

DIGITAL SIREN AMPLIFIER

PAS 100/ 200



KEY FEATURES

- **Power Amplifier** With PA System
- **True RMS** 100 W or 200 W (2x100 W)
- **Low Freq. Resonator**, Optional
- **Record'n'Play Function**, Optional
- **Horn Ring Cycler**
- **Full CAN Bus Control**

The **PA electronic Siren Amplifier PAS-100/200** is designed to be used in Emergency vehicles such as ambulance, firefighting, police or other law enforcement vehicles. The amplifier is available in 100 W and also in 200 W version with two independent channels of 2x 100 W True RMS. It can provide a wide range of pre-programed siren sounds that can be set according to the different country regulations and market needs. Incorporates radio broadcast - two radio inputs and PTT handheld unit with a public access (PA) override function - two mic. inputs.

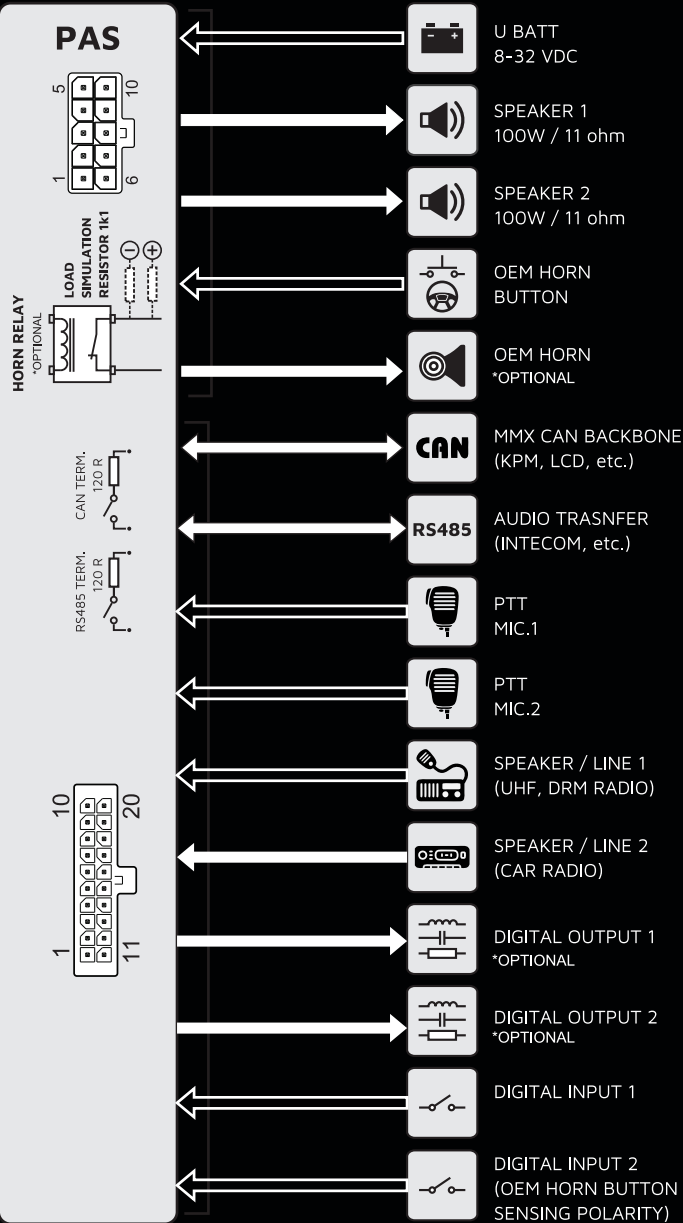
The siren sound can also be changed with the Ring horn button - Horn Ring Cycler function. It has an integrated OEM Horn Ring transfer Relay and load simulation resistor to avoid problems of displaying errors on vehicle's dashboard when the OEM Horn wire is cut. Optionally it can be supplied with extened memory used for Record'n'Play function. For additional functions, two digital high side outputs and inputs are available.

The PAS100/200 amplifier is a part of Emitter Electronics MMX family products and can be controlled by MMX LCD units, keypads or used together with customers CAN bus system.

As a special function, the Amplifier can transfer the sound via RS485 to other devices E.g. Intercom system etc

BLOCK DIAGRAM

Block Diagram of all available amplifier functions:



SPECIFICATIONS

POWER

Supply Voltage	8-32 V DC
Current	<50 mA @ IDLE
PAS-100	max. 15 A + dig. outputs @ 12 V max. 7.5 A + dig. outputs @ 24 V
PAS-200	max. 30 A + dig. outputs @ 12 V max. 15 A + dig. outputs @ 24 V
Electrical Protection	Overvoltage, under-voltage, transients, reverse polarity by breaking external fuse, load dump, over-temperature

INTERFACES

CAN	1x CAN, up to 1 Mbps, default Baud rate 250 kbps (optional ≤ 1 Mbps)
CAN Termination	120 Ohm, configurable with internal DIP switch
El. Protection	Short to GND or Ub, allowable voltage on pins 0..32V
RS485	Optional used for audio transfer, Baud rate ≤ 1 Mbps
RS485 Termination	120 Ohm, DIP switch
El. Protection	Short to GND or Ub, allowable voltage on pins 0..32V

AUDIO I/O

Inputs	
Microphone Level	2 x differential or single ended input, 100 Hz .. 10 kHz @-3dB
PTT (Push To Talk)	2 x active low logic, integrated pull-up resistor
Speaker/Line Level	2 x differential or single ended input, 100 Hz .. 10 kHz @-3dB
Speaker Outputs	
PAS-100	1 x 100 W RMS @11 Ω output
PAS-200	2 x 100 W RMS/ch @11 Ω outputs
PAS-200LF	1 x 100 W RMS @11 Ω output + 1 x 100 W RMS @4 Ω Low Freq. output
El. Protection	for 2x 50 W/8 Ω speakers connected in parallel Overload – short between pins, short to GND or Ub, over temperature

DIGITAL I/O

Inputs	2 x active high logic, integrated pull-down resistor
El. Protection	Short to GND or Ub, allowable voltage on pins 0..32V
Outputs	2 x high side switch ≤ 2.2 A
El. Protection	Overload – short between pins, short to GND or Ub, over temperature

OEM HORN CONTROL

Relay	Integrated, normally open contacts, 24 V: I ≤ 15 A, 12 V: I ≤ 30 A
OEM Horn Input	Voltage sensing, pull-down (optional pull-up) load simulation resistor

MISCELLANEOUS

Temperature range	
Storage	From -40°C to +85°C
Operation	Ambient from -40 to +65°C, internal -40 to +105°C (at full load)
IP Class (IEC529)	IP2x
EMC	Designed to EN 61000-6-2, noise immunity Designed to EN 61000-6-4, radiation of interference Designed to ISO 7637-2 pulse imm., load dump Designed to ECE-R10.5 noise immunity

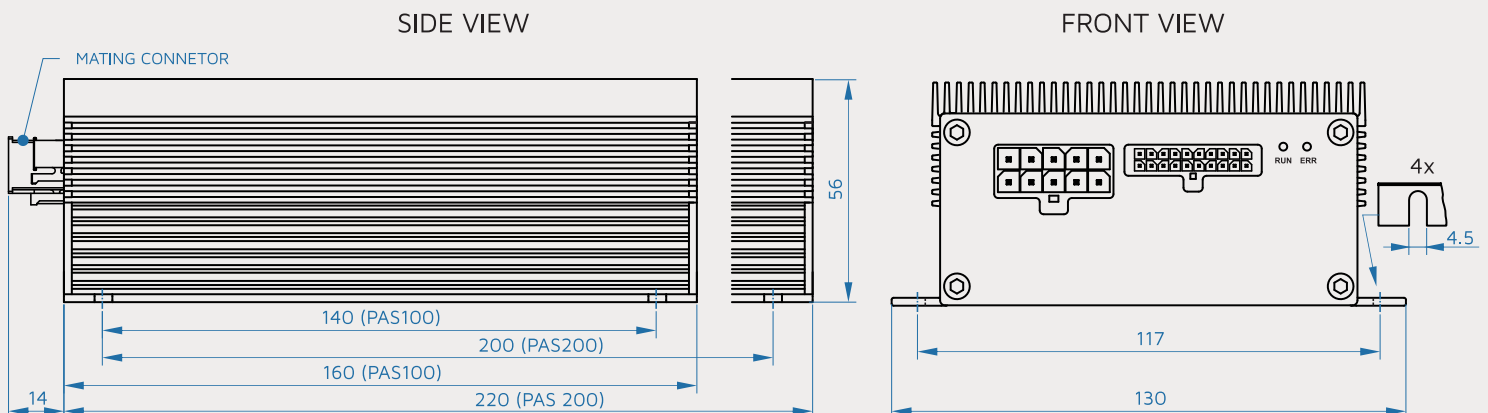
ENCLOSURE

Mating Connectors	
Power Connector	Mega Fit 10-way dual row, for wires 2.5 mm ² (14 AWG)
Signal Connector	WR-MPC3 20-way dual row for wires 0.5 mm ² (24-20 AWG)
Housing material	Aluminium housing - anodised
Mounting	4 screws M4 or tapping screws with max. diameter of 4.5 mm

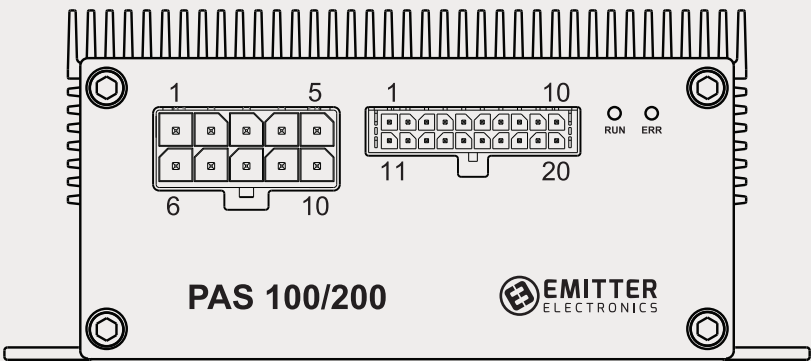
SIZE & WEIGHT

Housing dimensions	PAS-100 - 105 x 48 x 160 mm
W x H x D	PAS-200 - 105 x 48 x 220 mm
Weight	PAS-100 - 0.8 kg, PAS-200 - 1.1 kg

DIMENSIONS



CONNECTIONS



SIGNAL CONNECTOR WR-MPC3 2X10- WAY		POWER CONNECTOR MEGA-FIT 2X5 WAY	
PIN	DESCRIPTION	PIN	Description
1	CAN H	1	BATTERY +
2	RS485 A (OPTIONAL)	2	GND (BATTERY -)
3	DIGITAL OUTPUT 1 (OPTIONAL)	3	SPEAKER 1 OUT +
4	DIGITAL INPUT 1	4	SPEAKER 2 OUT + (ONLY PAS-200)
5	SPEAKER/LINE INPUT 1 +	5	OEM HORN IN (OPTIONAL)
6	SPEAKER/LINE INPUT 2 +	6	BATTERY +
7	MICROPHONE PTT 1 INPUT	7	GND (BATTERY -)
8	MICROPHONE PTT 2 INPUT	8	SPEAKER 1 OUT -
9	MICROPHONE INPUT 1 +	9	SPEAKER 2 OUT - (ONLY PAS-200)
10	MICROPHONE INPUT 2 +	10	OEM HORN OUT
11	CAN L		
12	RS485 B (OPTIONAL)		
13	DIGITAL OUTPUT 2 (OPTIONAL)		
14	DIGITAL INPUT 2		
15	SPEAKER/LINE INPUT 1 -		
16	SPEAKER/LINE INPUT 2 -		
17	MICROPHONE PTT 1 GND		
18	MICROPHONE PTT 2 GND		
19	MICROPHONE INPUT 1 -		
20	MICROPHONE INPUT 2 -		

HANDHELD MIC UNIT

PRODUCT CODE	DESCRIPTION	PICTURE	STATUS
HH-MIC1E-XLR-01	Handheld mic., electret condenser, PU coiled cable 0.5m, 5x0.8 mm ² with XLR connector		Standard

PRODUCT CODE

Ordering code example:

P	A	S	-	2	0	0	S	-	L	F		
				AMPLIFIER POWER		TYPE			OPTIONAL FUNCTIONS		OPTIONAL FUNCTIONS	OPTIONAL FUNCTIONS
				100: 100 WATT 200: 200 WATT		S: STANDARD			LF: LOW FREQ.RESONATOR		R: INTEGR. HORN RELAY	O: INTEGR. HSS OUTPUTS

SIREN SPEAKERS

Three types of high-performance, heavy-duty siren speakers are available, designed to deliver clear voice reproduction and withstand extreme weather conditions. All models are fully compatible with Emitter Electronics siren amplifiers.

SPK -R100W11-01 Standard 100W speaker offering robust performance and reliability.

SPK-R100W11-02 A powerful, slim-profile 100W speaker with powerful acoustic performance delivering sound levels over 122 dB.

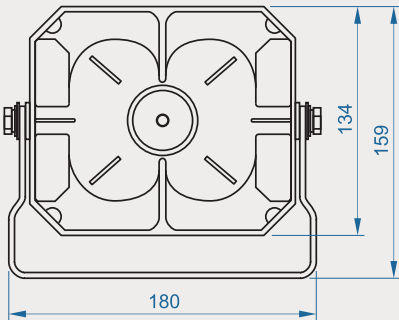
Its compact design allows flexible installation options, including tight spaces such as under the vehicle hood.

SPK-R50W8LW-01 Specialized low-frequency 50W speaker, designed to be used in pairs and connected to a single audio channel on specific siren amplifiers. This configuration generates infrasound waves that penetrate solid objects, allowing both drivers and nearby pedestrians to physically feel the alert. Perfect for use in dense urban environments and high-traffic zones.

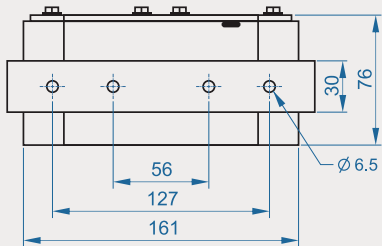
SPK-R100W11-01



FRONT VIEW



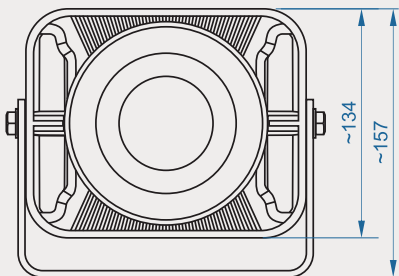
MOUNTING HOLES



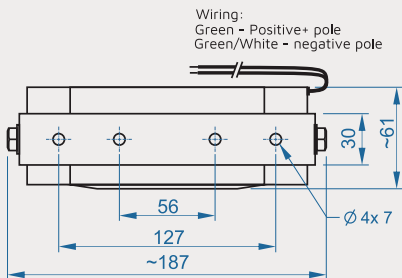
SPK-R100W11-02



FRONT VIEW



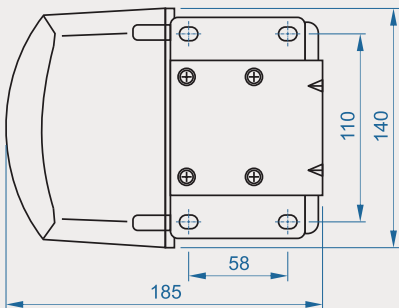
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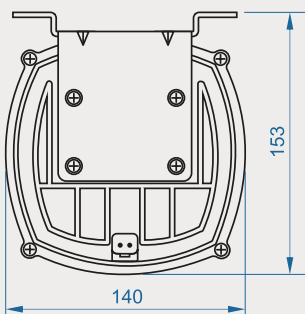
SPK-R50W8LF-01



FRONT VIEW



MOUNTING HOLES



PRODUCT CODE

SPK -R100W11-01	Speaker PA 100 W, 11 Ohm, >118 dB, 200-5.000 Hz, ~3kg
SPK-R100W11-02	Speaker PA Super Thin 100 W, 11 Ohm, >122 dB, 200-5.000 Hz, ~3kg
SPK-R50W8LW-01	Speaker Low Frequency 50 W, 8 Ohm
For more options please contact the supplier.	