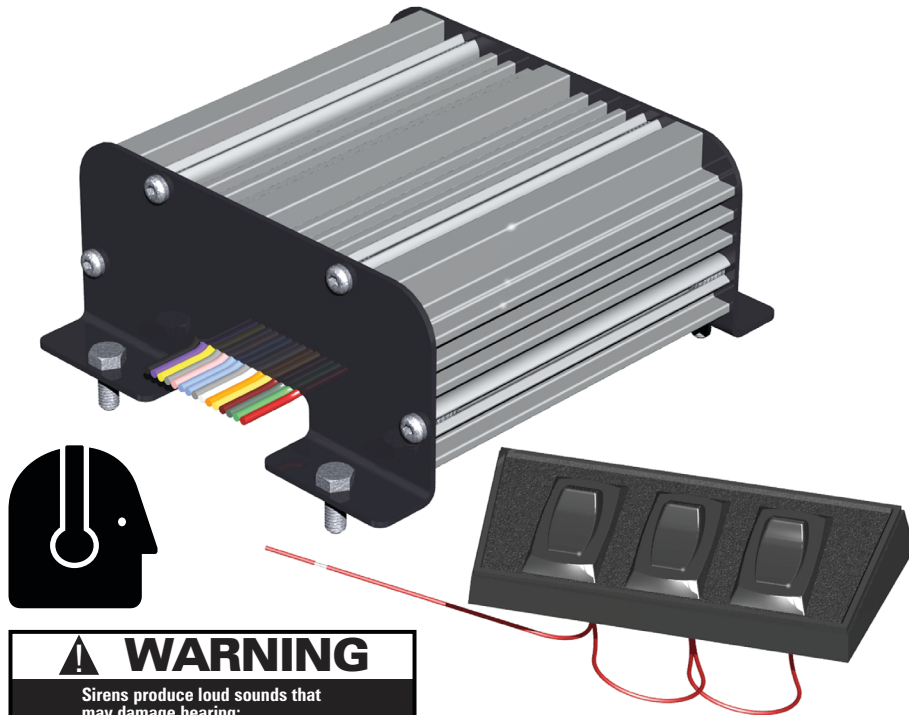# 200 SERIES
Compact Siren

ETSA2ØØR

⚠ WARNING

Sirens produce loud sounds that may damage hearing:
- Roll up windows.
- Wear hearing protection.
- Use only for emergency response.
- Avoid exposure to siren sound outside of vehicle.

Please see reverse for
Technical Specifications

Important Information:

• Warning devices are strictly regulated and governed by Federal, State and Municipal ordinances. These devices shall be used ONLY on approved vehicles. It is the sole responsibility of the user of these devices to ensure compliance.

IMPORTANT NOTICE TO INSTALLER:

Make sure to read and understand all instructions and warnings before proceeding with the installation of this product. Ensure the manual and all warning cards are delivered to the end user of this equipment.

Introduction

The ETSA2ØØR is a Compact Siren Amplifier designed for single 100 Watt speaker or dual 58 Watt use.

The primary operating modes are User Selectable Tone, Yelp, Wail, Piercer, Hi-Lo, Super Hi-Lo, Radio, PA, Horn Override, and a Manual Override are available in all modes.

Sirens provide an essential function of an effective audio / visual warning system. However, sirens are only short range secondary devices. The use of a siren does not insure that all drivers can or will abide by or react to an emergency warning signal, especially at high rates of speeds or long distances. The operator of the vehicle must never take the right of way for granted and it is the operator's responsibility to proceed safely.

The effectiveness of this siren system is highly dependant on the correct mounting and wiring. The installer must read and follow the manufacturer's installation instructions and warnings in the manual. The vehicle operator should verify the siren system is securely fastened to the vehicle and properly functioning.

Effective sirens generate loud sound pressure levels that can potentially cause hearing damage. Installers and those around the vehicle need to be aware of the dangers and wear hearing protection whenever the siren system is operating. Vehicle operators and occupants should assess their exposure to siren noise and determine what steps need to be taken to prevent hearing damage.

The siren system is intended for use by authorized personnel only. It is the user's responsibility to ensure they understand and operate the emergency warning devices in compliance with all applicable city, state, and federal laws and regulations. SoundOff Signal assumes no liability for any loss resulting from the use of the siren system.

Package Contents:
- 1 ea. Amplifier
- 1 ea. Instruction Manual
- 1 ea. Operators Warning Card to remain in vehicle for operator review
- 1 ea. Sound Pressure Warning Label that is to be attached in vehicle and in plain site of operator and occupants of the vehicle
- 1 ea. 3 Switch panel with:
     1-ON/OFF/ON Switch
     2-OFF/MOMENTARY Switch
- 1 ea. Electrical Isolation Hardware Kit

Wire capacity requirements for siren amplifier (incoming power + ground)

0-10 Feet:	14 AWG
10-20 Feet:	12 AWG
20-30 Feet:	10 AWG
30+ Feet:	Consult Factory to determine requirements

IMPORTANT INFORMATION:

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Compact Siren

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TECHNICAL SPECIFICATIONS	
Size Amplifier:	2.3"H x 5.4"W x 4.6"D
Input Voltage:	10 - 30 Vdc (negative ground)
Input Current:	8 Amps @ 13.6 Vdc (100W speaker)
Standby Current:	<1 mA
Audio Frequency:	200Hz - 10 kHz + 3db
Output Power:	100 WATTS RMS MAX. (11 Ohm Speaker Impedance)
Siren Frequency:	675Hz - 1633Hz
High Voltage Protection:	30 Vdc will cause siren output to cease, resume at normal.
Low Voltage Shutdown:	Voltage below 9.0 Volts for 10 seconds or more will cause siren output to cease and will resume when system voltage is above 9.0 Volts
Operating Temperature / Humidity:	-40° F to +110°F temperature, 5-95% Non-condensing humidity
Controls:	Tone, Yelp, Wail, Horn, Manual, Horn Ring, Park Kill, Ignition, PA, Radio Rebroadcast
Boxed Weight	3 Lbs.

INPUT WIRE HARNESS		
WIRE COLOR:	FUNCTION	ACTIVATION METHOD
TAN	Tone 1 Select	Connect to +Vdc
BROWN	Tone 2 Select	Connect to +Vdc
TAN AND BROWN	Tone 3 Select	Connect to +Vdc
RED/BLACK	Manual Tone Select	Connect to +Vdc
RED	Horn Tone Select	Connect to +Vdc
ORANGE/BLACK	Ignition Input	Connect to +Vdc
WHITE/RED	PA Audio through Siren	Connect PTT Switch wire (Grey) to ground (-)
BLUE	Radio Rebroadcast	Connect Grey wire to +Vdc
YELLOW	Park Kill / Tone Disable	Connect to Ground (-)
WHITE	Horn Ring Output	
WHITE/BLACK	Horn Ring Input	Ground Input Signal
VIOLET	Tone / Volume Program	Connect to Ground to change tone / volume

PA VOLUME PROGRAMMING
1. Connect audio source to White/Red wire
2. Connect Grey wire to ground to activate PA
3. Momentarily connect Violet wire to ground to toggle through the available volume settings.
4. The last volume selected will be programmed to be used whenever PA control is selected

RADIO RE-BROADCAST VOLUME PROGRAMMING
5. Connect audio source to Blue wires
6. Connect Grey wire to +V to activate Radio Rebroadcast
7. Momentarily connect Violet wire to ground to toggle through the available volume settings.
8. The last volume selected will be programmed to be used whenever Radio Rebroadcast is selected

HORN RING TONE ACTIVATION:
When Horn Ring is activated, while Tone 1 is activated, the siren will switch to Tone 2 for 5 seconds and then return to Tone 1
When Horn Ring is activated, while Tone 2 is activated, the siren will switch to Tone 1 for 5 seconds and then return to Tone 2
When Horn Ring is activated, while Tone 3 is activated, the siren will switch to Tone 1 for 5 seconds and then return to Tone 3

HANDS FREE OPERATION:
When the Horn Ring is programmed to a warning tone, Hands-free operation is enabled. When the Horn Ring is activated, the tone will sound until the Horn Ring is activated again. Tone1, Tone2, Tone3, PTT, Manual Tone and Radio Rebroadcast will override Hands-free operation.

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TONE SELECT PROGRAMMING

1. Connect the following wires to +Vdc to activate tone that needs to be programmed

WIRE COLOR:	FUNCTION
TAN	Tone 1 Select
BROWN	Tone 2 Select
TAN AND BROWN	Tone 3 Select
RED	Horn Tone Select
WHITE/BLACK	Horn Ring

2. Momentarily connect Violet wire to ground to toggle through available tones
3. The last tone selected will be programmed to be used whenever selected control wires are activated
4. Repeat steps 1-3 for each tone option

NOTE: Manual Function is NOT programmable.

TONE RESET INSTRUCTION:

When toggling through available tones, holding the violet wire to ground for more than two seconds the tone will switch to the default tone.

(See Horn Tone and Warning Tone Table below)

HORN TONE TABLE	
HORN TONE 1	Default
HORN TONE 2	
HORN TONE 3	
HORN TONE 4	

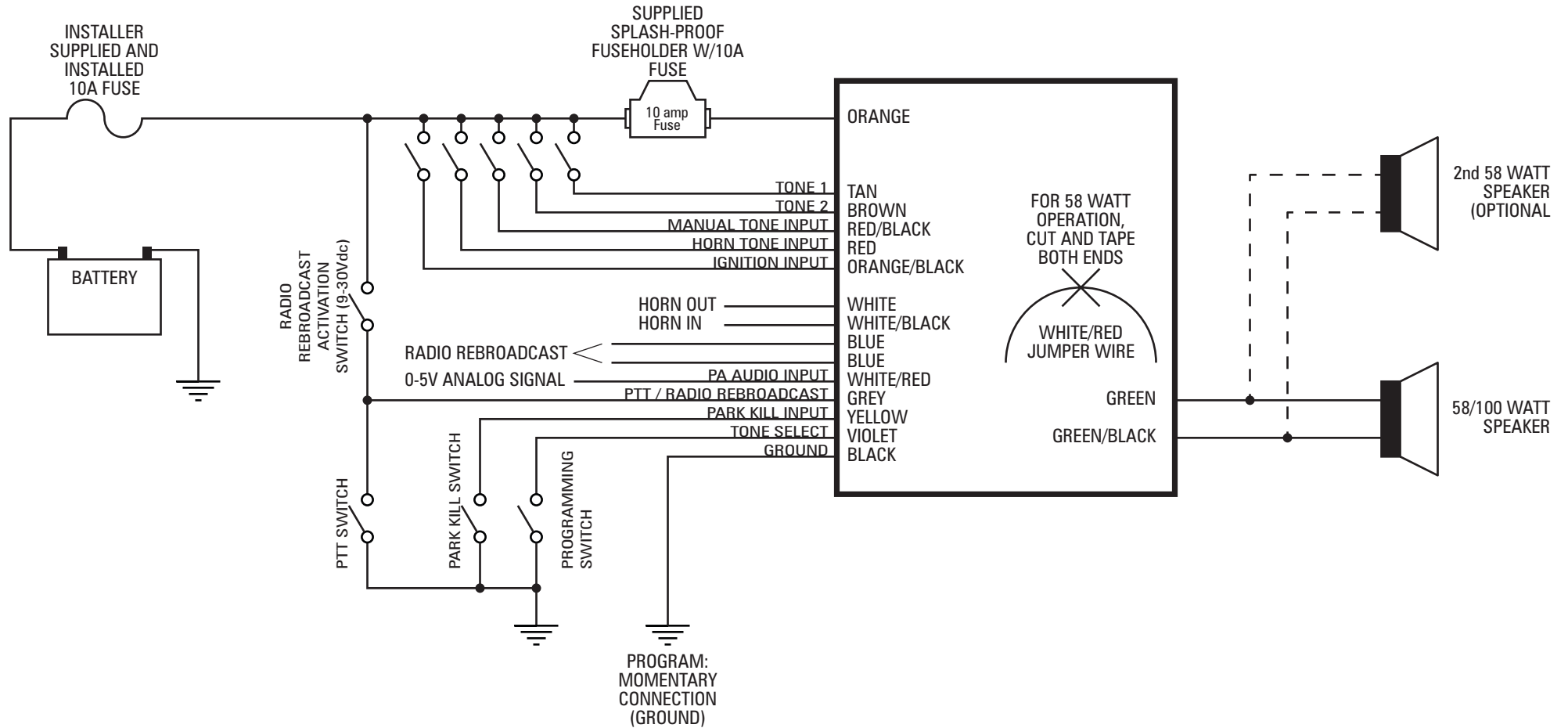| WARNING TONE TABLE	
WAIL	Tone 1 and Horn Ring (default)
YELP	Tone 2 (default)
ALERT A	Tone 3 (default)
PIERCER	
Hi-Lo	
SUPER Hi-Lo	
CYCLE TONE	Plays thru Wail, Yelp, Alert A and Piercer (Tone changes every 5 seconds)

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INSTALLATION:

1. Mount Amplifier Assembly in a protected location, being careful to route wires away from any hot surfaces or areas where the wires may get pinched.

2. Locate Green and Green/Black wires that are on opposite corners of all other input/control wires. These are the outputs to the speaker(s)

3. Connect these 2 wires to the speaker(s) which are installed on the vehicle. The white/red wire jumper will determine if the amplifier is to operate at an output voltage designed to drive a single 100 Watt speaker or a single/dual 58 Watt speaker(s). See electrical schematic on reverse side for more information.

SPEAKER CONFIGURATION	WHITE/RED JUMPER WIRE
SINGLE 100 WATT SPEAKER	DO NOT CUT
SINGLE 58 WATT SPEAKER	Cut and Tape both ends
DUAL 58 WATT SPEAKER	Cut and Tape both ends

4. Connect Black wire to reliable ground. Using wire capacity chart as a guideline to establish wire gauge to use for extending wires.

5. Connect Orange wire to fused constant +Vdc. Using wire capacity chart as a guideline to establish wire gauge to use for extending wires.

6. Connect Orange/Black wire to ignition switch. +Vdc is required on Orange/Black wire for siren to operate.

7. Connect Tone 1, Tone 2, Manual Tone, Horn Tone wires to provided switch panel as needed.

8. Program Tones following instructions found earlier in the manual under Tone Select Programming.

9. Connect Blue wires to radio output if radio rebroadcast feature is required.

10. Connect White/Red wire to PA microphone.

11. Connect PTT / Radio Rebroadcast activation wire and to switch that will supply ground when activated for PA function and +Vdc when activated for Radio Rebroadcast function. A Single Pole Double Throw (SPDT) switch with center OFF position will be required for this.

12. Program Radio Rebroadcast following the Programming instructions found earlier in the manual under Radio Re-broadcast Volume Programming.

13. Program Radio Rebroadcast following the Programming instructions found earlier in the manual under PA Volume Programming.

14. (OPTIONAL) Attach Yellow wire (Park Kill) to a switch that will supply ground whenever the siren is to be disabled.
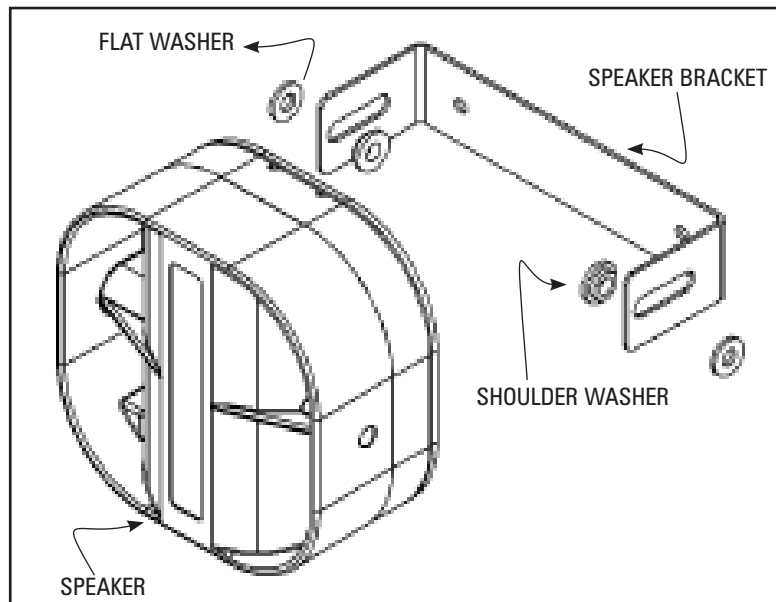
200 SERIES
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ETSA2ØØR

INSTALLER
SUPPLIED AND
INSTALLED
10A FUSE

SUPPLIED
SPLASH-PROOF
FUSEHOLDER W/10A
FUSE

10 amp
Fuse

ORANGE

BATTERY

RADIO
REBROADCAST
ACTIVATION
SWITCH (9-30Vdc)

TONE 1
TONE 2
MANUAL TONE INPUT
HORN TONE INPUT
IGNITION INPUT

TAN
BROWN
RED/BLACK
RED
ORANGE/BLACK

FOR 58 WATT
OPERATION,
CUT AND TAPE
BOTH ENDS

2nd 58 WATT
SPEAKER
(OPTIONAL

HORN OUT
HORN IN

RADIO REBROADCAST
0-5V ANALOG SIGNAL

WHITE
WHITE/BLACK
BLUE
BLUE
WHITE/RED
GREY
YELLOW
VIOLET
BLACK

PA AUDIO INPUT
PTT / RADIO REBROADCAST
PARK KILL INPUT
TONE SELECT
GROUND

WHITE/RED
JUMPER WIRE

GREEN

GREEN/BLACK

58/100 WATT
SPEAKER

PTT SWITCH

PARK KILL SWITCH

PROGRAMMING
SWITCH

PROGRAM:
MOMENTARY
CONNECTION
(GROUND)

ETSA2ØØR 5.13

FLAT WASHER

SPEAKER BRACKET

SHOULDER WASHER

SPEAKER

For 200 Series Sirens the speaker must be electrically isolated from the vehicle's chassis ground.

NOTICE TO INSTALLER:
When installing your speaker, be sure to use the supplied electrical isolation hardware kit as shown left.

1. Use a .375 drill bit to drill a hole in the speaker bracket to allow room for the shoulder washer if needed.

2. Place shoulder washers between the speaker and the speaker bracket

3. Place flat washer on outside of speaker bracket and use the screws supplied with your speaker to screw together.

IMPORTANT INFORMATION:

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