![STANDBY logo — When attention matters.]

200W Digital Siren (MCS-DDSA)
Part Number: UNI-SIR-D20

INSTALLATION GUIDE

C-10743-A

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1.1)   Overview

The MCS-DDSA is a dual channel siren amplifier that is highly versatile and capable of producing 200W in a number of output configurations. This document outlines the guidelines for installation and a brief description of the modes of operation when using firmware MHE2_MCS-DDSA200_UK.

1.2)   Pre-Installation & Required Tools

1.2.1)   Crimping Tool

Universal Molex Crimp Tool. (Can be used for all connectors) **Molex part number: 0638111000**

- http://www.digikey.co.uk/   Part Number: WM9999-ND
- http://www.mouser.co.uk   Part Number: 538-63811-1000
- http://uk.rs-online.com/   Part Number: 710-6499
- http://www.ttieurope.com   Part Number: 63811-1000

1.2.2)   Replacement Pins

Senior Fit Female   - 0428150134

- http://www.digikey.co.uk/   Part Number: 0428150134-ND
- http://www.mouser.co.uk   Part Number: 538-42815-0134

Mini Fit Female   - 50-34-8582 or 0039000211

- http://www.digikey.co.uk/   Part Number: 0050348582-ND or WM14176CT-ND
- http://www.mouser.co.uk   Part Number: 538-50-34-8582

2.1)   Installation Requirements

2.1.1)   The Supply line MUST be protected by a fuse, rated 20 Amp, preferably at (or near to) the battery terminal.

2.1.2)   DO NOT obstruct fan vents along the top, side or under surfaces of the MCS-DDSA. Do not install any equipment on top or underneath the MCS-DDSA.

The above installation requirement must be followed for safe operating and extended product lifetime
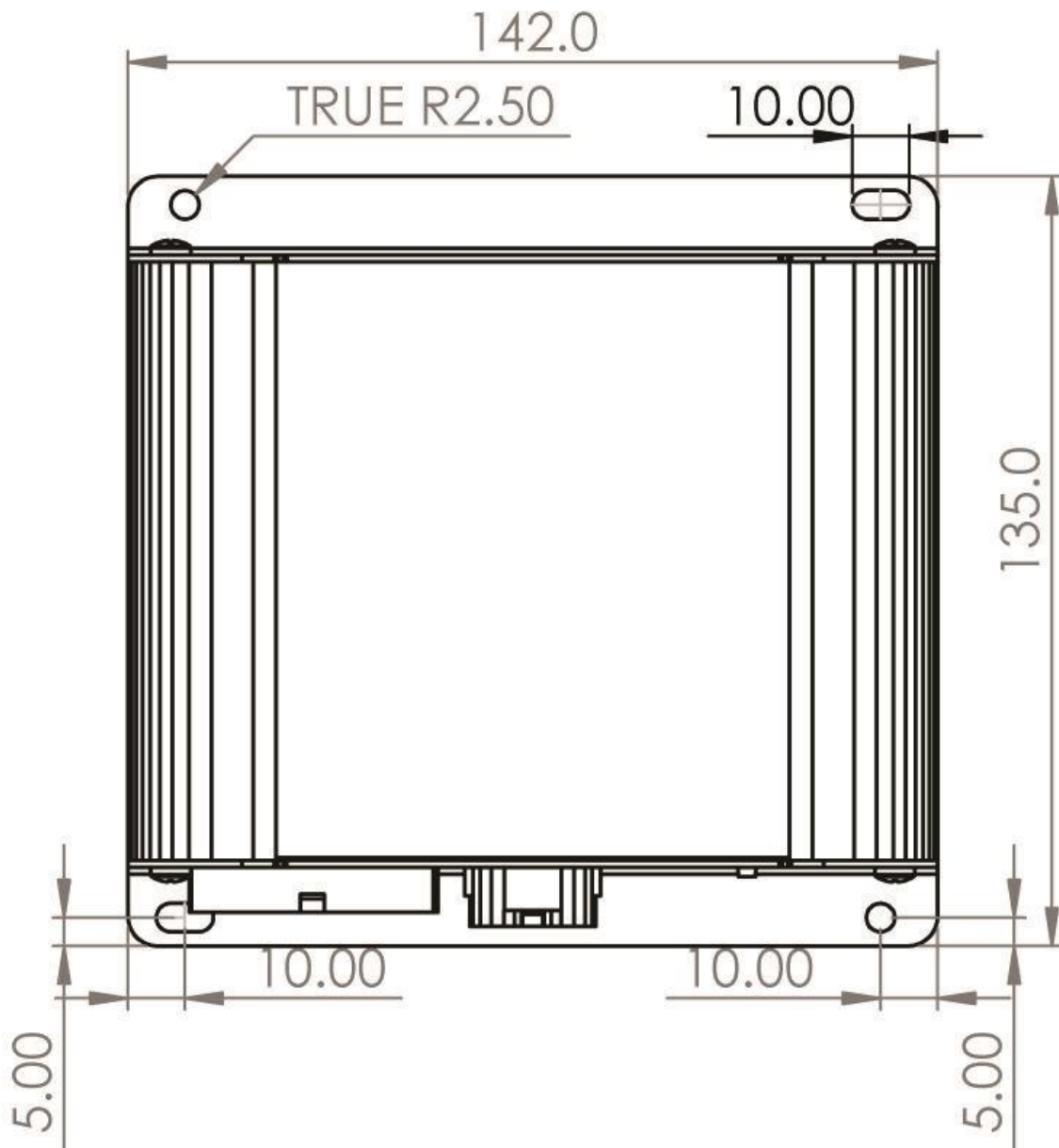
3.1)   Mounting

Figure 1 Dimensions and Mounting holes Top View

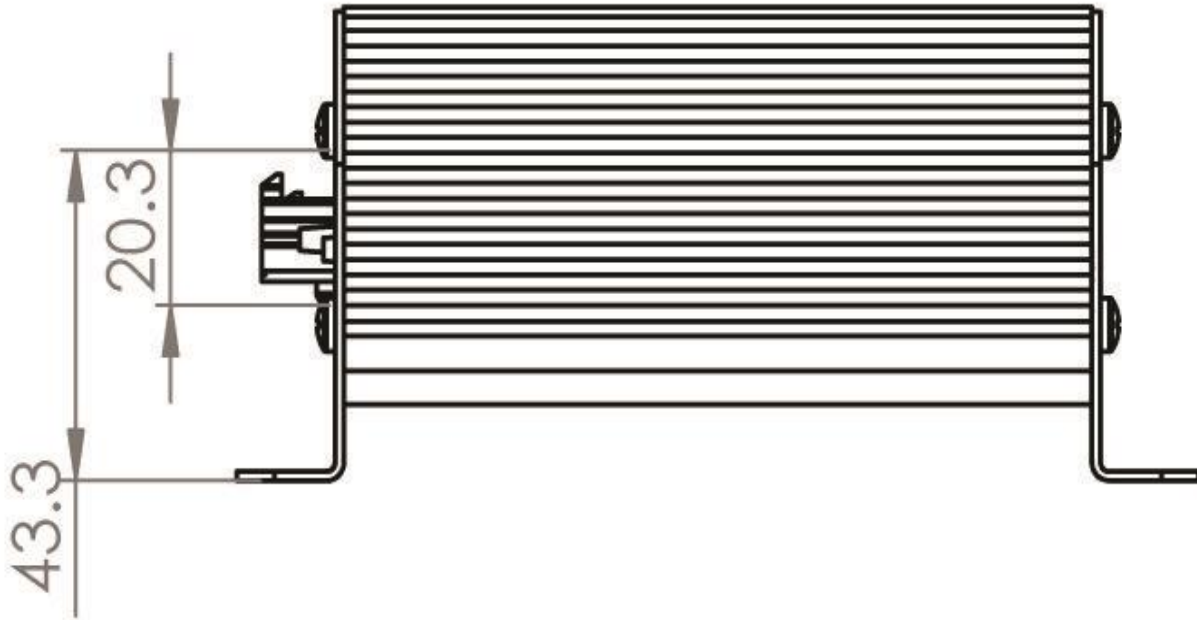4 x M4 holes are supplied for mounting the unit to a base panel.

Figure 2 Dimensions and Mounting holes Side View
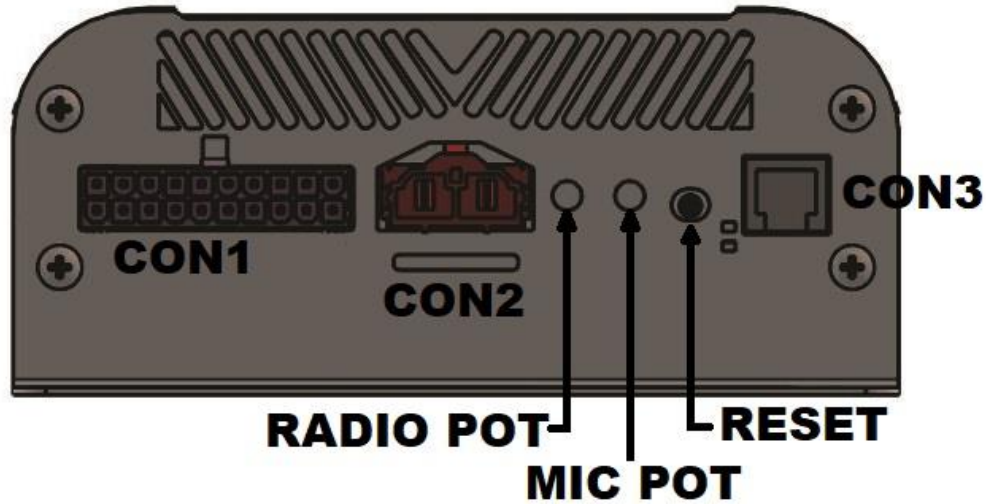
4.1)   Wiring

Power In and I/O's

Figure 3 End Plate Connector Layout – Outputs and Power

4.1.1)   Inputs and Outputs (CON1)

Pin	Name	Function	
1	CAN Data High	Data	
2	CAN Data Low	Data	
3	Airhorn Negative	Input	Airhorn active Low
4	Input 2	Input	Positive Switching Input
5	Input 3	Input	Positive Switching Input
6	Radio In 1A	Input	Radio Signal Input, to be used with a spare Input
7	Ground		
8	Auxillary 2	Output	500mA Max Positive or Negative Switched
9	Channel 1 -	Output	Negative Speaker Output for Channel one
10	Channel 2 -	Output	Negative Speaker Output for Channel two
11	Operation Switch	Input	Active High
12	HRT Negative	Input	HRT Active Low
13	Input 1	Input	Positive Switching Input
14	Airhorn Positive	Input	Airhorn active High
15	HRT Positive	Input	HRT Active High
16	Radio In 1B	Input	Radio Signal Input, to be used with a spare Input
17	Data Out\Auxillary 1	Output	500mA Max Positive or Negative Switched
18	Auxillary 3	Output	500mA Max Positive or Negative Switched
19	Channel 1 +	Output	Positive Speaker Output for Channel one
20	Channel 2 +	Output	Positive Speaker Output for Channel two

4.1.2)   Power Inputs (CON2)

Pin	Name	Function	Fuse
1	Ground	System Ground \ Chassis	
2	Supply	12-24V Input	20A

4.1.3)   CANBus Connector (CON3)

Pin	Name	Function
1	CAN High	CAN Data
2	Microphone	Microphone Input signal
3	Supply	12-24V DC Output 250mA Max
4	Ground	Chassis
5	PTT Switch	Push to Talk Active Low
6	CAN Low	CAN Data

Figure 4 End Plate Connector Layout – Programming and Configuration

4.1.4)   USB

Used with the MCS Application Loader for programming the device.

4.1.5)   DIP Switch Settings

	DIP 1	DIP 2
Default 2 x 100W 8Ω Standard Speakers	OFF	OFF
1 x 200W 4Ω Speaker	ON	OFF
1 x 100W 8Ω Low Frequency Speaker and 1 x 100W 8 Ω Standard Speaker	OFF	ON
1 x 200W 4Ω Speaker aand 2 x 100W Low Frequnecy 8 Ω Speakers in Parallel	ON	ON

5.1)   Diagnostics

Status LED	Red (Double Flash): Siren is sleeping Red (Steady): Siren is armed and ready Red (Single Flash): Battery Voltage too high or too low Red (Fast Flashing): Siren current is high or there is a short on the speaker Red (Long Flash Long Pause): Over Temperature
CAN LED	Green: Flashes on receipt of valid CAN data

6.1) Volume Setting

The MCS-DDSA has a potentiometer for setting volume accessible to the user for both the Radio rebroadcast and Personal address functions.

7.1) Speaker Configurations

The MCS-DDSA is versatile and can support the following Speaker configurations using the DIP switch to determine which one is in use. ***Take note that in Mode 1 and 3 both outputs can operate simultaneously but in mode 4 they cannot.**

7.1.1) MODE 1 (Default)

Figure 5 Mode 1 Configuration

7.1.2) MODE 2
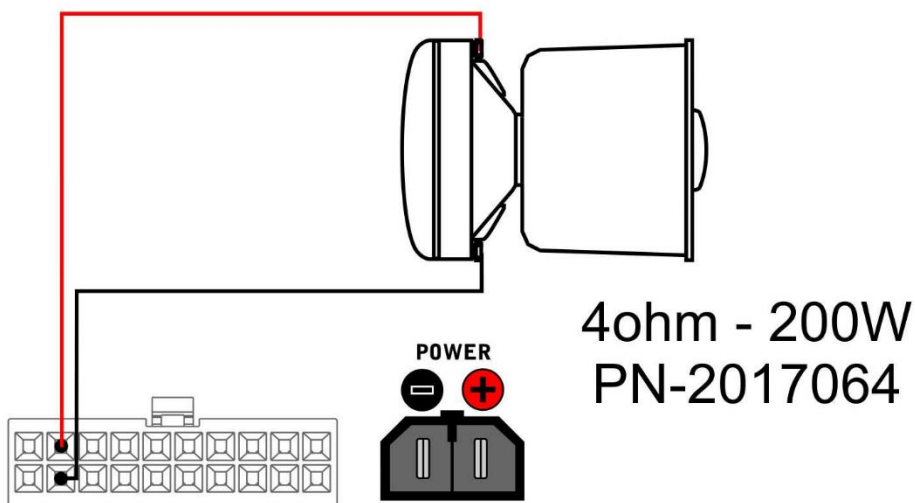
Figure 6 Mode 2 Configuration

7.1.3) MODE 3

8ohm - 100W
PN-2011033

8ohm - 100W
PN-2019024

POWER
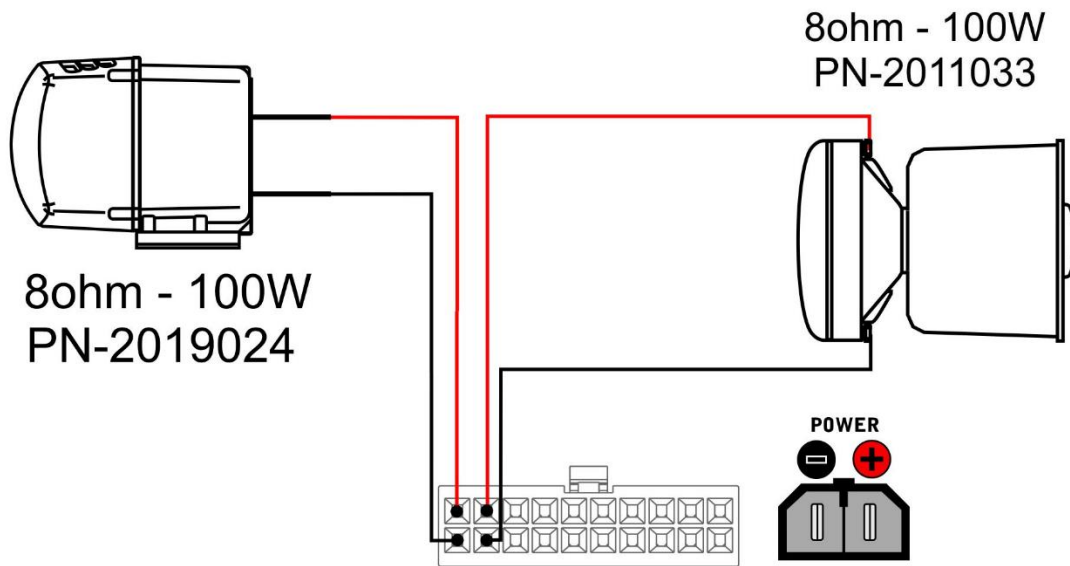
Figure 7 Mode 3 Configuration

7.1.4) MODE 4

4ohm - 200W
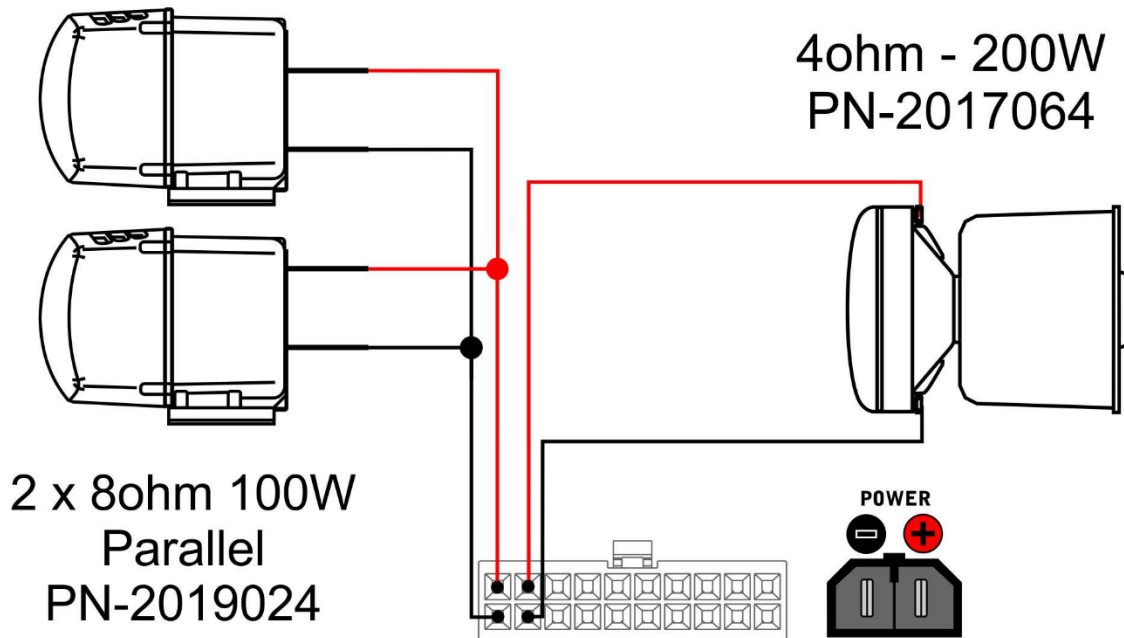PN-2017064

2 x 8ohm 100W
Parallel
PN-2019024

POWER

Figure 8 Mode 4 Configuration

8.1)   Version History

Current Word Revision: 79

Version	Word Revision	Changes	Responsible Person(s)	Date
1V0	47	Initial document release	KJVR	2021/01/15
1V1	66	Added overview and renumbered	KJVR	2021/01/28
1V2	73	Corrected Status LED behavior	KJVR	2021/03/02
1V3	79	Corrected Inputs1-3 to positive only	KJVR	2021/12/10