

# INSTALLATION INSTRUCTIONS TM100 TRAFFIC CONTROLLER



**SoundOff**  
**Signal** ®



**IMPORTANT NOTICE TO INSTALLER:**

- Make sure to read and understand all instructions and warnings before proceeding with the installation of this product. Ensure that the manual and any warning cards are delivered to the end user of this equipment. Proper installation of the lightbar requires the installer to have a thorough knowledge of automotive electronics, systems, and procedures.
- Lightbars provide an essential function of an effective visual warning system. The use of the lightbar 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 the lightbar is highly dependent 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 daily that the lightbar is securely fastened to the vehicle and properly functioning before operating vehicle.
- The lightbar 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 the applicable city, state and federal laws and regulations. SoundOff Signal assumes no liability for any loss resulting from the use of this warning device.

**⚠ WARNING**

- This product contains high intensity LED devices. To prevent eye damage DO NOT stare into the light beam at close range.

**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.
- DO NOT connect this device to a strobe power supply. This product is self-contained and does not require an external power supply.

**⚠ WARNING**

- Route wires only in locations that are not subjected to potential wear. Make sure to avoid routing wires in the deployment area of your airbag. Refer to your vehicle's owner's manual for airbag deployment zone.
- All customer supplied power wires connecting to the positive (+) or negative (-) battery terminal or local chassis ground (-) must be sized to supply at least 125% of the maximum current and properly fused at the power source with appropriately rated fuse.

**NOTICE:**

- Installers and users must comply with all applicable federal, state and local laws regarding use and installation of warning devices.
- Improper use or installation may void warranty coverage.
- To review our Limited Warranty Statement & Return Policy for this or any SoundOff Signal product, visit our website at [www.soundoffsignal.com/warranty](http://www.soundoffsignal.com/warranty).
- If you have questions regarding this product, contact Technical Services, Monday - Friday, 8 a.m. to 5 p.m. ET at 1.800.338.7337 (press #4).
- Questions or comments that do not require immediate attention may be emailed to [techgroup@soundoffsignal.com](mailto:techgroup@soundoffsignal.com).

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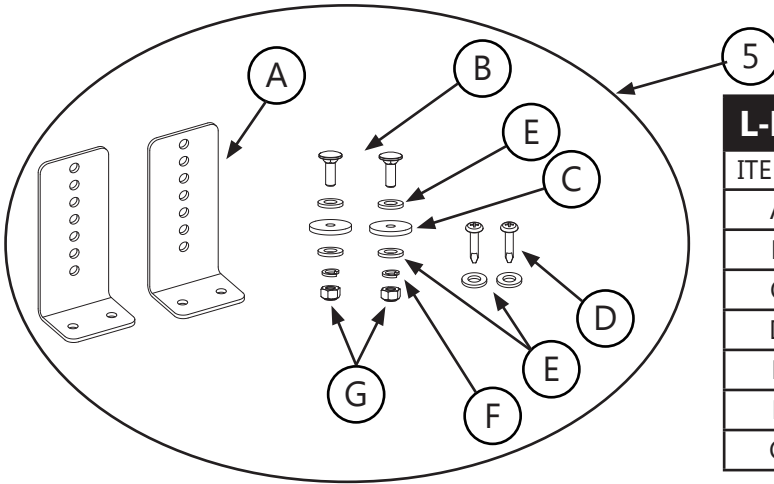
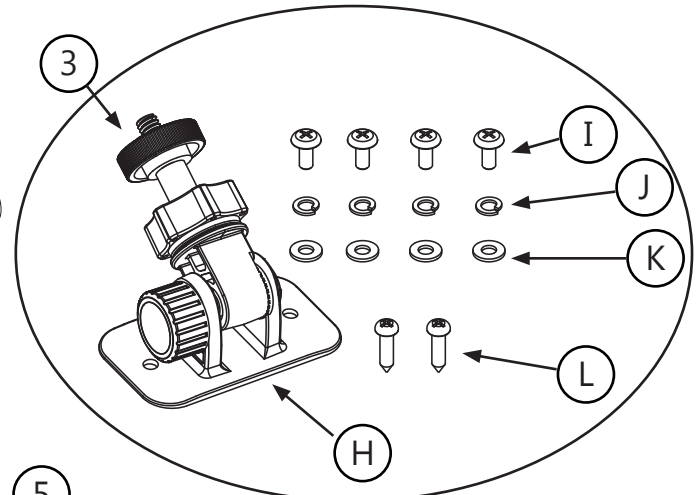
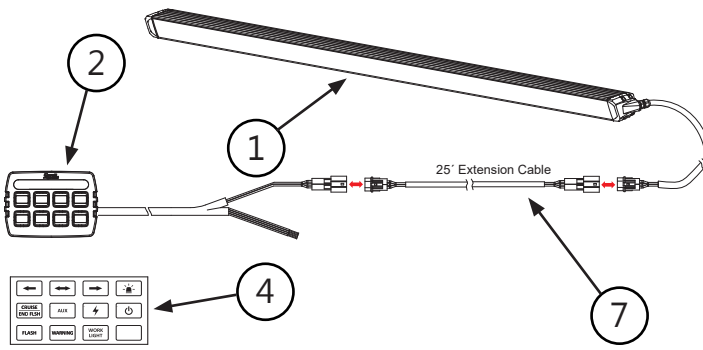
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4	BUTTON DECALS	1
5	TRAFFIC CONTROLLER MOUNTING KIT	1
6	INSTRUCTION SHEET	1
7	EXTENSION CABLE	1

ADJUSTABLE CONTROLLER / AMPS MOUNTING KIT CONTENTS		
ITEM #	COMPONENT	QTY
H	ADJUSTABLE MOUNT	1
I	1/2" 8-32 SCREW	4
J	SPRING WASHER	4
K	FLAT WASHER	4
L	SELF-DRILLING SCREW (#4 X 15MM)	2

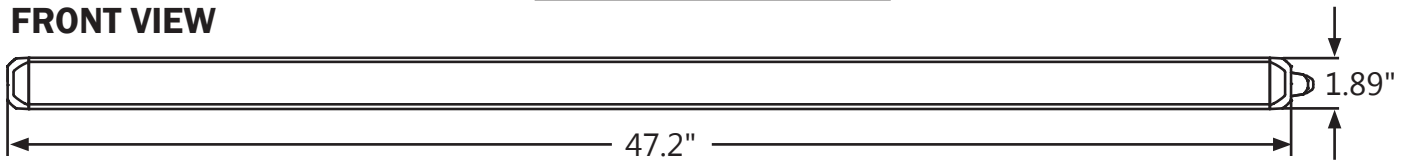


L-BRACKET MOUNTING KIT CONTENTS		
ITEM #	COMPONENT	QTY
A	L - BRACKET	2
B	CARRIAGE BOLT	2
C	FOAM PAD	2
D	SELF-DRILLING SCREW (#12 X 1")	4
E	FLAT WASHER	8
F	SPRING WASHER	2
G	HEX NUT	2

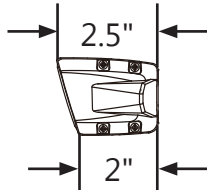
TECHNICAL SPECIFICATIONS	
INPUT VOLTAGE RANGE	12-24Vdc
OPERATING TEMPERATURE	-40°C to +65°C (-40°F to +149°F)
ELECTRICAL PROTECTION	REVERSE POLARITY TRANSIENT VOLTAGE
MATERIAL	MAIN HOUSING: ALUMINUM ALLOY POLYCARBONATE OUTER LENSES
OVERALL DIMENSIONS	47.2" L X 1.89"H X 2.5 D
STANDBY CURRENT(Per Module)	IGNITION ON: 0.08 Amps IGNITION OFF: <0.04 Amps
CURRENT DRAW AVG / MAX	1.15 Amps / 2.3 Amps @ 12.8 Vdc .80 Amps / 1.2 Amps @ 27.6 Vdc
CERTIFICATIONS	SAE J595 CLASS 1 / CA13 CLASS B

## PRODUCT VIEWS

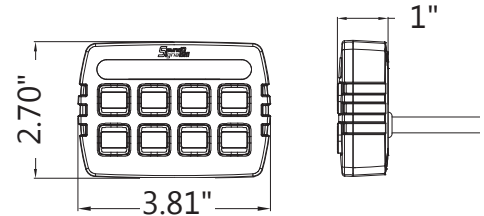
### FRONT VIEW



### SIDE VIEW



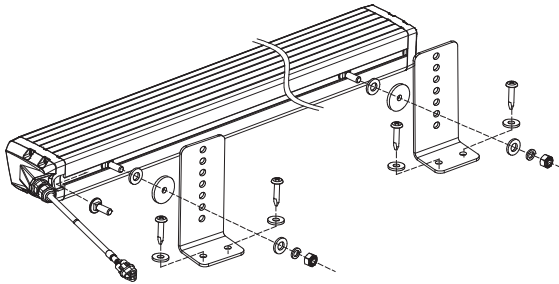
### CONTROLLER VIEWS



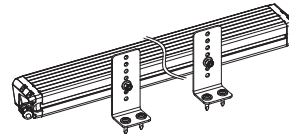
## INSTALLATION

### L-Bracket Mount for Traffic Controller

1. Determine a desired elevation for your unit that ensures visibility and clearance.
2. Assemble the bracket onto the stick and to the mounting surface as shown in the graph below.
3. Use at least two brackets for each stick and make sure they are spaced evenly.
4. Set torque force @  $40 \pm 4$  lb-in for all Hex Nuts.

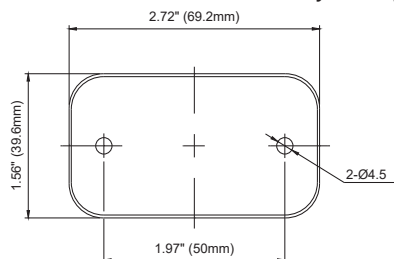
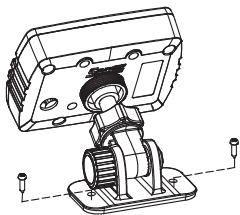


Completion drawing



### Adjustable Bracket for Controller

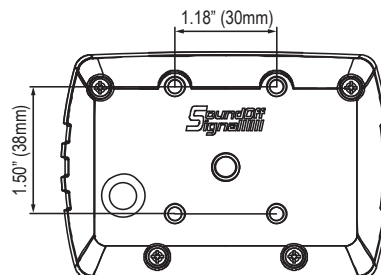
1. Choose a desired place for installation.
2. Use the base as the template to locate and mark two mounting holes on the mounting surface.
3. Secure the bracket with the two  $\varnothing 4$  self-drilling screws supplied.
4. Assemble the controller with the bracket by tightening the knurled knob firmly.
5. Adjust the bracket to an angle that is most convenient to your operation.



### AMPS MOUNTING for Controller

The control panel can also be mounted by using a standard AMPS mount, using the parameters below:

1. 30 x 38 mm (1.20" x 1.49") standard hole pattern, centered on rear housing
2. 4 x 8-32 insert molded nuts (Included)
3. Dimension for the gap between AMPS hole center to edge of cable exit 7.5mm (0.30")
4. Max depth for 4 AMPS holes are 8.0mm (0.315")



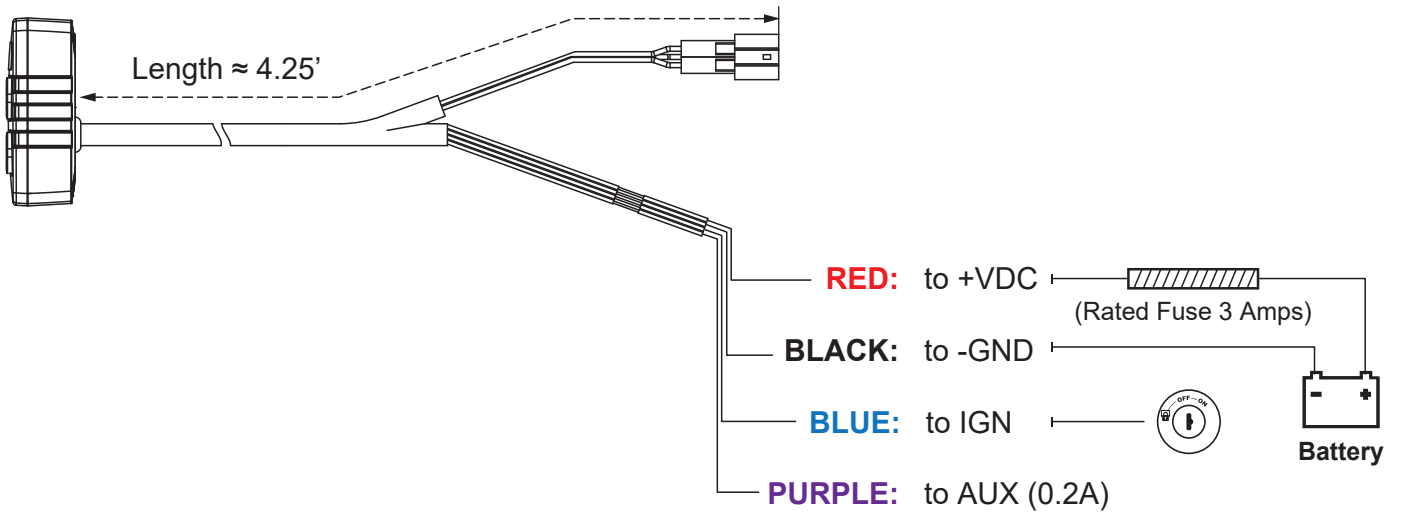
## INSTALLATION CONTINUED

### DECALS FOR CONTROLLER BUTTONS

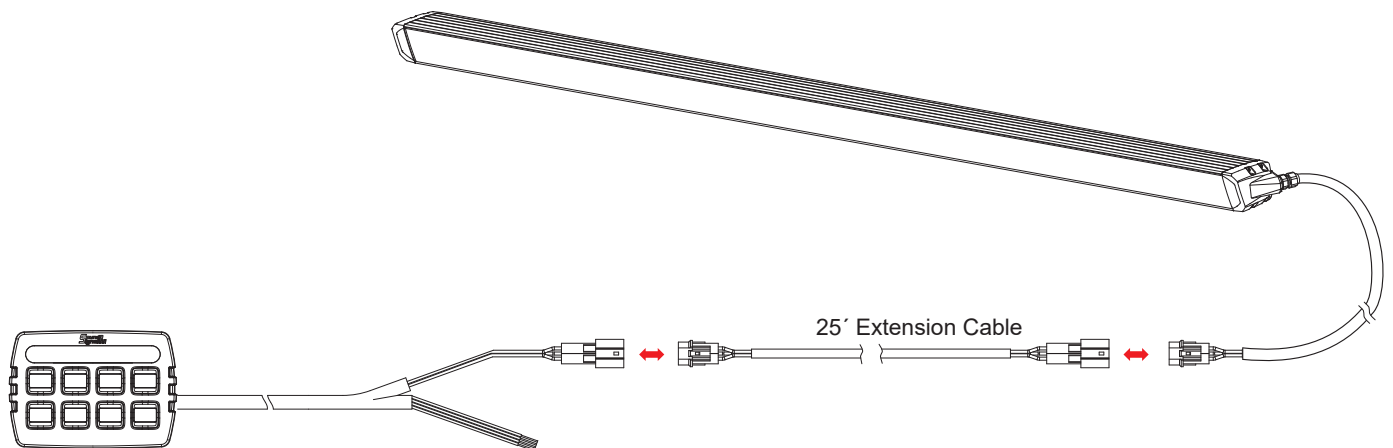
1. The controller is shipped without any button decals installed.
2. After assembling the controller and the mounting bracket, apply a desired decal above each button to name its operation.



## ELECTRICAL INSTALLATION



## COMPLETE TRAFFIC CONTROLLER OVERVIEW



## ELECTRICAL INSTALLATION CONTINUED

**POWER WIRES:**

1. Connect RED wire to the positive (+) battery terminal. Fuse the wire independently @ 3 Amps (user-supplied). DO NOT install the fuse until the wiring for entire system has been completed.
2. Connect BLACK wire to vehicle's chassis ground (typically adjacent to the battery).

**IGNITION ACTIVATION (IGN) INPUT:**

1. Connect BLUE wire to a positive circuit controlled by the vehicle ignition switch to enable the controller.
2. The green back-light will be turned on while it is activated.
3. DO NOT directly connect this BLUE wire to the battery as this may drain battery.

**AUXILIARY (AUX) OUTPUT**

1. Connect PURPLE wire to auxiliary devices powered up to 0.2 Amps max.
2. Wire to a relay (user-supplied) to activate auxiliary devices with higher current requirements.
3. After properly wired & fused, use Button B6 on the controller to activate or deactivate this auxiliary device.
4. If PURPLE wire is not used, make sure to insulate from moisture, abrasion and corrosion.

## BUTTON FUNCTIONS

**B1 - B4 TRAFFIC ARROW / WARNING**

Press once to activate / deactivate the Traffic Controller in:

- B1: Left Arrow**
- B2: Center-Out Arrow**
- B3: Right Arrow**
- B4: Warning Mode (Flash Pattern)**
- B5: CRUISE / END-FLASHER MODE**  
Press B5 once to activate / deactivate Cruise or End-Flasher mode. (See Flash Pattern Chart)

**B6: AUXILIARY**

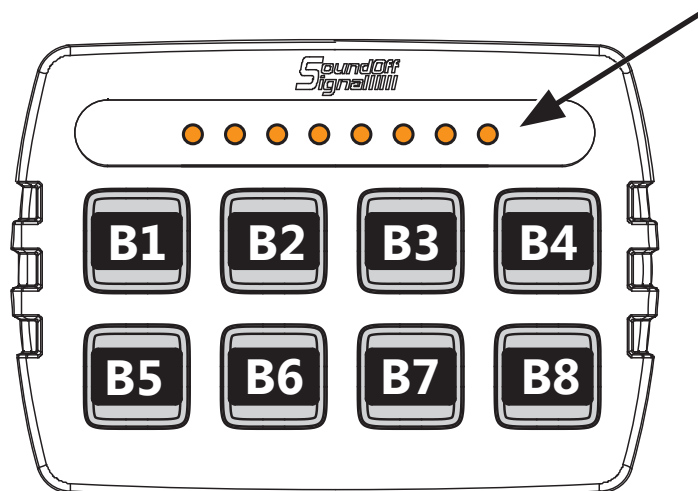
Press B6 once to activate / deactivate PURPLE wire (AUX)

**B7: FLASH PATTERN SELECTION**

While one of B1~B5 has been activated, press B7 to cycle through its available flash patterns. (Refer to the Flash Pattern Chart)

**B8: STANDBY**

Press B8 once to turn OFF all activated buttons.



**SIGNAL DISPLAY / LED INDICATOR:**

Display the flash pattern or traffic arrow direction for the current operation. The LEDs may not be synchronized with the actual pattern on the Traffic Controller.

## ELECTRICAL INSTALLATION CONTINUED

### FLASH PATTERN CHART:

FLASH PATTERNS		
TRAFFIC ARROW PATTERNS - (LEFT, CENTER, RIGHT) - (BUTTONS B1-B3)		
1	<b>Sweep Single Head + End x 2 (DEFAULT)</b>	
2	Fast Single Head + Ends x2	
3	Solid End x2	
4	Fast Solid End x2	
5	Sweep Double Head	
6	Fast Sweep Double Head	
7	Grow / Fade	
8	Fast Grow / Fade	
WARNING PATTERNS - (BUTTON B4)		
1	<b>Solid</b>	<b>Double [SAE] (DEFAULT)</b>
2	Left-Right	Double [SAE]
3	Outside-In	Double [SAE]
4	Every-other	Double [SAE]
5	Left-Right	Single [SAE, CA13]
6	Outside-In	Single [SAE, CA13]
7	Every-other	Single [SAE, CA13]
CRUISE / END-FLASHER PATTERNS - (BUTTON B5)		
1	<b>Steady Cruise</b>	
2	Steady Cruise with Ping Pong	
3	End Double (Simultaneous)	
4	End Double (Alternating)	

**NOTE:** Bold font indicate default settings.

### SERVICE PART NUMBERS:

**PTMTCHN01** - REPLACEMENT EXTENSION HARNESS 25'

## WARRANTY & RETURN GOODS PROCEDURE



**CLEANING & CARE OF YOUR LIGHTBAR:**

Keeping the lenses clean and scratch free will optimize the performance of the lightbar. The exterior of the lightbar including lenses should be cleaned with mild soapy water and a soft cotton cloth to remove dirt, grime and insects. Never use window cleaners or harsh chemicals on the lenses; this may cause failure of the lenses or reduce clarity resulting in the reduction of light output.

**MOUNTING INTEGRITY:**

A review of bolt/hardware/mounting bracket integrity should be performed at the beginning and end of each shift.

**WARNING MESSAGES - PLEASE READ:** \_\_\_\_\_

**WARNING** - DRILLING ANY HOLES INTO THE LIGHTBAR IS NOT RECOMMENDED! THE RISK OF DAMAGING INTERNAL COMPONENTS AND THE RESULTING FAILURE OF THE LIGHTBAR WILL VOID ANY WARRANTY OF THIS PRODUCT.

**WARNING** - CARE MUST BE TAKEN WHEN DRILLING THROUGH THE ROOF OF THE VEHICLE NOT TO DRILL INTO ANY EXISTING WIRING AND NOT TO DRILL THROUGH THE HEADLINER OR SUPPORT MEMBERS OF THE VEHICLE. CHECK BOTH SIDES OF THE MOUNTING SERVICE PRIOR TO DRILLING. DE-BURR ANY HOLES AND REMOVE ANY METAL SHARDS OR REMNANTS. INSTALL GROMMETS INTO ALL WIRE PASSAGE HOLES.

**WARNING** - ROUTE WIRES ONLY IN LOCATIONS THAT ARE NOT SUBJECTED TO POTENTIAL WEAR. MAKE SURE TO AVOID ROUTING WIRES IN THE DEPLOYMENT AREA OF YOUR AIR BAG. REFER TO YOUR VEHICLE OWNER'S MANUAL FOR AIR BAG DEPLOYMENT ZONES.

**WARNING** - ALL CUSTOMER SUPPLIED POWER WIRES CONNECTING TO THE POSITIVE (+) OR NEGATIVE (-) BATTERY TERMINAL OR LOCAL CHASSIS GROUND (-) MUST BE SIZED TO SUPPLY AT LEAST 125% OF THE MAXIMUM CURRENT AND PROPERLY FUSED AT THE POWER SOURCE WITH APPROPRIATELY RATED FUSE.

**IMPORTANT:** When passing cables through fire wall or other sheet metal, insert grommet to protect the cable!

**WARRANTY RETURN PROCESS:**

Please scan QR code or visit <https://soundoffsignal.com/support-page/returns/>.

Alternatively contact your SoundOff Signal Sales Representative, Customer Services staff or our Technical Department (800.338.7337) for a RMA #, Return Merchandise Authorization Number.

The following information is required for issuance of the RMA #:

- Reason for returning the product\*
- Address where replacement product is to be shipped\*
- Telephone number where you may be reached\*
- SoundOff Signal invoice number on which product was purchased\*\*
- SoundOff Signal part number and serial number\*\*
- E-mail address where RMA # should be e-mailed\*\*
- Fax number where RMA # should be faxed\*\*

\* RMA # will not be given without this information.

\*\* If available, please provide this information.

SoundOff Signal will NOT accept returns without an RMA #. Each RMA # is good for only one (1) return and will expire (30) days after the date it was issued. Products must be shipped back to SoundOff Signal and the RMA # clearly marked on the outside of the package near the shipping label. Please use the following address on your shipping label:

SoundOff Signal  
ATTN: RMA # / Technical Services  
3900 Central Parkway  
Hudsonville, MI 49426

**WARRANTY EXCLUSIONS:**

Shipping & Handling, labor and service fees are non-refundable. SoundOff Signal is not liable for any damage due to installation or personal injury as a result of using SoundOff Signal product.

**WARRANTY FORFEITURE:**

Warranty will not be granted if the Warranty Return Policy & Procedure rules are not strictly followed. Physical damage resulting from customer abuse will void warranty. Warranty will also be voided if any SoundOff Signal and/or manufacturer serial tags, product stickers, seals, or the like, are removed, altered or tampered with. Returned product that is damaged by shipping via the RMA # procedure is not the responsibility of SoundOff Signal.

Document effective date on cover and below supersedes previously dated policies and statements.

There are no other warranties, expressed or implied, including, but not limited to, any implied merchantability or fitness for a particular use. SoundOff Signal reserves the right to modify this warranty statement at any time; or to discontinue, modify, or upgrade any products of its manufacture with design improvements without prior notice.