SDA100W
Siren Amplifier

— Installation & Operation Manual —

OBS! inden istallation bør punktet om
Positive and Negative Horn Ring Transfer (HRT) Switching
på side 6 læses.

NOTICE TO INSTALLER

Before installation and operation — read all instructions and warnings.
Deliver this manual to the end user of this product.

TABLE OF CONTENTS

WARNING

1. Proper installation of the product requires the installer to have a good understanding of automotive electronics, systems and procedures. It is essential to install the unit properly to ensure safe and reliable operation.

2. Please read through all instructions thoroughly and carefully before installing the unit.

3. Failure to follow these instructions could result in serious damage to the unit or vehicle and may void warranties.

4. The correct mounting and wiring is the key to the effectiveness of SDA100W.

5. Installers must read and follow instructions and warnings in the manual from the original manufacturer.

6. The operator should verify the siren system is fastened to the vehicle securely and is functioning properly. Failure to follow all safety precautions and instructions may cause property damage, injury, or death.

7. Ensure that any switch control panel is located in an area that allows both the vehicle and the control panel to be operated safely in any driving condition.

WARNING **Sound Hazard** - Sound level from a siren speaker (109dB at 2M) may cause hearing damage.
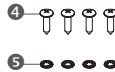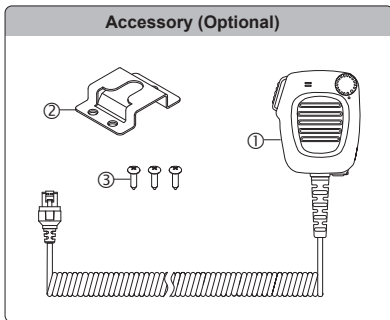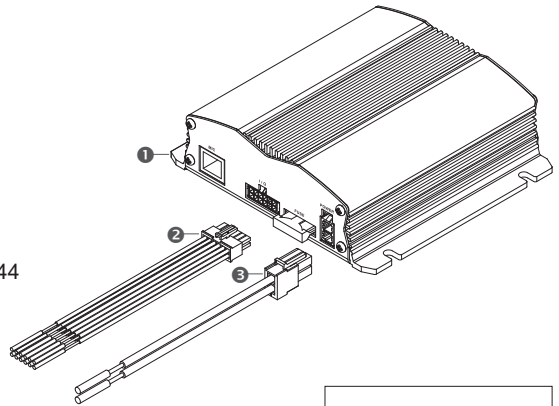
Do not operate the siren without adequate hearing protection for you and anyone in immediate vicinity.

(Ref. OSHA 1910.95 for occupational noise exposure guidelines)

CONTENTS

❶ Siren amplifier   x 1 pc
❷ Control wire harness x 1 pc
    (30cm)
❸ Power wire harness   x 1 pc
    (30cm)
❹ Sheet metal screws   x 4 pcs
    (ø3/16" x 3/4")
❺ Tooth lock washers   x 4 pcs
❻ Manual   x 1 pc

Accessory (Optional)
① Microphone   x 1 pc   JU-17010344
② Microphone clip   x 1 pc
③ Sheet metal screws   x 3 pcs
    (ø4 x 16mm)

Accessory (Optional)

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SPECIFICATIONS

Input Voltage: 12~24VDC

Siren Output Power: 100 Watts
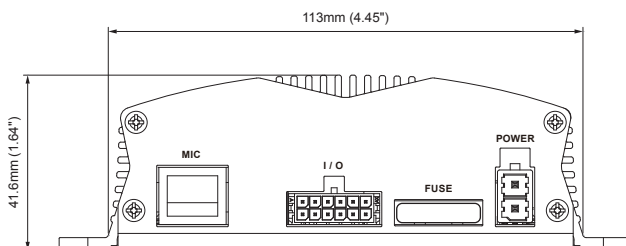
Output Load: 100W-ACR 11Ω

Siren Frequency: 759Hz - 1592Hz

Max. Current: 9A @ 12VDC / 4.5A @ 24VDC

Standby Current: 0 mA (w/o IGN wire) / <0.38 A (w/ IGN wire)

Operating Temperature Range: -20℃~50℃

Dimensions(amplifier): 126mm x 136.2mm x 41.6mm

113mm (4.45")

41.6mm (1.64")

MIC

I / O

FUSE
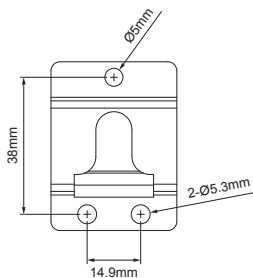
POWER

MOUNTING

● *Siren amplifier*

1. Select a location that is not exposed directly to weather elements, such as the driver compartment firewall, below the seat, or in the trunk; avoid any interference of air bag deployment.

2. Using the siren amplifier as a template, mark four mounting holes to be drilled.

3. Drill four mounting holes for sheet metal screw.

4. Install the siren amplifier with provided sheet metal screws and tooth lock washers.

Top view

136.2mm (5.36")

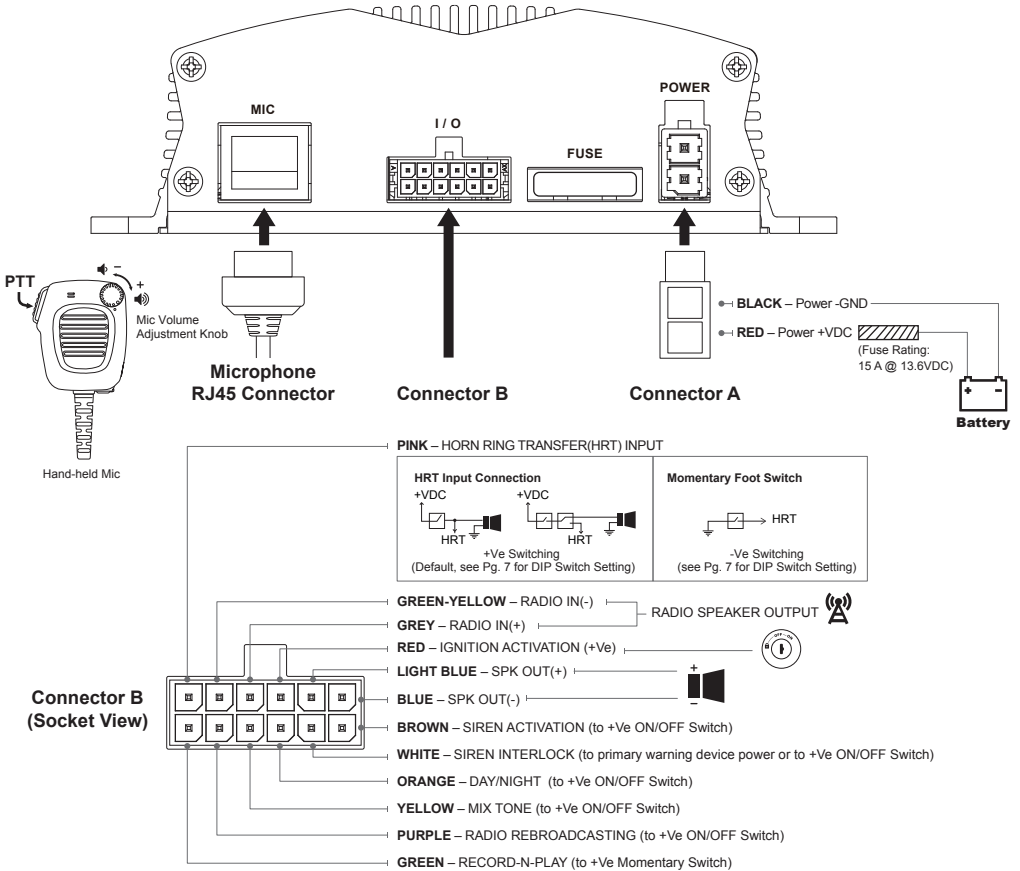126mm (4.96")

126mm (4.96")

90mm (3.54")
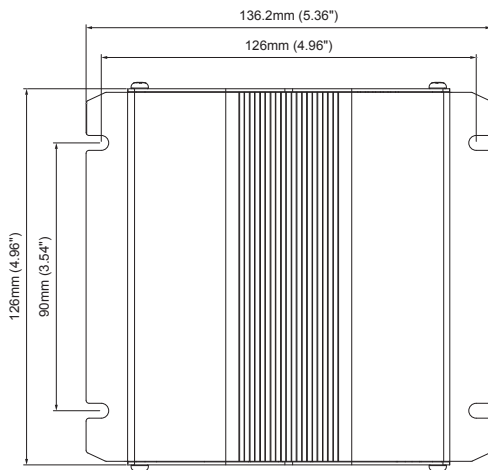
● *Microphone clip*

1. Select a location where is convenient to the operator; avoid any interference of air bag deployment.

2. Using the mounting clip as a template, mark the three holes to be drilled.

3. Drill three mounting holes for sheet metal screw.

4. Install the microphone clip with provided sheet metal screws.

Ø5mm

38mm

2-Ø5.3mm

14.9mm

WIRING

● *Wiring diagram:*

MIC

I / O

POWER

FUSE

PTT

Mic Volume
Adjustment Knob

**Microphone
RJ45 Connector**

Hand-held Mic

Connector B

Connector A

● **BLACK** – Power -GND

● **RED** – Power +VDC (Fuse Rating: 15 A @ 13.6VDC)

Battery

PINK – HORN RING TRANSFER(HRT) INPUT

HRT Input Connection	Momentary Foot Switch
+VDC +VDC	
HRT HRT	HRT
+Ve Switching (Default, see Pg. 7 for DIP Switch Setting)	-Ve Switching (see Pg. 7 for DIP Switch Setting)

**Connector B
(Socket View)**

GREEN-YELLOW – RADIO IN(-)
GREY – RADIO IN(+)
RADIO SPEAKER OUTPUT

RED – IGNITION ACTIVATION (+Ve)

LIGHT BLUE – SPK OUT(+)

BLUE – SPK OUT(-)

BROWN – SIREN ACTIVATION (to +Ve ON/OFF Switch)

WHITE – SIREN INTERLOCK (to primary warning device power or to +Ve ON/OFF Switch)

ORANGE – DAY/NIGHT (to +Ve ON/OFF Switch)

YELLOW – MIX TONE (to +Ve ON/OFF Switch)

PURPLE – RADIO REBROADCASTING (to +Ve ON/OFF Switch)

GREEN – RECORD-N-PLAY (to +Ve Momentary Switch)

PA Mic (optional)

● *PA Activation*
Connect the mic to the RJ45 jack on the siren amplifier. Press "Push-to-Talk" button on the side of the mic to activate PA broadcasting. PA broadcasting will override all current Siren Tone. Action will resume when the PTT is released.

● *Mic Volume Adjustment Knob* (available on selected mic model only)
The knob located on the top right corner of the mic will adjust the mic volume (high or low). Turn clockwise for high volume; turn anticlockwise for low volume.

Power Wire Harness (Connector A)

● *Power +VDC & -GND*
 1. Connect the RED wire to the positive (+) battery terminal. Fuse each wire independently @15 Amps. DO NOT install these fuses until the wiring for the entire system has been completed.
 2. Connect the BLACK wire to the vehicle's chassis ground (typically adjacent to the battery).
 3. Plug the connector A into the siren amplifier.

Control Wire Harness (Connector B)

● *Speaker Out*

Connect the **LIGHT BLUE** (SPK+) and **BLUE** (SPK-) wires to one 100W 11-ohm impedance speaker.

● *Ignition Activation (IGN) input*

Apply +VDC continuously to **RED** wire to enable the siren system. Connect this wire to a positive circuit controlled by the vehicle ignition switch to allow the siren amplifier to be turned on & off together. The system does not operate without this Ignition Activation. DO NOT directly connect this wire to the battery as this may drain battery.

● *Siren Tone Activation*

Apply +VDC continuously to **BROWN** wire to activate the siren tone. The siren tone will only sound if the Siren Interlock (**WHITE**) wire is enabled. For tone selection, see page 7 for Tone Group Selection.

● *Siren Interlock input*

Apply +VDC continuously to **WHITE** wire to enable the activation of siren tone. Connect this wire to the switch output of a beacon or the primary warning light. The siren tone will only sound when this wire is enabled with the Siren Tone Activation (**BROWN**) wire.

Note: If siren interlock is not required, connect this wire directly to the positive (+) battery terminal.

● *DAY/NIGHT Volume*

Apply +VDC continuously to **ORANGE** wire to activate volume dimming of siren tone (reduced output). This function does not affect the sound output of Air Horn, Mic volume.

Base on the Tone Group setting, this wire may be used for tone change. For actual function of this wire, see page 6 for Tone Table.

● *Horn Ring Transfer (HRT) input*

When the Siren Tone is not activated:
- If **WHITE** wire is enabled, apply +VDC momentarily to **PINK** wire for two cycle of the Siren Tone or apply +VDC continuously for a continuous Siren Tone until the wire is released.
- If **WHITE** wire is not enabled, apply +VDC continuously to **PINK** wire for Air Horn tone until the wire is released.
- Base on the Tone Group setting, this wire may sound or behave differently. For actual function of this wire, see page 6 for Tone Table.

When the Siren Tone is activated:
- Apply +VDC continuously to **PINK** wire for Air Horn tone until the wire is released.
- Base on the Tone Group setting, this wire may be used for tone change or behave differently. For actual function of this wire, see page 6 for Tone Table.

This wire may be wired to a positive or a negative source based on the DIP switch setting. See page 6 for DIP SWITCH SETTING.

● *Mix Tone*

While Siren Tone is activated, apply +VDC continuously to **YELLOW** wire for Mix Tone function. This function allows the siren speaker to deliver two siren tones simultaneously for a fanfare effect and increase Siren effectiveness. Base on the Tone Group setting, this wire may sound or behave differently. For actual function of this wire, see page 6 for Tone Table.

● *Radio Re-broadcast*

Connect **GREY** and **GREEN-YELLOW** wire to the speaker output of a radio console. Apply +VDC continuously to **PURPLE** wire to re-broadcast the incoming radio messages over the siren speaker.

● *Record-n-Play*

This function allows user to record a short message up to 20 seconds and re-broadcast over the siren speaker. Connect **GREEN** wire to a momentary switch before recording or re-playing

For Recording:
1. Enter the recording mode by pressing and holding the Record-n-Play switch for more than 5 seconds; a continuous single beep will sound from the siren speaker. Do not release the switch yet.
2. While holding the switch, pick up the microphone and press the PTT button to start recording. (DO NOT release the switch or PTT during the recording.)
3. Release the PTT button to end the recording; double beeps will sound from the siren speakers. Release the momentary switch to save and exit the process.

For Re-Play :
1. Quick press the Record-n-Play switch once to play the pre-recorded message three times.
2. Quick press the Record-n-Play switch 3 times to play the pre-recorded message continuously.
3. Quick press the Record-n-Play switch once during the re-play to end the re-broadcasting.

TONE TABLE

To change the Tone Group, see next page for corresponding DIP Switch setting.

| No.	COUNTRY	TONE	CYCLE/MINUTE	DISABLE/ENABLE DAY/NIGHT WIRE	ENABLE HRT, SIREN ON, INTERLOCK ON	ENABLE HRT, SIREN OFF, INTERLOCK OFF	ENABLE HRT, SIREN OFF, INTERLOCK ON	MIX TONE
1	DK	STANDARD	WAIL	DAY/NIGHT	YELP	AIR HORN	AIR HORN	WAIL
			YELP		WAIL			YELP
2	FRANCE	GENDAMERIE	TWO TONE 54 C/M	DAY/NIGHT	AIR HORN	AIR HORN	TWO TONE	TWO TONE
3	FRANCE	POLICE	TWO TONE 54 C/M	DAY/NIGHT	AIR HORN	AIR HORN	TWO TONE	TWO TONE
4	FRANCE	AMBULANCE	TWO TONE 30 C/M	DAY/NIGHT	AIR HORN	AIR HORN	TWO TONE	TWO TONE
5	FRANCE	POMPIERS	TWO TONE 27 C/M	DAY/NIGHT	AIR HORN	AIR HORN	TWO TONE	TWO TONE
6	FRANCE	UMH	TWO TONE 54 C/M	DAY/NIGHT	AIR HORN	AIR HORN	TWO TONE	TWO TONE
7	GERMANY	CITY(STADT)	TWO TONE 40 C/M	STADT/LAND	AIR HORN	AIR HORN	TWO TONE	TWO TONE
		COUNTRY(LAND)	TWO TONE 40 C/M				TWO TONE	TWO TONE
8	AUSTRIA	POLICE	TWO TONE 25 C/M	DAY/NIGHT	N/A	N/A	TWO TONE	TWO TONE
9	AUSTRIA	AMBULANCE	TWO TONE 17 C/M	DAY/NIGHT	N/A	N/A	TWO TONE	TWO TONE
10	AUSTRIA	FIRE BRIGADE	TWO TONE 17 C/M	DAY/NIGHT	N/A	N/A	TWO TONE	TWO TONE
11	AUSTRIA	MAGISTRATE	TWO TONE 18 C/M	DAY/NIGHT	N/A	N/A	TWO TONE	TWO TONE
12	ITALY	POLICE	TWO TONE 20 C/M	DAY/NIGHT	AIR HORN	AIR HORN	TWO TONE	TWO TONE
13	ITALY	AMBULANCE	TWO TONE 20 C/M	DAY/NIGHT	AIR HORN	AIR HORN	TWO TONE	TWO TONE
14	ITALY	AMBULANCE 2	WAIL 12 C/M	DAY/NIGHT	YELP	AIR HORN	TWO TONE	WAIL
			YELP 157 C/M		TWO TONE			YELP
			TWO TONE 20 C/M		WAIL			TWO TONE
15	USA / UK	STANDARD 2	WAIL 12 C/M	DAY/NIGHT	YELP	AIR HORN	AIR HORN	YELP
			YELP 157 C/M		TWO TONE			YELP
			TWO TONE 40 C/M		WAIL			TWO TONE
16	NETHERLANDS	POLICE	TWO TONE 33 C/M	DAY/NIGHT	AIR HORN	AIR HORN	TWO TONE	TWO TONE
17	NETHERLANDS	POLICE 2	TWO TONE 33 C/M	DAY/NIGHT	AIR HORN	AIR HORN	TWO TONE	TWO TONE

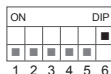# DIP SWITCH SETTING

● *DIP Switch Location*
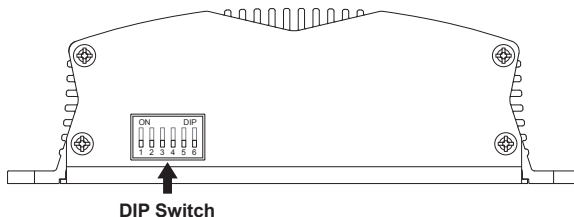
DIP Switch

● *Positive and Negative Horn Ring Transfer (HRT) Switching*

Carefully check and change the DIP Switch #6 according to your required +ve or -ve switching.
Restart the unit after setting to apply the change.
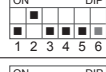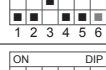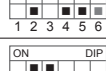DIP Switch #1 to #5 is for Tone setting; see next page.

For +ve switching HRT:
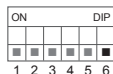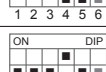
For -ve switching HRT:
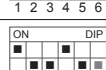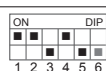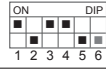
● Tone Group Selection

Carefully check and change the DIP Switch #1 to #5 according to your required tone.
Restart the unit after setting to apply the change.
DIP Switch #6 is for HRT setting; see previous page.

No.	DIP SWITCH	COUNTRY	TONE	FREQUENCY(Hz)	CYCLE/MINUTE
1	ON ... DIP / 1 2 3 4 5 6	DK	STANDARD	763 ~ 1594	WAIL 12 C/M
				763 ~ 1594	YELP 157 C/M
2	ON ... DIP / 1 2 3 4 5 6	FRANCE	GENDAMERIE	434-729	TWO TONE 54 C/M
3	ON ... DIP / 1 2 3 4 5 6	FRANCE	POLICE	434-581	TWO TONE 54 C/M
4	ON ... DIP / 1 2 3 4 5 6	FRANCE	AMBULANCE	420-515-420	TWO TONE 30 C/M
5	ON ... DIP / 1 2 3 4 5 6	FRANCE	POMPIERS	434-487	TWO TONE 27 C/M
6	ON ... DIP / 1 2 3 4 5 6	FRANCE	UMH	434-649	TWO TONE 54 C/M
7	ON ... DIP / 1 2 3 4 5 6	GERMANY	CITY (STADT)	432-574	TWO TONE 40 C/M
			COUNTRY (LAND)	362-483	TWO TONE 40 C/M
8	ON ... DIP / 1 2 3 4 5 6	AUSTRIA	POLICE	431-574	TWO TONE 25 C/M
9	ON ... DIP / 1 2 3 4 5 6	AUSTRIA	AMBULANCE	523-393	TWO TONE 17 C/M
10	ON ... DIP / 1 2 3 4 5 6	AUSTRIA	FIRE BRIGADE	393-523	TWO TONE 17 C/M
11	ON ... DIP / 1 2 3 4 5 6	AUSTRIA	MAGISTRATE	523-393	TWO TONE 18 C/M
12	ON ... DIP / 1 2 3 4 5 6	ITALY	POLICE	465-621	TWO TONE 20 C/M
13	ON ... DIP / 1 2 3 4 5 6	ITALY	AMBULANCE	392-657-392-657	TWO TONE 20 C/M
14	ON ... DIP / 1 2 3 4 5 6	ITALY	AMBULANCE 2	763 ~ 1594	WAIL 12 C/M
				763 ~ 1594	YELP 157 C/M
				392-657-392-657	TWO TONE 20 C/M
15	ON ... DIP / 1 2 3 4 5 6	USA / UK	STANDARD 2	763-1594	WAIL 12 C/M
				763-1594	YELP 157 C/M
				450-598	TWO TONE 40 C/M
16	ON ... DIP / 1 2 3 4 5 6	NETHERLANDS	POLICE	373-501	TWO TONE 33 C/M
17	ON ... DIP / 1 2 3 4 5 6	NETHERLANDS	POLICE 2	373-501	TWO TONE 33 C/M

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