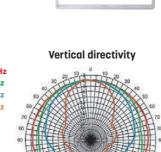
 Optional specific RAL painting available : PEINT PROJECTEUR (minimum 15 pcs).

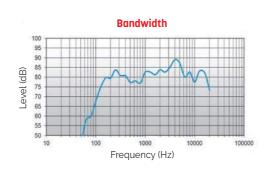
Model	IMPI 330T VA
Body & grill	Aluminium
Nominal power	10W
Nominal Impedance	1kΩ
Power 100V Line	10 / 5 / 2.5W
Impedance	1 / 2 / 4kΩ
Bandwidth	120Hz - 20kHz
Sensitivity (1W/1m)	95dB
SPL MAX 1m	103dB
Directivity (H-V) @ 500Hz	360° - 360°
Directivity (H-V) @ 1kHz	240° - 260°
Directivity (H-V) @ 2kHz	115 <sup>°</sup> - 115 <sup>°</sup>
Directivity (H-V) @ 4kHz	54 <sup>°</sup> - 54 <sup>°</sup>
Speaker	5"
Cone	Plastic
Dimensions [mm]	Ø138 x (D)225
Weight	2.5kg
Operating temperature	-25 to +70°C
Protection Index	IP55
Color	White











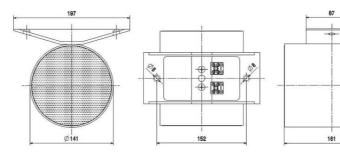


#### **IMPI 2510T VA**

#### **Bi-directional Sound Projector - 10W**

- The 10W powered speaker is equipped with two 130mm full-range loudspeakers and a 100V line transformer with 4 power adjustments.
- A robust powder coated aluminum housing in RAL 9010, and a vandal-resistant feet ensure a permanent installation of this speaker.
- For additional reliability, a 2x2 pin-ceramic block and a thermal fuse is provided and the speaker chassis is impregnated against wetness..
- Optional specific RAL painting available : PEINT DUAL (minimum 25 pcs).

Model	IMPI 2510T VA	
Body & grill	Aluminium	
Nominal power	10W	
Nominal Impedance	1000Ω	
Power 100V Line	10 / 6 / 3 / 1,5W	
Impedance	1,000 / 1,667 / 3,333 / 6,667Ω	
Bandwidth	237 - 12 400Hz	
Sensitivity (1W/1m)	89,6dB	
SPL MAX 1m	95,3dB	
Directivity (H-V) @ 500Hz	2 x 130°	
Directivity (H-V) @ 1kHz	2 x 150°	
Directivity (H-V) @ 2kHz	2 x 145°	
Directivity (H-V) @ 4kHz	2 × 75°	
Speaker	2 x 5"	
Cone	Coated paper	
Dimensions (WxDxH)	197 x 161 x 166mm	
Weight	2,35kg	
Operating temperature	-25 to +70°C	
Protection Index	IP65	
Color	RAL 9010	

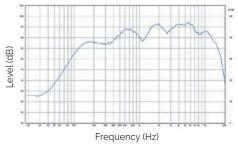




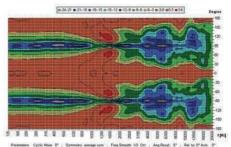




Bandwidth









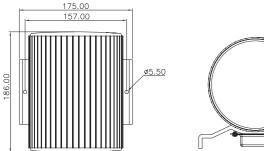
#### EN 54 24

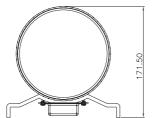
#### SPJ-52WHBS

#### 2-way bi-directional sound projector - 20W

- Excellent reproduction of voice and music
- Built-in connector and connection cables
- For installation on the ceiling or on the wall
- Protection from water and dust, IP66
- The SPJ-52WHBS is a powerful, 20-W bidirectional sound projector designed for the high-quality reproduction of voice and music.
- It can be used inside or outside. The two opposing speakers are perfect for applications such as metro stations, train stations, parking garages, and make it possible to cut the number of speakers in half.
- The SPJ-52WHBS is equipped with a ceramic terminal block, a thermal fuse and wires that can withstand high temperatures.

Model	SPJ-52WHBS	
Body & grill	Aluminium	
Nominal power	20W	
Nominal Impedance	500Ω	
Power 100V Line	20 / 10 / 5W	
Impedance	500 / 1,000 / 2,000Ω	
Bandwidth	120Hz - 20,000Hz	
Sensitivity (1W/1m)	88dB	
SPL MAX 1m	100dB	
Directivity (H-V) @ 500Hz	360°	
Directivity (H-V) @ 1kHz	320°	
Directivity (H-V) @ 2kHz	200°	
Directivity (H-V) @ 4kHz	80°	
Speaker	2 x 5"	
Cone	Paper composite	
Dimensions	Ø 146 x 186mm	
Weight	3.2kg	
Operating temperature	-20 to +70°C	
Protection Index	IP66	







#### **IMPI 520T VA**

EN 54 24

#### 20W Design Sound Projector

- The 20W design speaker with an amazing concave shape is equipped with a 130mm full-range speaker and a 100V transformer with 3 power adjustments 20/10/5W.
- Acoustically the design loudspeaker convinces at all levels. Thanks to a smart phase-shifting and a high-quality midrange resonator, the speaker offers a sound characteristic that is matching a 2-way system.
- In addition, the very wide dispersion ensures a comprehensive sound.
- A robust, ABS plastic housing in RAL9016 and a stable aluminium mounting bracket guarantee a durable installation.
- The cable is fed via a cable gland (PG11). The integrated 2x2-pole ceramic block and thermal fuse as well as the moisture impregnation of the loudspeaker ensure additional safety.

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Level (dB)	80			F
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_	60	/		
	50			
	40 20	100	500 1000	10000 20000
	20		Frequency (Hz)	

Bandwidth

	Directivity	
00500 Hz 01000 Hz 02000 Hz 04000 Hz	10 10	
A	Es Ar	
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14		
1		

"	EN 54-24
	Speaker for voice alarm systems for systems for fire detection systems and fir alarm systems in buildings
Certificate n° : 1488-CPD-0302/W	SPJ-52WHBS
MAJORCOM:	3FJ-32WHD3
56 chemin de la Flambère 31300 TOULOUSE FRANCE	Туре В

Model	IMPI 520T VA
Body & grill	ABS, Aluminium
Nominal power	20W
Nominal Impedance	500Ω
Power 100V Line	20 / 10 / 5W
Impedance	500 / 1,000 / 2,000Ω
Bandwidth	142 - 14,300Hz
Sensitivity (1W/1m)	88,4dB
SPL MAX 1m	100dB
Directivity (H-V) @ 500Hz	360°
Directivity (H-V) @ 1kHz	155° - 220°
Directivity (H-V) @ 2kHz	95° - 85°
Directivity (H-V) @ 4kHz	80° – 85°
Speaker	5"
Cone	PP polypropylene
Dimensions (WxDxH)	166,4 x 283,5 x 169mm
Weight	1,76kg
Operating temperature	-25 to +70°C
Protection Index	IP65
Color	RAL 9016

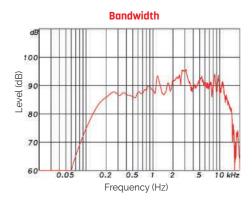




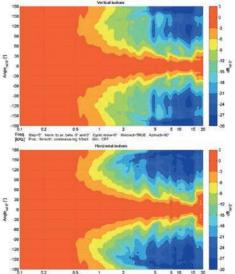
76

### MAJORCOM loudspeakers for Voice Alarm Systems

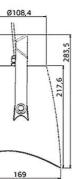












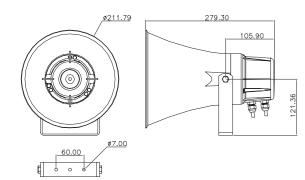


EN 54 24

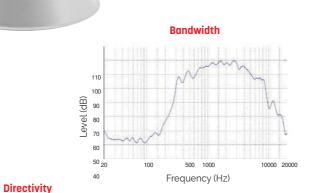
#### PHS-81T30BS **30W Horn Speaker**

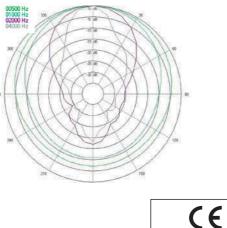
- High performance enclosure
- High-quality vocal reproduction
- Protection from water and dust, IP66
- The high-performance horn speaker faithfully reproduces speech with excellent sound distribution and can be used in a wide range of outdoor applications. The perfect solution for sports fields, parks, factories and outdoor pools
- The speaker is equipped with a ceramic terminal block, a thermal fuse and wires that can withstand high temperatures.
- Included is a U-shaped, stainless steel universal mount and screws (both AISI 316) for flexible installation.

Model	PHS-81T30BS
Body & grill	ABS fireproof
Nominal power	30W
Nominal Impedance	333Ω
Power 100V Line	30 / 15 / 7,5 / 3,75W
Impedance	333 / 666 / 1,333 / 2,667Ω
Bandwidth	340Hz - 9kHz
Sensitivity (1W/1m)	108dB
SPL MAX 1m	123dB
Directivity (H-V) @ 500Hz	200°
Directivity (H-V) @ 1kHz	120°
Directivity (H-V) @ 2kHz	60°
Directivity (H-V) @ 4kHz	30°
Dimensions [mm]	Ø212 x 280
Weight	2,05kg
Operating temperature	-25 to +70°C
Protection Index	IP66
Color	White









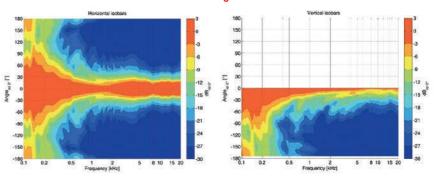


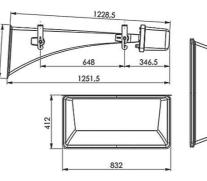
#### **TU 100T VA 100W Horn speaker**

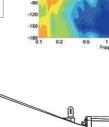
EN 54 24

- The boundary horn speaker TU 100T VA has been developed for areas with extreme high ambient noise and is suitable for indoor and outdoor application, such as tunnels.
- It is built to withstand corrosive atmospheric contaminants, high moisture levels and temperature extremes. The horn provides an enormous sound pressure level, a very balanced frequency response and also a very low distortion.
- The TU 100T VA with a flame retardant plastic housing (UL 94V-0) in black and IP65 protection is also equipped with a ceramic terminal and thermal fuse. The high quality 100W horn driver offers a high performance CCAR voice coil. Furthermore sturdy cable glands 2 x PG13,5 are also provided.
- Sturdy installation by rust-free V4A (A4) stainless steel brackets and screws.
- This horn speaker provides intelligible voice notifications over great distance, resulting in a lower number of loudspeakers which are required. The product is a certified voice alarm speaker according EN54-24 and there is no additional equalizer needed to meet the frequency response requirements according EN54-24.

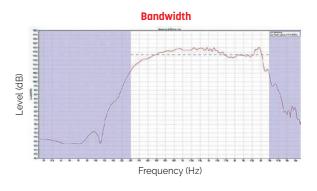
Model	TU 100T VA
Body & grill	ABS
Nominal power	100W
Nominal Impedance	100Ω
Power 100V Line	100 / 50 / 25W
Impedance	100 / 200 / 400Ω
Bandwidth	280 to 9,000Hz
Sensitivity (1W/1m)	113.9dB
SPL MAX 1m	131.9dB
Directivity (H-V) @ 500Hz	58° - 35°
Directivity (H-V) @ 1kHz	35° - 25°
Directivity (H-V) @ 2kHz	40° - 20°
Directivity (H-V) @ 4kHz	54° - 15°
Dimensions (WxDxH)	315 x 305 x 350mm
Weight	16kg
Operating temperature	-25 to +70°C
Protection Index	IP65
Color	Black











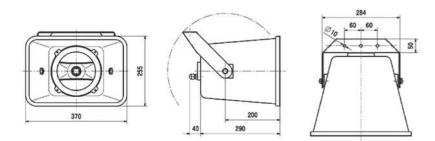


EN 54 24

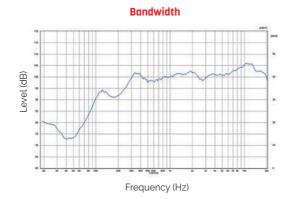
#### **CS 532T VA** 2-Way Horn Speaker - 30W

- The 30W powered 2-way speaker is equipped with a 100V line transformer with 4 power adjustments 30/15/7.5/3.75W.
- The impact-resistant ABS housing in RAL 7035 guarantees long-term stability.
- For additional reliability, a ceramic block and a thermal fuse is provided.
- The speaker is also secured with the high protection class IP66 against the security risks of environmental influences. Mounting by stainless aluminum universal mount.

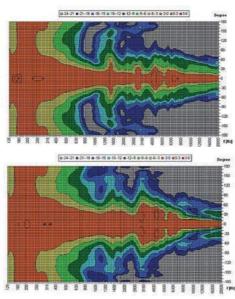
Model	CS 532T VA
Body & grill	ABS
Nominal power	100W
Nominal Impedance	100Ω
Power 100V Line	100 / 50 / 25W
Impedance	100 / 200 / 400Ω
Bandwidth	280 to 9,000Hz
Sensitivity (1W/1m)	98.1dB
SPL MAX 1m	112dB
Directivity (H-V) @ 500Hz	58° - 35°
Directivity (H-V) @ 1kHz	35° - 25°
Directivity (H-V) @ 2kHz	40° - 20°
Directivity (H-V) @ 4kHz	54 <sup>°</sup> - 15 <sup>°</sup>
Speaker	5" + Driver
Dimensions (WxDxH)	315 x 305 x 350mm
Weight	16kg
Operating temperature	-25 to +70°C
Protection Index	IP66
Color	White







#### **Polar diagrams**



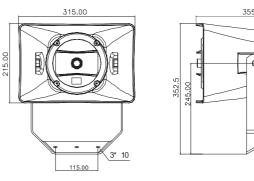


#### **CS-5HTBS**

#### 2-Way Horn Speaker - 30W

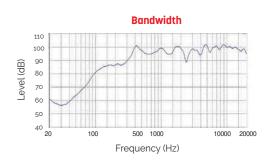
- The CS-5HTBS long-range enclosure is equipped with a 2-way system, thereby providing a wide fre-quency range and high sensitivity, making it ideal for the high-quality reproduction of voice and music..
- With its controlled-directivity acoustical horn and two transducers, one for low frequencies and the other for high, this unique rectangular enclosure produces amazingly pure sound..
- The horn is waterproof and can be used in high-humidity environments. It is therefore suitable for outdoor use such as sports fields, stadiums, theme parks, exhibition halls and air terminals, as well as for applications used in P.A and evacuation systems.

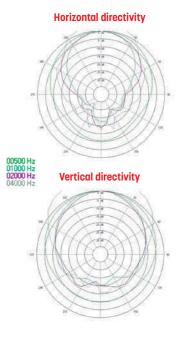
Model	CS-5HTBS
Body & grill	
	ABS fireproof
Nominal power	30W
Nominal Impedance	333Ω
Power 100V Line	30 / 15 / 7.5 / 3.75W
Impedance	333 / 666 / 1,333 / 2,667Ω
Bandwidth	120Hz - 20,000Hz
Sensitivity (1W/1m)	96dB
SPL MAX 1m	111dB
Directivity (H-V) @ 500Hz	140° - 180°
Directivity (H-V) @ 1kHz	60° - 100°
Directivity (H-V) @ 2kHz	90° - 90°
Directivity (H-V) @ 4kHz	90° - 140°
Speaker	6" + 2,5" driver
Dimensions (WxDxH)	315 x 355 x 215mm
Weight	4,65kg
Operating temperature	-25 to +70°C
Protection Index	IP66
Color	White



### MAJORCOM loudspeakers for Voice Alarm Systems









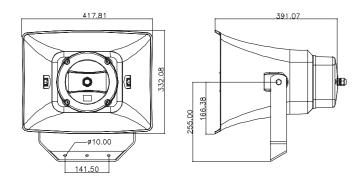


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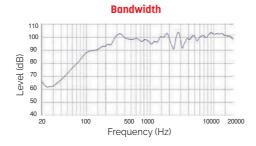
#### **CS-6HT60BS** 2-way Horn Speaker - 60W

- The CS-6HT60BS is equipped with a 2-way system, thereby providing a wide frequency range and high sensitivity, making it ideal for the high-quality reproduction of voice and music.
- With its controlled-directivity acoustical horn and two transducers, one for low frequencies and the other for high, this unique rectangular enclosure produces amazingly pure sound.
- The horn is waterproof and can be used in high-humidity environments. It is therefore suitable for outdoor use such as sports fields, stadiums, theme parks, exhibition halls and air terminals, as well as for applications used in P.A and evacuation systems.

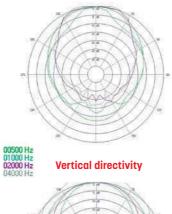
Model	CS-6HT60BS
Body & grill	ABS fireproof
Nominal power	60W
Nominal Impedance	167Ω
Power 100V Line	60 / 30 / 15 / 7,5W
Impedance	167 / 333 / 666 / 1,333Ω
Bandwidth	100Hz - 20kHz
Sensitivity (1W/1m)	98dB
SPL MAX 1m	113dB
Directivity (H-V) @ 500Hz	100° - 140°
Directivity (H-V) @ 1kHz	40° - 70°
Directivity (H-V) @ 2kHz	80° - 90°
Directivity (H-V) @ 4kHz	80° - 150°
Speaker	6,5" + tweeter 2,5"
Dimensions [mm]	(L)332 x (P)391 x (H)418
Weight	7.05kg
Operating temperature	-25 to +70°C
Protection Index	IP66
Color	White







Horizontal directivity





<b>CE</b>	EN 54-24 Speaker for voice alarm systems for systems for fire detection systems and fir alarm systems in buildings
Certificate n° : 1488-CPD-0315/W	CS-6HT60BS
MAJORCOM:	C3-0H100B3
56 chemin de la Flambère 31300 TOULOUSE FRANCE	Туре В

## PS 8150T/W VA - PS 8150T/B VA

#### 2-Way Horn Speakers - 150W

EN 54 24

- This 2-way coaxial horn speaker is designed for booth outdoor and outdoor applications !
- EN54-24 certified, it delivers a superb foreground music.
- The PS 8150T VA delivers a smooth and powerful beam type sound for a large range of venues, such as airports, mega-stores, stadiums and many more.
- The 150W powered professional speaker is equipped with an impressing 2-way bassreflex system, consisting of an 8" woofer and a high performance HF-driver with crossover at 2.5kHz.
- The speaker offers 3 different 100V power tappings 150/75/38W, low impedeance operation is also possible.
- The sturdy high-impact ABS housing in white with metal hexagon-shaped aluminium grill offers IP66 enclosure protection.
- Connection is easily done by a screw-terminal at the rear of the speaker, protected by a cover plate with 2 x PG11 cable glands.
- The metal mounting bracket with adjustable inclination enables simple and safe installation. A safety rope is included in the delivery.



Model	PS 8150T/W VA - PS 8150T/B VA
Body & grill	ABS, Aluminium
Nominal power	150W
Nominal Impedance	67Ω
Power 100V Line	150 / 75 / 38W
Impedance	67 / 133 / 263Ω
Bandwidth	75 - 20,000Hz
Sensitivity (1W/1m)	96,7dB
SPL MAX 1m	116.8dB
Directivity (H-V) @ 500Hz	170° - 180°
Directivity (H-V) @ 1kHz	79° - 80°
Directivity (H-V) @ 2kHz	50° - 62°
Directivity (H-V) @ 4kHz	85° - 70°
Speaker	8" + Driver
Cone	PP polypropylene
Dimensions (WxHxD)	315 x 305 x 350mm
Weight	11,85kg
Operating temperature	-25 to +70°C
Protection Index	IP66
Color	White

### MAJORCOM loudspeakers for Voice Alarm Systems

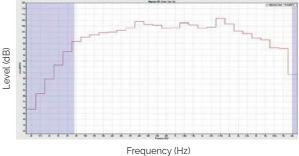


PS 8150T/W VA (White)

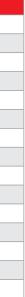


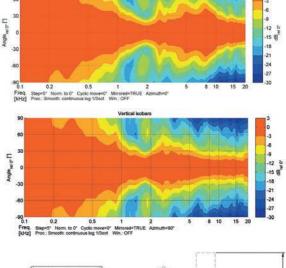
PS 8150T/B VA (Black)

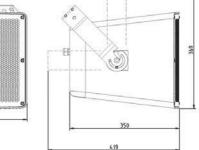












EN 54 24

NEW

### MAJORCOM loudspeakers for Voice Alarm Systems

#### PS 8250T/W VA - PS 8250T/B VA 2-Way Horn Speakers - 250W

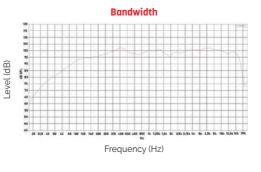
- This 2-way coaxial horn speaker is designed for booth outdoor and outdoor applications !
- EN54-24 certified, it delivers a superb foreground music.
- The PS 8250T VA delivers a smooth and powerful beam type sound for a large range of venues, such as airports, mega-stores, stadiums and many more.
- The 250W powered professional speaker is equipped with an impressing 2-way bassreflex system, consisting of a 12" woofer and a high performance HF-driver with crossover at 2.5kHz.
- The speaker offers 3 different 100V power tapings 250/125/63W, low impedance operation is also possible.
- The sturdy high-impact ABS housing with metal hexagon-shaped aluminium grille offers IP66 enclosure protection.
- Connection is easily done by a screw-terminal at the rear of the speaker, protected by a cover plate with 2 x PG11 cable glands.
- The metal mounting bracket with adjustable inclination enables simple and safe installation. A safety rope is included in the delivery.

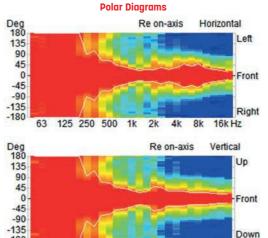


Model	PS 8250T/W VA - PS 8250T/B VA
Body & grill	ABS, Aluminium
Nominal power	250 W
Nominal Impedance	40 Ω
Power 100V Line	250 / 125 / 63 W (80 Ω)
Impedance	40 / 80 / 158 Ω
Bandwidth	75 - 20,000Hz
Sensitivity (1W/1m)	98,5 dB
SPL MAX 1m	122.5 dB
Directivity (H-V) @ 500Hz	138° - 152°
Directivity (H-V) @ 1kHz	60° - 70°
Directivity (H-V) @ 2kHz	90° - 110°
Directivity (H-V) @ 4kHz	80° - 70°
Speaker	12" + Driver
Cone	PP polypropylene
Dimensions (WxHxD)	390 x 425 x 418 mm
Weight	18,9 kg
Operating temperature	-25 to +70°C
Protection Index	IP 66
Color	White / Black

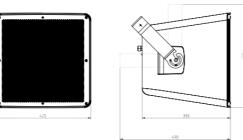


PS 8250T/B VA (Black)





-180 63 125 250 500 1k 2k 4k 8k 16kHz



## **XS 100T VA**

#### Compact Power Speaker 25/50/100 W

• The XS 100T VA is a compact power speaker, with waveguide technology. Whether sports venues, exhibition halls or stages, the XS 100T VA offers an exceptional sound experience with excellent speech intelligibility, certified according to EN54-24.

• Built in an impact-resistant ABS housing with an aluminium grille, the XS 100T VA is available in white. The 100W speaker is equipped with two 4" performance mid-bass woofers, a 2-way bass reflex system and a high-performance tweeter including a waveguide.

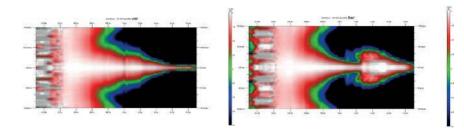
• A tweeter switch provides a 4dB boost for possible sound correction in near-wall and near-ceiling installations. The loudspeaker offers 4 different 100V power adjustments. Low-impedance operation is also possible.

• The loudspeaker is weatherproof with IP66 protection rating. A sturdy aluminium bracket ensures flexible mounting, indoors as well as outdoors.

This loudspeaker is also available as a professional line array (XS 100T VA ARRAY).

Model	XS 100T VA
Power	25/50/100 W
Impedance (100V)	100/200/400 or 1x4 Ω
Bandwidth	49-22.000 Hz
SPL, Pmax/4m	95,1 dB
Sensitivity (1W/1m)	86,3 dB
Directivity (H-V) -6dB, 500Hz	160° - 230°
Directivity (H-V) -6dB, 1KHz	65° - 140°
Directivity (H-V) -6dB, 2KHz	120° - 100°
Directivity (H-V) -6dB, 4KHz	145° - 68°
Dimensions	341 x 245 x 192 mm
IP Rating	IP66
Weight	6,5 kg
Temperature range	-25 / +70 °C
Mounting	Mounting bracket (included)
Connector	Screw terminal
Terminal diameter	2,3 mm
Maximum cable passage	4 mm <sup>2</sup>
Colour	White



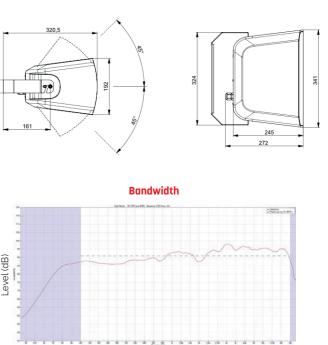


84









Frequency (Hz)

#### EN 54 24

NEW

#### **XS 100T VA ARRAY** Compact Line Array 4x100 W

• The XS 100T VA ARRAY combines the strengths of the XS 100T VA into a loudspeaker system that is able to cover even larger areas with excellent speech intelligibility, certified according to EN54-24. This compact line array consists of 4 modules in a steel bracket. Each module can be adjusted in 3 vertical steps : 0, 5, 10 and 15°. This makes it adaptable to all acoustic challenges, indoors and outdoors. The loudspeaker is weatherproof with an IP66 protection rating. A safety rope is included.

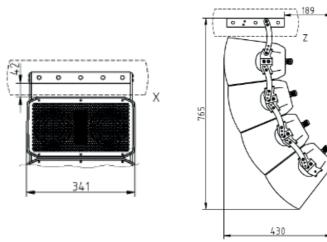
• Built in an impact-resistant ABS housing with an aluminium grille, the XS 100T VA ARRAY is available in white. Each of the 100W speakers is equipped with two 4" performance mid-bass woofers, a 2-way bass reflex system and a high-performance tweeter including a waveguide.

• A tweeter switch provides a 4dB boost for possible sound correction in near-wall and near-ceiling installations. Each loudspeaker offers 4 different 100V power adjustments. Low-impedance operation is also possible.

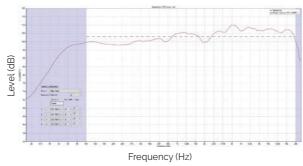
• These loudspeakers are also available individually (XS 100T VA).

Model	XS 100T VA ARRAY
Power	4 x 100/50/25 W
Impedance (100V)	4 x 100/200/400 or 1x4 $\Omega$
Bandwidth	50-22.000 Hz (Tweeter odB)
Sensitivity (1W/1m)	92 dB
Directivity (H-V) -6dB, 500Hz	182°- 62°
Directivity (H-V) -6dB, 1KHz	78° - 30°
Directivity (H-V) -6dB, 2KHz	82° - 11°
Directivity (H-V) -6dB, 4KHz	175 <sup>°</sup> - 10 <sup>°</sup>
Dimensions	0° : 341 x 852 x 274 mm 45° : 341 x 765 x 430 mm
IP Rating	IP66
Weight	30 kg
Mounting	Mounting bracket (included)
Connector	Screw terminal
Terminal diameter	2,3 mm
Maximum cable passage	4 mm <sup>2</sup>
Colour	White











## **Qualifications & certifications**

## An export sales network to meet your needs

Our systems strictly comply with the requirements of European EN 54 and international ISO standards. These certifications, genuine proof of quality and reliability, give you total peace of mind while ultimately guaranteeing the safety of the public concerned.



The EC marking of our products guarantees compliance with the European regulation in terms of safety,health and environmental protection while ensuring their free circulation within the European Union.



Stands for "Restriction of the use of certain Hazardous Substances in electrical and electronic equipment". Our products respect the RoHS European directive (2002/95/EC), the purpose of which is to limit the use of certain heavy metals and other harmful materials.



Our EN-54 products comply with European safety requirements in terms of fire detection and alarm systems.

- EN 54-16 concerns the voice alarm control and indicating equipment.
- EN 54-24 concerns the components of voice alarm systems (Loudspeakers).



Our ISO 7240 products comply with International safety requirements in terms of fire detection

and alarm systems.

EN 54-4 concerns the power supply equipment.

ISO 7240-24 concerns the components of voice alarm systems (Loudspeakers).



DANTE is the newest networking standard for audio developed by Audinate. It respects the standard Ethernet standard and is compatible with the future standard AVB. Advantage: high number of channels and multi-format, low latency, native redundancy, automatic network configuration, use of standard Ethernet hardware.



Establishments receiving services from the public shall be such as to enable persons with disabilities to access, circulate and receive information disseminated therein in the areas open to the public. In this context, the installation of a magnetic induction loop amplifier for the hearing impaired Check-out counters, meeting rooms, conference rooms, shows..., is imperative. This does not apply only to E.R.P. but also to the liberal professions and traders.

#### MAJORCOM is ISO 9001 certified



The ISO goo1:2015 certification of the quality management system demonstrates MAJORCOM's commitment to delivering a quality service and satisfying its customers while constantly improving its quality management systems. The award of an ISO 9001:2015 certificate by a prestigious company like BUREAU VERITAS is proof of high quality and also demonstrates that MAJORCOM complies with the quality management principles recognised at the highest international level.



# MAJORCOM:

Custom-designed sound systems by a highly involved Design Office, R&D, Customer Service and Support Functions.

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SERVICES

SUPPORT



PRODUCTS

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