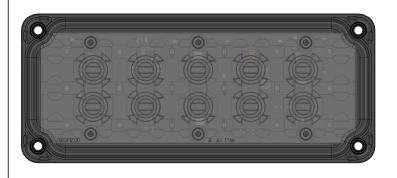
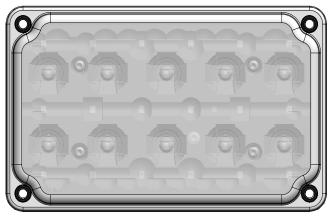
nFUSE® P BACKUP LIGHT EPSSCOJ(xx)-(x) - 7X3 P Backup - Screw Mount & Stud Mount EPSSBOJX(x)-(x) - 6X4 P Backup - Screw Mount & Stud Mount



7x3 Backup Light Shown



6x4 Backup Light Shown

Protected by U.S. Patent 10,703,260 and Patents Pending https://soundoffsignal.com/legal/patent-notification/



- HIGH CURRENT interconnects must be properly terminated. Poor crimp quality can cause heat build-up and fire. Follow the crimp connector manufacturer instructions.
- DO NOT install this product or route any wires in the Air Bag Deployment Zone. Refer to vehicle Owner's Manual for deployment zones.
- Do NOT use system to disconnect headlights, brake lights or other safety equipment.
- Unit may become hot to touch during normal operation.
- Failure to properly install connectors, fuses or wiring may cause vehicle failure or fire.
- Installation must only be performed by trained technician. Installer must determine vehicle wiring configuration and proper integration of system.
- Use proper wire gauge. All power wires connecting to positive (+) or negative (-) battery terminal or local chassis ground (-) must be sized to supply at least 125% of max. current and properly fused at power source.
- Install protective grommets when routing wire through firewall or metal.

DIMENSIONS
WARNING LIGHT OPTIONS 2
TECHNICAL SPECIFICATIONS 3
WIRING INFORMATION 4-5
STUD MOUNT INSTALLATION 6
SCREW MOUNT INSTALLATION 7
RETENTION CLIP INSTRUCTIONS 8
NOTES
WARRANTY

WARNING

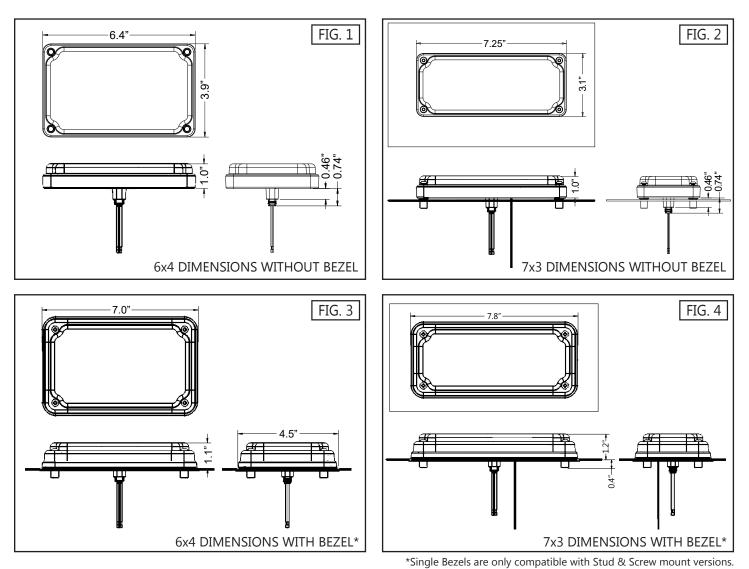
ROUTE WIRES ONLY IN LOCATIONS THAT ARE NOT SUBJECTED TO POTENTIAL WEAR. MAKE SURE TO AVOID ROUTING WIRES IN THE DEPLOYMENT AREA OF YOUR AIR BAG. REFER TO YOUR VEHICLE'S OWNER'S MANUAL FOR AIRBAG DEPLOYMENT ZONES.



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/tech-services/returns/. 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 techservices@soundoffsignal.com.*

DIMENSIONS & BEZEL INFORMATION:



BACKUP LIGHT WITH WARNING OPTIONS:

7x3 & 6x4 LED OPTIONS

Single Color

7x3 & 6x4 LED COLOR OPTIONS • White

- Red
- Amber
- Blue

7x3 & 6x4 LENS COLOR OPTIONS Clear

- Red
- Amber • Blue

7x3 & 6x4 CERTIFICATIONS

- SAEJ595 • NFPA 1901-2009
- California Title 13 • KKK-A-1822 (July 2021)

Green

Green

• FMVSS108 (Backup light Only)

7x3 & 6x4 MOUNTING OPTIONS

- Stud Mount
- Screw Mount

7x3 & 6x4 AVAILABLE FLASH PATTERNS

- Double*
- Double 2*
- Inter-cycle
- Power Pulse*
- Q-switch
- Quad*
- Quad 2*
- Quad Pulse-pop*

PART NUMBERS (UNCONFIGURED)

- 7x3 EPSSC0J XX-X**
- 6x4 EPSSB0JX X-X**

**See SoundOff Signal configurator or sales representative for specific color, lens, and mounting options.

*Certified Flash Patterns

- Quint*
- Random 1

• Warp

- Random 2
- Road Runner*
- Steady-Burn Driver Title 13 Quad
- Steady-Burn/Road Runner

7X3 & 6X4 P SERIES BACKUP LIGHT W/ WARNING TECHNICAL SPECIFICATIONS				
	Input Voltage: 9-32Vdc			2Vdc
	BACKUP LIGHT WITH WARNING CURRENT CONSUMPTION (Amps)			
	12.8Vdc 25.6Vdc			
	Peak	Average	Peak	Average
Red	1.45	0.73	0.73	0.36
Amber, Blue, Green, or White 1.66 0.83 0.83 0.42				
	1.66	0.83	0.83	0.42

7X3 & 6X4 P SERIES BACKUP LIGHT TECHNICAL SPECIFICATIONS					
	Input Voltage:	9-32Vdc			
	BACKUP LIGHT CURRENT CONSUMPTION (Amps)				
12.8Vdc 25.6Vdc					
	Peak	Peak			
Red	0.55	0.28			
Red Amber, Blue, Green, or White	0.55	0.28			

WIRING AND TABLE INFORMATION:

OVER-VOLTAGE PROTECTION

When an over-voltage condition is detected, the module will flash an overvoltage warning pattern of 50mS ON/950mS OFF to alert of the overvoltage condition and protect the electronics from damage due to heat/voltage.

THERMAL COMPENSATION PROTECTION

The LED module is designed to provide maximum power output while providing protection to the electronic components by reducing the output power at extreme temperatures.

FUNCTION TABLE					
	WIRE		LIGHT		
RED	ORANGE	WHITE	BACKUP LIGHT WITH WARNING	BACKUP LIGHT ONLY	
+9-32V	-	-	FLASH WARNING COLOR	FMVSS SINGLE LAMP SYSTEM BACKUP	
-	+9-32V	-	STEADY BACKUP HIGH POWER	FMVSS DUAL LAMP SYSTEM BACKUP	
+9-32V	+9-32V	-	STEADY BACKUP HIGH POWER	FMVSS SINGLE LAMP SYSTEM BACKUP	
-	-	+9-32V	NO OP	NO OP	
+9-32V	-	+9-32V	FLASH WARNING COLOR LOW POWER	FMVSS SINGLE LAMP SYSTEM BACKUP	
-	+9-32V	+9-32V	STEADY BACKUP LOW POWER	FMVSS DUAL LAMP SYSTEM BACKUP	
+9-32V	+9-32V	+9-32V	STEADY BACKUP LOW POWER	FMVSS SINGLE LAMP SYSTEM BACKUP	

FEDERAL MOTOR VEHICLE SAFETY STANDARDS (FMVSS) COMPLIANCE

To be compliant with FMVSS when using the backup function, the following settings are required:

- Single lamp system Set the light to Steady Backup High Power
- Dual lamp system Set each light to Steady Backup Low Power

REMOTE NODE: FOR USE WITH bluePRINT® SYSTEM ONLY

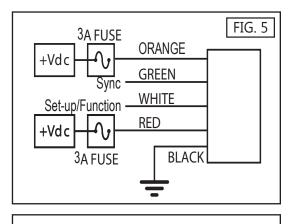
Connecting the Green wire to ground before applying power to the Red or Orange wires will place the LED module into remote mode and the light output color will be directly controlled by the input wires as shown below. For Cruise mode or Low Power control of the LED module, the signal to the control wires must be 100 +/- 2Hz using the duty cycle inputs listed below to produce the light output.

P SERIES 6x4 & 7x3 BACKUP LIGHT ONLY REMOTE NODE FUNCTIONALITY			
RED	ORANGE	LIGHT	
CRUISE	-	CRUISE BACKUP COLOR	
FLASH	-	FLASH BACKUP COLOR	
STEADY	-	STEADY BACKUP COLOR	

CRUISE MODE DUTY CYCLE (@ 100Hz)		
Input	Light Output	
40%	OFF	
50%	5%	
60%	10%	

	/ER FLASH D.C. 100Hz)
Input	Light Output
70%	30%
80%	40%
90%	50%

CERTIFICATION	APPLICABLE COLORS
SAEJ595	Red, Amber, Blue, White, Green
CALIFORNIA TITLE 13	Red, Amber, Blue
NFPA 1901-2009	Red, Amber, Blue, White
KKK-A-1822F (JULY 2021)	Red, Amber, Blue, White, Green
FMVSS108 (Backup Only)	White



Lights are chassis-grounded. If you need to ground-switch the light, you must isolate the lights metal backing, heatsink, studs and/or screws from the body of the vehicle or use a relay.

P SERIES 6x4 & 7x3 BACKUP LIGHT WITH WARNING REMOTE NODE FUNCTIONALITY

VVARINI		NODE FUNCTIONALITY
RED	ORANGE	LIGHT
CRUISE	-	CRUISE WARNING COLOR
-	CRUISE	CRUISE BACKUP COLOR
CRUISE	CRUISE	CRUISE BACKUP COLOR
FLASH	-	FLASH WARNING COLOR
-	FLASH	FLASH BACKUP COLOR
FLASH	FLASH	FLASH BACKUP COLOR
STEADY ON	-	STEADY WARNING COLOR
-	STEADY ON	STEADY BACKUP COLOR
STEADY ON	STEADY ON	STEADY BACKUP COLOR
CRUISE	FLASH	FLASH BACKUP COLOR

WIRING AND TABLE INFORMATION (CONT.):

NOTE: FOR BACKUP LIGHT WITH WARNING ONLY

F	LASH PATTERNS	CER	TIFICATIO	NS
PATTERN #	SINGLE COLOR	FLASHES PER MINUTE	HIGH POWER	LOW POWER
1	QUINT	70	SAE, KKK	SAE, KKK
2	WARP	360	NA	NA
3	INTER-CYCLE	-	NA	NA
4	DOUBLE	70	SAE, KKK	SAE, KKK
5	QUAD	80	SAE, NFPA, KKK	SAE, NFPA, KKK
6	POWER PULSE	180	SAE, NFPA, KKK	SAE, NFPA, KKK
7	ROAD RUNNER	118	SAE, CA13*, NFPA, KKK	SAE, CA13*, NFPA, KKK
8	Q-SWITCH	-	NA	NA
9	STEADY-BURN / ROADRUN- NER (SEQUENCE TYPE 1: STEADY BURN, SEQUENCE TYPE 2: ROADRUNNER)	- / 118	NA	NA
10	STEADY-BURN DRIVER TITLE 13 QUAD (SEQUENCE TYPE 1: STEADY BURN, SEQUENCE TYPE 2: TITLE 13 QUAD)	- / 65	NA	NA
11	QUAD 2	67	SAE, KKK	SAE, KKK
12	DOUBLE 2	95	SAE, NFPA, KKK	SAE, NFPA, KKK
13	RANDOM 1	-	NA	NA
14	RANDOM 2	-	NA	NA
15	QUAD PULSE-POP	75	SAE, CA13*, NFPA, KKK	SAE, CA13*, NFPA, KKK

SETUP TABLE				
SECONDS USER INTERFACE			USER INTERFACE	
FROM	TO	VISUAL FEEDBACK	ACTION TAKEN	
0	1	STEADY-HIGH (60%)	FORWARD ONE PATTERN	
1	2	STEADY-LOW (30%)	BACKWARD ONE PATTERN	
2	3	OFF	COLOR SWAP (OFF OR ON)	
3	4	STEADY - HIGH (60%)	SEQUENCE TYPE: SIMULTANEOUS OR ALTERNATE	
4	5	STEADY - LOW (30%)	SEE FUNCTION TABLE	
5	6	OFF	RESET TO PATTERN 1	
6	7	STEADY-HIGH (60%) SWAP: OFF, SIMULTANEOUS) SEPARATE COLOR CONTROL: OFF		
7	8	STEADY - LOW (30%) LOCK OUT WHITE CONFIGURATION WIRE		
If held longer than 8 seconds, the light will go back to flashing the current pattern and no action will be taken.				

SYNC 2

Synchronizing flashing of multiple light modules is accomplished by connecting the Green wires of different light modules together. Up to 24 light modules can be connected for synchronized flashing. All light module flash patterns must be set to the same flash pattern # to ensure proper operation. Refer to Sequence Type section in the Setup Table to setup light modules to flash in alternate or simultaneous flash pattern.

NOTE: Will NOT work with non-Sync 2 products, such as Ghost, LED3, and 4 wire Intersector. WILL WORK with Sync 2 products nFORCE Secondary Lights, nFORCE FIT, and 5 wire Intersector Lights.

SIMULTANEOUS/ALTERNATE

This function can only be changed when the LED module is in a flashing mode (disabled in cruise or steady ON functions) and only has an effect when at least 2 LED modules have the green sync wire connected together. When the light is flashing, momentarily connect the white wire to ground for >3S and <4S (light will go steady high, steady low, off, steady high) then release. The light module will switch between Simultaneous and Alternate each time this sequence is done. To have light modules flash simultaneously, both light modules need to be set to the same sequence type (Set-Up Table). To have light modules flash alternately, the light modules need to be set to different sequence types (Set-Up Table).

ADVANCE PATTERN

Flash pattern can only be changed when the LED module is in a flashing mode (disabled in cruise or steady ON functions). When the light is flashing, momentarily connect the white wire to ground for >250mS and <1S (light will go steady high) then release. The flash pattern will advance to the next pattern. If the light module was at the last pattern, the pattern will reset to the 1st pattern.

BACKUP PATTERN

This function is only valid when the LED module is in a flashing mode (disabled in cruise or steady ON functions). When the light is flashing, momentarily connect the white wire to ground for >1S and <2S (light will go steady high, steady low) then release. The flash pattern will backup to the previous pattern. If the light module was at the first pattern, the pattern will change to the last pattern on the list.

PATTERN RESET

This function is only valid when the LED module is in a flashing mode (disabled in cruise or steady ON functions). When the light is flashing, momentarily connect the white wire to ground for >5S and <6S (light will go steady high, steady low, off, steady high, steady low, off) then release. The flash pattern will reset to the 1st pattern in the list.

FACTORY RESET

This function is only valid when the LED module is in a flashing mode (disabled in cruise or steady ON functions). When the light is flashing, momentarily connect the white wire to ground for >6S and <7S (light will go steady high, steady low, off, steady high, steady low, off, steady high) then release. The LED module will reset to: pattern=1, Function Table=1, Color Swap=OFF, Simultaneous.

LOCKOUT CONFIGURATION WIRE

This function will disable the wire tap configuration mode that is activated by holding the white wire to ground. The lock out is activated by applying ground to the white wire for >7 seconds and <8 seconds per the table below. The function can be disabled by tapping the wire to ground and releasing 8 times within 5 seconds. The light will flash 8 times when the feature is enabled or disabled to notify the user of a setting change.

BACKUP HIGH/LOW POWER

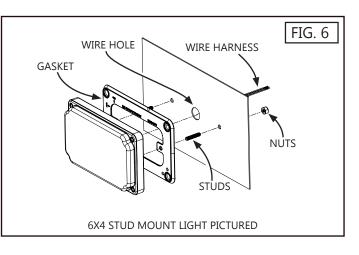
To be compliant with government regulations, a Backup Light System consisting of Dual Backup Lights shall be operated in Low Power. A system consisting of one Single Backup Light shall be operated in High Power.

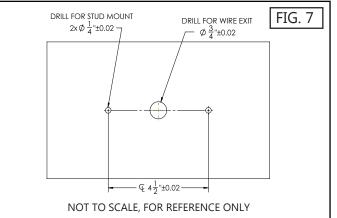
STUD MOUNT INSTALLATION:

- 1. Drill (2) 1/4" holes to mount light and 3/4" wire hole (see **Fig. 7**). The drill template shown is compatible with both the the 6x4 and 7x3 stud mount light.
- 2. Thread studs into the back of light.
- 3. Place bezel over front of light.
- 4. Align the gasket to the mounting surface. Horizontal and vertical orientations are indicated on gasket for proper seal.
- 5. Press light/bezel assembly against gasket, against mount surface.
- 6. Secure the light to mounting surface using (2) supplied nuts, on the back side of vehicle mount surface.

NOTE: Tighten until gasket is compressed. DO NOT over tighten and strip casting threads. **DO NOT USE POWER TOOLS TO TIGHTEN.**

8. Plug the wire harness into the back of the light. Reference **page 8** for retention clip installation.





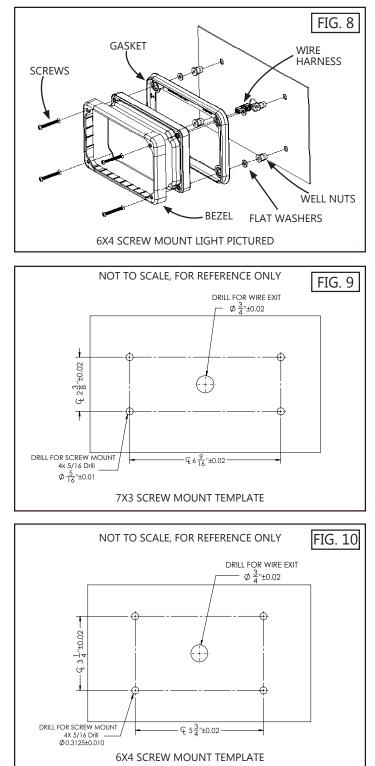
SCREW MOUNT INSTALLATION:

- Drill (4) 5/16" holes to mount light. Drill 3/4" wire hole. See Fig. 9 (7x3) OR Fig. 10 (6x4).
- 2. If a bezel is being used, place bezel over light.
- 3. Place the gasket on the back of the light and bezel (if used).

<u>NOTE</u>: Horizontal and vertical orientations indicated on gasket for proper seal.

- 4. Insert the (4) supplied screws into each screw hole.
- 5. Place (4) flat washers over the screws on the back of the light.
- 6. Screw onto each fastener the (4) well nuts onto the back of the light. Tighten until snug.
- 7. Pull the wire harness through the opening and plug into the back of the light. Reference page 8 for retention clip installation.
- 8. With the light assembly in hand, insert the well nuts into the 4 drilled holes. Fully seat to mounting surface.
- 9. Secure the light to mounting surface. While applying pressure on each fastener, tighten the (4) screws 7 full turns.

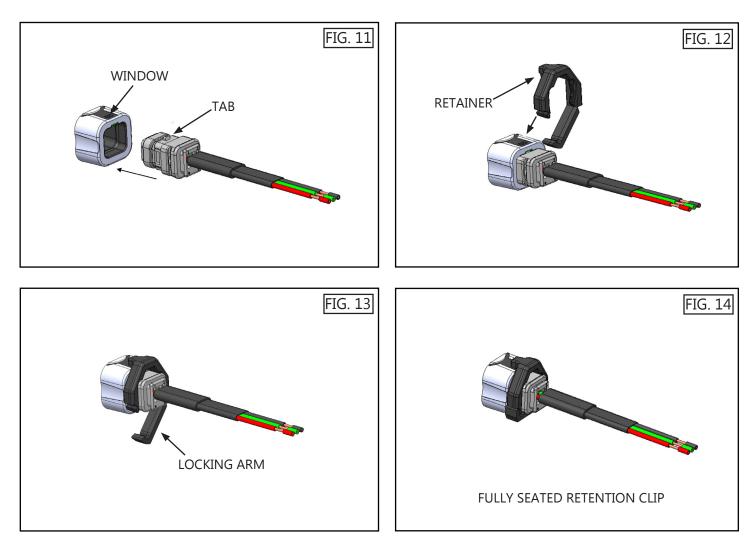
<u>NOTE</u>: Tighten until gasket is compressed. DO NOT over tighten.



RETENTION CLIP INSTRUCTIONS:

NOTE: In the event the harness needs to be disengaged from the light, these instructions can be used to reattach and apply the retention clip.

- 1. Plug harness into light housing, aligning tab to window, as shown in Fig 13.
- 2. Install the retainer clip over harness/light interface, inserting retainer into window, as shown in Fig. 14.
- 3. Press retainer clip's locking arm to snap closed.



NOTES:

WARRANTY & RETURN GOODS PROCEDURE

CLEANING & CARE OF YOUR LIGHTBAR:

Keeping the lenses clean and scratch free will optimize the performance of the light. The exterior of the light 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 - CARE MUST BE TAKEN WHEN DRILLING THROUGH 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.

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.