intersector
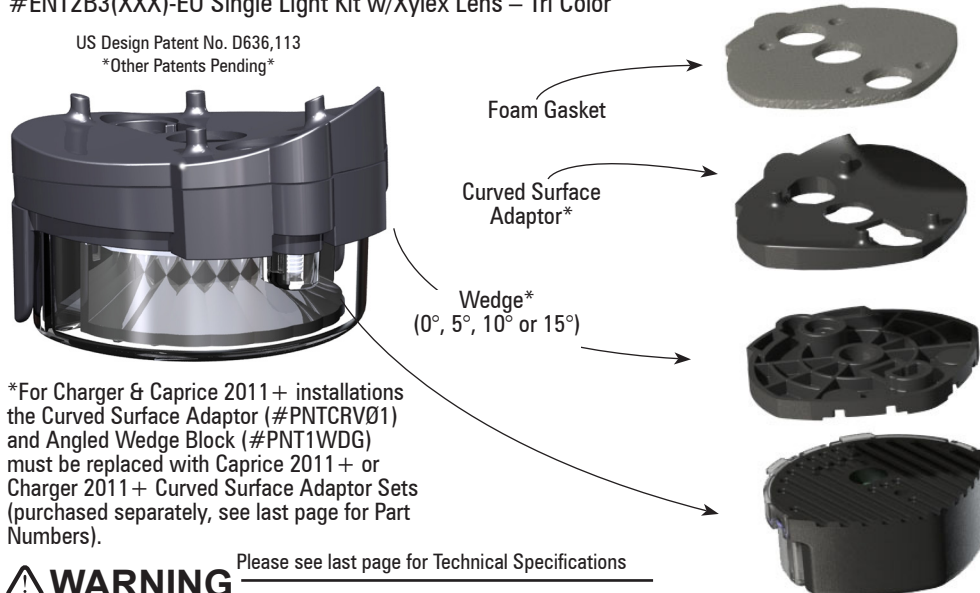by SoundOff Signal

INTERSECTOR LED LIGHT

#ENT2B3(X) Single Light Kit – Single & Dual Color
#ENT2B3(X)-EU Single Light Kit w/Xylex Lens – Single & Dual Color
#ENT2B3(XXX) Single Light Kit – Tri Color
#ENT2B3(XXX)-EU Single Light Kit w/Xylex Lens – Tri Color

US Design Patent No. D636,113
Other Patents Pending

Foam Gasket

Curved Surface Adaptor*

Wedge*
(0°, 5°, 10° or 15°)

*For Charger & Caprice 2011+ installations the Curved Surface Adaptor (#PNTCRVØ1) and Angled Wedge Block (#PNT1WDG) must be replaced with Caprice 2011+ or Charger 2011+ Curved Surface Adaptor Sets (purchased separately, see last page for Part Numbers).

Please see last page for Technical Specifications

⚠ WARNING

- HIGH CURRENT interconnects must be properly terminated. Poor crimp quality can cause heat build-up and fire. Follow 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.
- 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.

The Intersector LED Light is designed to be mounted under the vehicle's side mirrors and provide a warning signal to the front and sides. It can also be surface mounted.

INSTALLATION:

Loosely assemble Intersector Light, correct wedge block and curve block (P=Passenger, D=Driver's side, Crown Vic and Dodge Charger only) and position assembly below side rear view mirror as shown at left.

Carefully remove light from stack without changing position of wedge block. Mark and drill pilot holes for #6 sheet metal screw.

Drill Ø3/8" hole in mirror shell if wire is to be routed internally. If wire will be routed external of the mirror shell this step can be ignored.

Dismount mirror from door.

The following is referencing the Ford Explorer but can be applied to other vehicles as well:

After pilot holes for #6 sheet metal screws are drilled a Ø3/8" hole should then be made between the pilot holes. It is important to avoid drilling through the power cable as this will damage the mirror.

Using #6 machine screw, washer and square nut assemble light and appropriate wedge block, curve block (if required) and gasket. Route wire carefully through 3/8" hole and into door. Use appropriate #6 sheet metal screws to attach light to underside of mirror. DO NOT OVERTIGHTEN SCREWS AS THIS MAY DAMAGE THE MIRROR OR LIGHT. Mirror may now be replaced on vehicle.

⚠ WARNING

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

OPERATION:
For details on operation see page 4.

IMPORTANT:
Supply power through a 3A fuse. For Flashing mode, refer to function tables 1,2 and 3 on page 5. For slave/Remote Node functionality such as when connected to Blueprint, permanently connect the Green wire to ground. Refer to Remote Node functionality table on page 7. **Insulate all connections.**
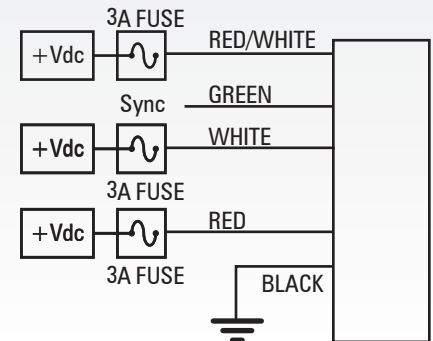
WIRE HOOK-UP TABLE

WIRE COLOR:	FUNCTION:
RED	Power (Table pg. 5)
BLACK	Ground
GREEN**	Sync2 or Remote Node Function*
WHITE to GROUND	Wire Function (See page 4)
WHITE to POWER	Power (Table pg. 5)
RED/WHITE	Power (Table pg. 5)

** To sync multiple Intersector or Nforce lights connect the green wire from each light together.
*Will NOT work w/ other sync products such as Ghost, LED3, & 4-wire Intersector.

OPERATIONAL CONNECTIONS:

3A FUSE
+Vdc — RED/WHITE

Sync
+Vdc — GREEN
WHITE

3A FUSE
+Vdc — RED

3A FUSE
BLACK

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/sales-support**. *If you have questions regarding this product, contact* **Technical Services**, *Monday - Friday, 8 a.m. to 5 p.m. at* **1.800338.7337** *(press #4 to skip the automated message). Questions or comments that do not require immediate attention may be emailed to* **techservices@soundoffsignal.com.**

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UTILITY BLOCK
0° (HORIZONTAL)*
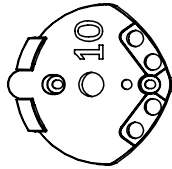
WEDGE BLOCKS

10° FOR TAHOE*

5° FOR CROWN VIC,
IMPALA, CHARGER &
CAPRICE*
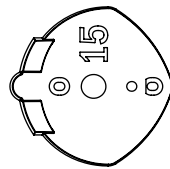
15° FOR 2015+
FORD F150*

Intersector™ LIGHT CABLE

* INDICATES FOR WHAT PART WAS DESIGNED. INSTALLATION
ON OTHER VEHICLES IS INSTALLER'S RESPONSIBILITY.
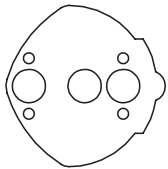
GASKET

DEGREE DESIGNATION IS EMBOSSED IN PART

3/4" SHEET
METAL SCREW

USE WHEN
CURVE BLOCK IS
USED

1/2" SHEET
METAL SCREW

USE WHEN
CURVE BLOCK IS
NOT USED

1" SHEET
METAL SCREW

USE WHEN
THICKER CURVE
BLOCK IS NEEDED
& 3/4" SCREW
IS NOT LONG
ENOUGH

3/8" MACHINE SCREW

WASHER

SQUARE NUT   WASHER   3/8" MACHINE
                                    SCREW

USE TO JOIN LIGHT TO WEDGE BLOCK AFTER
CORD EXIT IS DETERMINED

GASKET IS ALWAYS
POSITIONED NEXT TO MIRROR
SHELL

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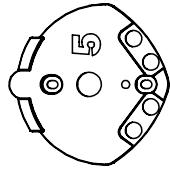
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ADVANCE PATTERN
Flash pattern can only be changed when the LED module is in a flashing mode (disabled in cruise or steady ON functions). When the light is flashing, momentarily touch the white wire to ground for >250ms and <1s (light will go steady 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 touch 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.

COLOR SWAP
This function is only valid for dual color light modules and can only be changed when the light module is in a flashing mode (disabled for single color modules and when light module is operating in cruise or steady ON functions). When the light is flashing, momentarily touch the white wire to ground for >2s and <3s (light will go steady high, steady low, off) then release. The light module will switch between Color Swap OFF and Color Swap ON. When Color Swap is OFF, the 1st color will flash 1st on a dual color pattern. When Color Swap is ON, the 2nd color will flash 1st on a dual color pattern.

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 touch 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).

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 touch 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 touch 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.

SETUP TABLE			
SECONDS		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%)	FACTORY RESET (PATTERN 1, COLOR SWAP: OFF, SIMULTANEOUS) SEPARATE COLOR CONTROL: OFF

If held longer than 7 seconds, the light will go back to flashing the current pattern and no action will be taken.

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FUNCTION TABLES

Changing the function table is only enabled when the LED module is in a flashing mode (disabled in cruise or steady ON functions). The functional operation of the LED module can be changed while applying the +V to the Red wire with the black wire connected to ground. When the light is flashing, momentarily connect the White wire to ground for >4S and <5S (light will go steady high, steady low, off, steady high, steady low) then release. The function table will now advance to the next table (table 1 to table 2, table 2 to table 3, or table 3 to table 1). Repeat above process until required function table is active.

FUNCTION TABLE 1

WIRE			LIGHT		
RED	R/W	WHT	SINGLE	DUAL	TRI
+9-32V			FLASH	FLASH DUAL	FLASH TRI
	+9-32V		CRUISE	STEADY CLR 2	STEADY CLR 3
+9-32V	+9-32V		FLASH	STEADY CLR 2	STEADY CLR 3
		+9-32V	NO OP	NO OP	NO OP
+9-32V		+9-32V	LOW PWR FLASH	FLASH CLR 1	FLASH CLR 1
	+9-32V	+9-32V	CRUISE	FLASH CLR 2	FLASH CLR 2
+9-32V	+9-32V	+9-32V	LOW PWR FLASH	FLASH DUAL	FLASH CLR 3

FUNCTION TABLE 2

WIRE			LIGHT		
RED	R/W	WHT	SINGLE	DUAL	TRI
+9-32V			FLASH	FLASH CLR 1	FLASH DUAL
+9-32V		+9-32V	CRUISE	FLASH DUAL	FLASH TRI
	+9-32V		STEADY CLR 1	STEADY CLR 2	STEADY CLR 3
	+9-32V	+9-32V	STEADY CLR 1	STEADY CLR 2	STEADY CLR 3
+9-32V	+9-32V	+9-32V	STEADY CLR 1	STEADY CLR 2	STEADY CLR 3
		+9-32V	NO OP	NO OP	NO OP
+9-32V	+9-32V		STEADY CLR 1	STEADY CLR 2	STEADY CLR 3

FUNCTION TABLE 3

WIRE			LIGHT		
RED	R/W	WHT	SINGLE	DUAL	TRI
+9-32V			FLASH	FLASH DUAL	FLASH TRI
	+9-32V		FLASH LOW PWR	FLASH DUAL LOW PWR	FLASH TRI LOW PWR
+9-32V	+9-32V		FLASH LOW PWR	FLASH DUAL LOW PWR	FLASH TRI LOW PWR
		+9-32V	NO OP	NO OP	NO OP
+9-32V		+9-32V	FLASH LOW PWR	FLASH DUAL LOW PWR	FLASH TRI LOW PWR
	+9-32V	+9-32V	FLASH LOW PWR	FLASH DUAL LOW PWR	FLASH TRI LOW PWR
+9-32V	+9-32V	+9-32V	FLASH LOW PWR	FLASH DUAL LOW PWR	FLASH TRI LOW PWR

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SYNC 2
Syncronizing the 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 syncronized flashing. All light module flash patterns must be set to the same flash pattern # to ensure proper operation. Refer to the Sequence Type section in Set-Up table to setup light modules to flash in alternate or simultaneous flash pattern.
NOTE: Will NOT work with Sync products such as Ghost, LED3, 4-wire Intersector.

FLASH PATTERNS			
PATTERN #	SINGLE COLOR	DUAL COLOR / TRI COLOR	SAE COMPLIANT
1		QUINT	x
2		WARP	x
3		INTER-CYCLE	x
4		DOUBLE	
5		QUAD	x
6		POWER PULSE	x
7		ROAD RUNNER	x
8		Q-SWITCH	x
9		STEADY-BURN / ROADRUNNER (SEQUENCE TYPE 1: STEADY BURN, SEQUENCE TYPE 2: ROADRUNNER)	x
10		STEADY-BURN DRIVER / TITLE 13 QUAD (SEQUENCE TYPE 1: STEADY BURN, SEQUENCE TYPE 2: TITLE 13 QUAD)	x
11		QUAD 2	x
12		DOUBLE 2	x
13		RANDOM 1	x
14		RANDOM 2	x

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REMOTE MODE: FOR USE WITH bluePRINT SYSTEM ONLY
Connecting the Green wire to ground before applying power to the Red or Red/White 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.

		Single Color		Dual Color		Tri Color	
INTERSECTOR LED LIGHT REMOTE NODE FUNCTIONALITY							
Red Wire	**Red/Wht Wire**	**Color Swap=OFF**	**Color Swap=ON**	**Color Swap=OFF**	**Color Swap=ON**	**Color Swap=OFF**	**Color Swap=ON**
Cruise	-	Cruise Color 1		Cruise Color 1	Cruise Color 2	Cruise Color 1	Cruise Color 2
-	Cruise			Cruise Color 2	Cruise Color 1	Cruise Color 2	Cruise Color 1
Cruise	Cruise			Cruise Color 2	Cruise Color 1	Cruise Color 3	Cruise Color 3
Flash	-	Flash Color 1		Flash Color 1	Flash Color 2	Flash Color 1	Flash Color 2
-	Flash			Flash Color 2	Flash Color 1	Flash Color 2	Flash Color 1
Flash	Flash			Flash Color 2	Flash Color 1	Flash Color 3	Flash Color 3
Steady ON	-	Steady ON Color 1		Steady ON Color 1	Steady ON Color 2	Steady ON Color 1	Steady ON Color 2
-	Steady ON			Steady ON Color 2	Steady ON Color 1	Steady ON Color 2	Steady ON Color 1
Steady ON	Steady ON			Steady ON Color 2	Steady ON Color 1	Steady ON Color 3	Steady ON Color 3
Cruise	Flash			Flash Color 2/Cruise Color 1 during OFF cycle of Flash	Flash Color 1/Cruise Color 2 during OFF cycle of Flash		
Cruise	Steady ON			Steady ON Color 2	Steady ON Color 1		
Flash	Steady ON			Steady ON Color 2	Steady ON Color 1		

CRUISE MODE DUTY CYCLE (@ 100Hz)

Input	Light Output
40%	OFF
50%	5%
60%	10%

LOW POWER FLASH D.C. (@ 100Hz)

Input	Light Output
70%	30%
80%	40%
90%	50%

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OVER-VOLTAGE PROTECTION
When an over-voltage condition is detected, the module will flash an over-voltage warning pattern of 50mS ON/950mS OFF to alert of the over-voltage 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.

TECHNICAL SPECIFICATIONS	
INTERSECTOR	
Single Mount Dimensions:	2.9" (74 mm) W x 1.9" (48 mm) H x 2.9" (74 mm) D
Input Voltage:	9 - 32 Vdc
AFTER POWER IS ON, touching the WHITE wire to the ground will allow you to change variouse settings on the module. (refer to pages 3 & 4)	

	Input Voltage:		9-32Vdc	
	SINGLE / DUAL COLOR CURRENT CONSUMPTION (Amps)			
	12.8Vdc		**25.6Vdc**	
	Peak	**Average**	**Peak**	**Average**
Red	1.00	0.60	0.50	0.30
Amber, Blue, Green or White	1.30	0.80	0.65	0.40
	TRI COLOR CURRENT CONSUMPTION (Amps)			
	12.8Vdc		**25.6Vdc**	
	Peak	**Average**	**Peak**	**Average**
Red	0.77	0.46	0.36	0.22
Amber, Blue, Green or White	1.00	0.60	0.50	0.30

Parts & Accessories:
Univ. Curved Surface Adaptors	#PNT1CRVØ1 (pair)
Chevrolet Caprice Adaptors	#PNT1CRVØ2 (pair)
Dodge Charger Adaptors	#PNT1CRVØ3 (pair)
Ford Interceptor Sedan Adaptors	#PNT1CRVØ4 (pair)
Ford Interceptor SUV Adaptors	#PNT1CRVØ5 (pair)
Wedges (0°, 5° & 10°)	#PNT1WDG (set of 3)
Intersector™ (light only)	#PENT2BØ(x)

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NOTICE:
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