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100/300 SERIES SIRENS

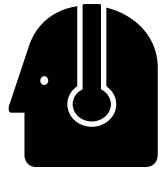
ETSA100E - ETSA300MF

WARNING: 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.

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



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 ETSA100E and ETSA300MF Multi Function Siren Amplifier are premium 200W units designed for single or dual 100W speaker use. The sirens comes standard with a noise-cancelling microphone for PA use. The amplifier box contains a single amplifier capable of supplying sound to either 1 - 100 Watt or 2 - 100 Watt speakers. The ETSA300MF also includes a 4 position slide switch and 4 independently controlled accessory switches each capable of supplying 20 amps.

The primary operating modes are Piercer, Yelp, Wail, Hi-Lo, and Super Hi-Lo, Manual, and Radio. A Noise Canceling PA Override, a push-button Horn Override, and a push-button Manual Override are available in all modes. All tones except wail and yelp for California Title 13 compliance may be disabled by removing a jumper located on the PCB.

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 this warning device.



ETSA300MF SHOWN

Package Contents:

- 1ea. Amplifier Box with Microphone
- 1ea. Microphone Bracket w/ mounting hardware
- 2ea. Amplifier Wire Harnesses with Connectors (1-12 Pin and 1-4 Pin)
- 1ea. Instruction Manual.
- 1ea. Operators warning card to remain in vehicle for operator review
- 1ea. Sound Pressure warning label that is to be attached in vehicle and in plain site of operator and occupants of the vehicle

Wire capacity requirements for siren amplifier

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



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Connecting the Wires:

Black Wires (Ground)

1. Connect to reliable ground
2. To minimize field service issues, it is recommended that the ground wires be connected directly to the ground terminal of the battery

Red Wires (Power Input)

1. Connect to a reliable +12v power source
2. The siren comes equipped with 2 - 15 Amp AGC inline fuses. If these fuses are cut off, the installer must replace with same type / rating of fuse either AGC or ATO

Orange and Orange / Black (Speaker #1 output)

1. Route wires to the 1st speaker
2. Connect the Orange wire to 1 of the speaker input wires
3. Connect the Orange / Black wire to the other speaker input wire

Green and Green / Black (Speaker #2 output)

1. Route wires to the 2nd speaker (if used)
2. Connect the Green wire to the speaker positive input wire
3. Connect the Green / Black wire to the speaker negative input wire
4. If a second speaker will not be used, cut the wires close to the connector and tape with electrical tape

WARNING: DO NOT ATTEMPT TO CONNECT 58 WATT SPEAKER TO THE OUTPUT OF THE AMPLIFIER. DOING SO WILL CAUSE PERMANENT DAMAGE TO SPEAKER AND / OR AMPLIFIER

Blue Wires (Radio Re-broadcast)

1. Locate the 2 wires that connect the external speaker to the 2 way radio
2. Tap one of the blue wires into either of the external speaker wires
3. Tap the other blue wire into the other external speaker wire

Grey Wire (Backlighting)

1. To have backlighting whenever vehicle running: Connect Grey wire to Ignition Run wire
2. To have backlighting only when the headlights are ON: Connect Grey wire to Marker light wire

Yellow Wire (Park Kill)

1. Locate the Neutral safety switch and tap into this wire to disable the siren when the vehicle is parked

White / Black and White Wires (Horn Ring)

1. Locate the wire that provides power to the Horn
2. Cut this wire and connect the White/Black wire to the wire that returns to the horn Relay
3. Connect the white wire to the wire that returns back to the horn.

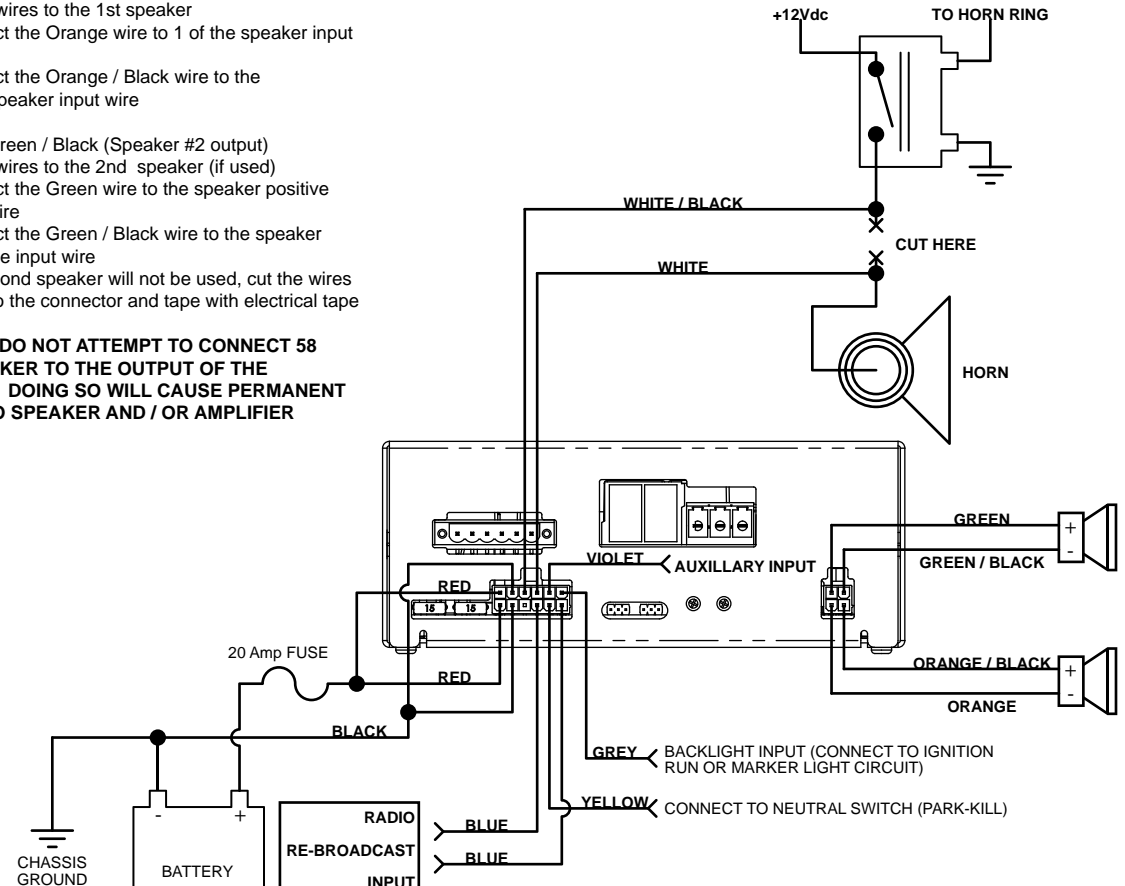
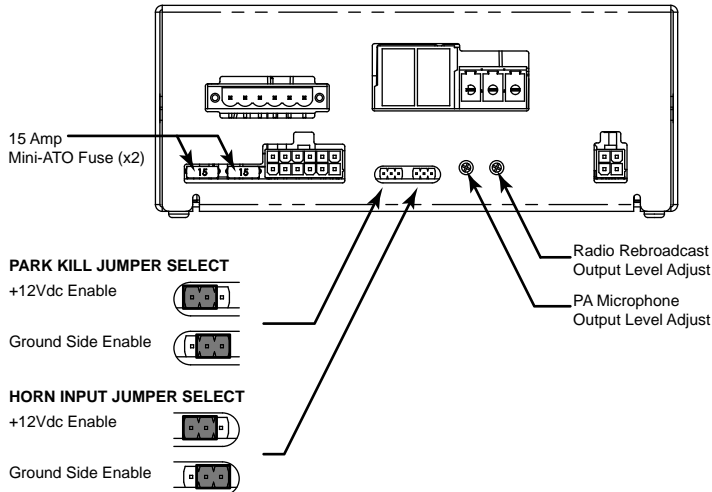
Setting up the configuration jumpers

Park Kill Polarity Setup

- +12Vdc Enable:** Amplifier will turn OFF when +12v is applied to the Park Kill wire
- Ground Enable:** Amplifier will turn OFF when a Ground is applied to the Park Kill wire

Horn Input Setup:

- +12Vdc Enable:** Horn Ring input is active when +12v is applied to the Park Kill wire
- Ground Enable:** Horn Ring input is active when a Ground is applied to the Park Kill wire
- Tone Disable Setup:** Remove cover and locate JP1
- Jumper Removed:** Only Wail and Yelp tones will function for CA Title 13 compliance
- Jumper Installed:** All tones will function when selected





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Microphone Bracket Installation:



A metal clip is provided for mounting the microphone. Choose a location convenient to the operator and away from any air bag deployment areas. Using the mounting clip as a template, mark the two holes to be drilled. Using a 1/8" drill bit, drill the two mounting holes. Install the two #6 screws provided with the bracket.

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Lighting Control Terminals (ETSA300MF):

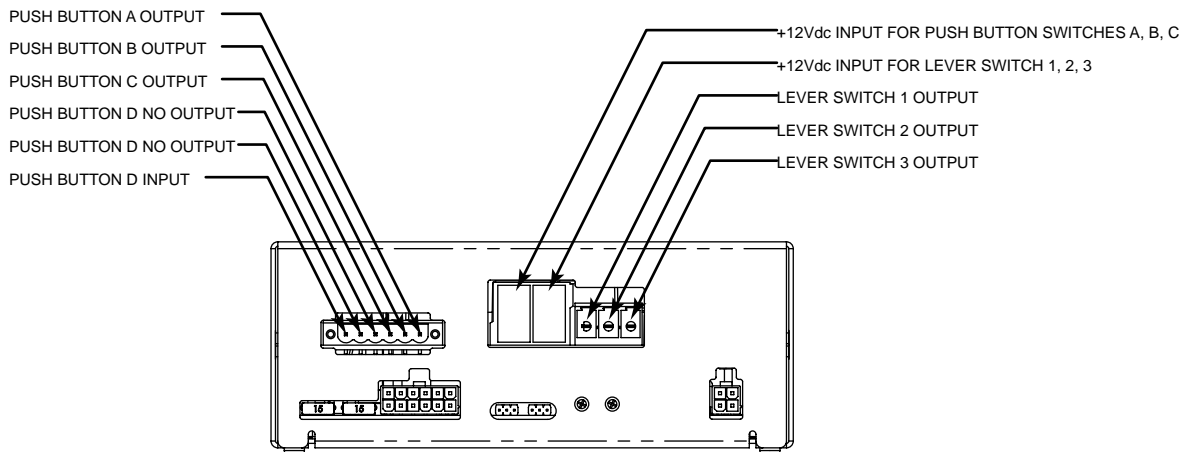
NOTE:

OUTPUT A, B, C, and D ARE RATED FOR 15 AMPS AND EACH OUTPUT MUST BE FUSED WITH A MAXIMUM OF A 15 AMP ATO TYPE FUSE TO PROTECT FROM OVERLOADS / SHORT CIRCUITS

OUTPUT 1, 2, 3 ARE RATED FOR 30 AMPS AND EACH OUTPUT MUST BE FUSED WITH A MAXIMUM OF A 30 AMP ATO TYPE FUSE TO PROTECT FROM OVERLOADS / SHORT CIRCUITS

THE 2 INPUTS ARE RATED AT 60 AMPS AND EACH INPUT MUST BE FUSED WITH A MAXIMUM OF A 60 AMP FUSE TO PROTECT FROM OVERLOADS / SHORT CIRCUITS

CAUTION: DO NOT USE FUSIBLE LINK, AUTOMATICALLY RESETTABLE FUSE, OR CIRCUIT BREAKER.



Operation

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Power ON/OFF

OFF position: All power from the siren and all functions will be inoperable
 ON position: All functions of the siren will be function when selected

MAN and AIR HORN BUTTONS

MAN button: Depress button to momentarily activate wail tone. If wail tone is already selected, the amplifier will produce the Yelp tone while the MAN button is depressed
 HORN button: Depress button to momentarily activate the Air Horn tone.



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DIAGNOSTIC INDICATORS

Condition	LED Indication
Normal Operation	ON whenever siren is active (tone, radio, or PA mode)
Shorted Output	Flashing Indicator (500mS ON, 500mS OFF) whenever siren is active
Over Voltage	3 fast flashes (200mS ON, 200mS OFF) followed by 2 second delay
Under Voltage	2 fast flashes (200mS ON, 200mS OFF) followed by 2 second delay
No Output	Indicator is OFF whenever siren is active (tone, radio, or PA mode)
Over Temperature	5 fast flashes (200mS ON, 200mS OFF) followed by 2 second delay

The ETSA300MF has custom programmable switches.

To Program Slide Switch:

1. Press Aux Button #1 and #4 Simultaneously for 2 seconds
2. Speaker 1 LED should flash to indicate programming mode is entered
3. Press the Following Auxillary Button 1 time to program desired configuration:

Aux Button	Switch Position Relays	Output
2	1	1
	2	1, 2
	3	1, 2, 3
3	1	1
	2	2
	3	3
4	1	1
	2	2
	3	1, 2, 3

To Program Aux Button #4:

4. Press Aux Button #1 and #3 Simultaneously for 2 seconds
5. Speaker 2 LED should flash to indicate programming mode is entered
6. Press the Following Auxillary Button 1 time to program desired configuration:

Aux Button	Function
2	Switch 4 stays active until user presses switch to turn OFF
3	Gun Lock Timer. Switch 4 will stay active for 8 seconds after user presses switch, then turns OFF

SPECIFICATIONS

Input Voltage	10 - 16 VDC (negative ground)
Input Current	16 Amps @ 13.6 VDC (dual 100W speakers)
Standby Current	Less than 150 mA
Audio Frequency	200Hz - 10 kHz + 3db
Output Power	100 WATTS RMS MAX. (11 Ohm Speaker Impedance) 200 WATTS RMS MAX. (11 Ohm Speaker Impedance x 2)
Siren Frequency	675Hz - 1633Hz
High Voltage Protection	15.5 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	-15° F to +110°F temperature, 5-95% Non-condensing humidity
Controls	7-position rotary switch (Piercer, Yelp, Wail, Hi-Lo, Super Hi-Lo, Manual, PA, Radio) Momentary push-button Horn switch Momentary push-button Manual switch Auxiliary input connection for remote Manual or Hands Free operation -jumper programmable for positive or negative horn Park Kill input connection -jumper programmable for positive or negative activation Tone Disable for California Title 13 Compliance
Diagnostic Indicators	Two LED indicators provide diagnostic feedback, one for each speaker.
Connections	Detachable, 12-pin, positive locking connector with pigtail leads for Amplifier. Detachable 3-pin positive locking connector with pigtail leads
Size	Amplifier: 2-1/2" High, 7" Wide, 7-3/8" Deep (plus 3/4" flange on each side)
Boxed Weight	8.3 lbs.

REPLACEMENT PARTS

ITEM	QUANTITY	SOUNDOFF SIGNAL P/N
Microphone	1	TBD
12 Pin Harness	1	TBD
4 Pin Harness	1	TBD
Microphone Bracket and Hardware	1	TBD
Relay PCB (ETSA300MF)	1	TBD

WARRANTY

SoundOff Signal warrants the ETSA100E and the ETSA300MF Sirens for one (1) year from the date of purchase to the original purchaser against any manufacturing defects or workmanship. This warranty is a 100% replacement value warranty. It applies only to units installed according to manufacturer's installation instructions and operated within the units specifications. Warranty is void if the unit was installed incorrectly or maliciously damaged. All warranty claims must be accompanied by a dated proof of purchase.

SoundOff Signal retains the right to be the sole mediator of what constitutes defects in performance or manufacturing.