WARRANTY

SoundOff Signal warranties the Directional Arrow Switch for 1 (one) full year from the date of purchase to the original purchaser against any manufacturer defects or workmanship. This warranty 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.

ETSWDAS01 - DIRECTIONAL ARROW SWITCH

INSTALLATION & OPERATION INSTRUCTIONS

PRODUCT SPECIFICATIONS

Electrical		
● Input Voltage:	+10-30 Vdc
● Polarity:	Negative Ground
● Reverse Polarity Protection:	Yes
● Transient Protection:	Yes
● Operating Temperature:	-40C to +85C
● Current Draw:	0.8 Amps
● Standby Current:	Zero Amps
● +Vin Fuse:	5 Amps ATO

Mechanical		
● Dimensions	166mm x 22mm x 45mm (6.55" x 0.88" x 1.76")
	170 mm (6.7") w/ Mounting Bracket
● Shipping Weight	.65 lbs

WIRE COLORS/USES

CN1 (2x2, Power Input Connector)		
Pin #	Wire Color	Function
1	Red	+10-30 Vdc Power Input
2	White / Red	Master / Ignition switch (0u = Stand by)
3	Black	(-) Ground
4	NA	Not populated

CN2 (2x3, Control Output Connector, Low Current: 0.25A Max)*		
Pin #	Wire Color	Function (All Outputs +Vdc Active High)
1	Blue	LEFT Arrow Indicator Output Control
2	Brown	CENTER Arrow indicator Output Control
3	Green	RIGHT Arrow Indicator Output Control
4	Yellow	WARNING 1 Output Control
5	Pink	WARNING 2 Output Control
6	Red/Black	Power Control Output to External Relay for Predator Bar

* Must NOT exceed a total of 0.25 Amp for any combination of active outputs.

NOTES:

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CONNECTING THE WIRES:

Black Wire (Ground)
- ✓   Connect to Reliable Ground
- ✓   To minimize field service issues, it is recommended that the ground wires be connected directly to the ground terminal of the battery.
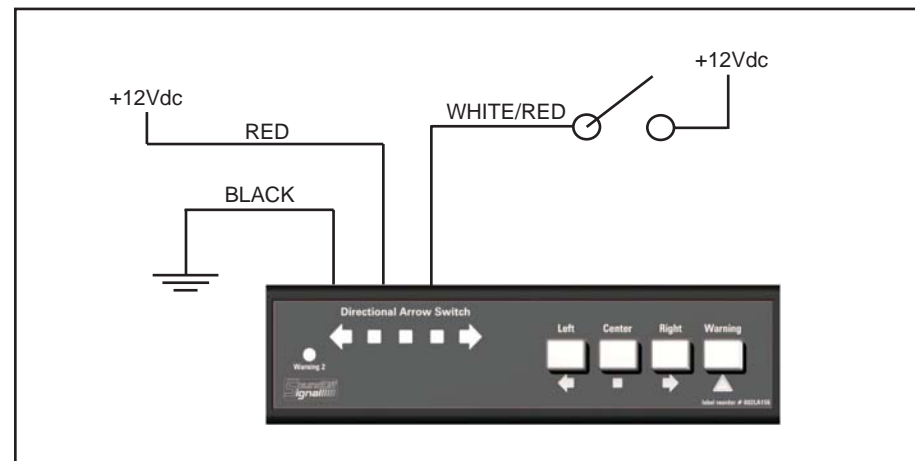
Red Wire (Power Input)
- ✓   Connect to a reliable +12v or +24v power source

White / Red Wire (Master / Ignition switch)
- ✓   Connect to a reliable +12v or +24v power source

Wire Color	Function	Connection
Black	Ground	Reliable Ground
Red	Constant power	+12v or +24v
White w/ Red	Switch	Master/Ignition switch

For the remaining wires, see the specific instructions listed below with page numbers to distinguish which method best suits your application.

INSTRUCTIONS FOR CONNECTION WITH ETL 5000
WITH 4-WIRE ARROW CONTROLLER OPTION

Yellow Wire (Warning One)
✓ Connect to Arrow Warning function on ETL 5000 or ETL5000 DSC technology breakout box input.

      ETL 5000 w/ Control Cable: BLACK/WHITE
      ETL 5000 w/DSC: Breakout Box Arrow, WARNING input

Blue Wire (Left Arrow Direction)
✓ Connect to Arrow Left function ETL 5000 or ETL5000 DSC technology breakout box input.
      ETL 5000 w/ Control Cable: ORANGE/WHITE
      ETL 5000 w/DSC: Breakout Box Arrow, LEFT input

Brown Wire (Center Arrow Direction)
✓ Connect to Arrow Center out function on ETL 5000 or ETL5000 DSC technology breakout box input.
      ETL 5000 w/ Control Cable: VIOLET/WHITE
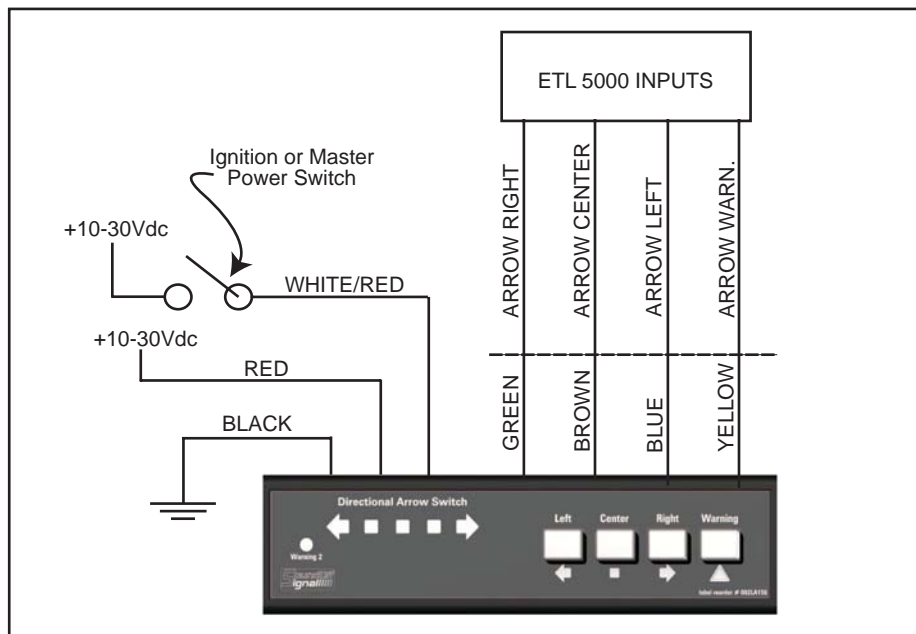   ETL 5000 w/DSC: Breakout Box Arrow, CENTER input

Green Wire (Right Arrow Direction)
✓ Connect to Arrow Right function on ETL 5000 or ETL5000 DSC technology breakout box input.
      ETL 5000 w/ Control Cable: YELLOW/WHITE
      ETL 5000 w/DSC: Breakout Box Arrow, RIGHT input

NOTE: POWER CONTROL (Red/Black Wire) AND WARNING 2 (Pink Wire) OUTPUTS ARE NOT USED.

NOTES:

Changing between Warning output options:

Pressing the Warning button while in product configuration mode will change the outputs the warning button controls. Below is a table of options

	Warning Mode Options						
	1	2	3	4	5	6 (Default)	7
Warning Mode One	DW+EW	DW	EW	DW	EW	DW	EW
Warning Mode Two	NA	EW	DW	NA	NA	DW+EW	DW+EW

Directional Warning (DW) will apply voltage to the Yellow Wire (Warning One Output). End Warning (EW) will apply voltage to the pink wire (Warning Two Output).

In modes 1, 4, and 5 there is no warning mode two.

In modes 2, 3, 6, and 7 pressing the warning button once will activate warning mode one. Pressing the warning button twice will activate warning mode two. To exit either warning mode, press the warning button once.

The Current Warning Mode Option is designated by the yellow LEDs.
1.   Warning Mode setting 1 is designated by yellow LED 1.
2.   Warning Mode setting 2 is designated by yellow LED 2.
3.   Warning Mode setting 3 is designated by yellow LED 3.
4.   Warning Mode setting 4 is designated by yellow LED 4.
5.   Warning Mode setting 5 is designated by yellow LED 5.
6.   Warning Mode setting 6 is designated by yellow LED 1 and 5.
7.   Warning Mode setting 7 is designated by yellow LED 1, 2, and 5.

Note: If the warning 2 RED LED is illuminated and an arrow button is pressed, they will both be on at the same time. Pressing the Warning button will turn of the Warning 2 output. Pressing the arrow button that is green will turnoff the Arrow Function.

To exit product configuration mode:
By holding down the Left and Warning Buttons together for 2 seconds, product configuration mode can be exited. The unit will emit two short beeps. At this time release the buttons.

INSTRUCTIONS FOR LED TRAFFIC MASTER:

ETTMLEDW3
(STANDARD WIRING SETUP: LOOKING AT BAR, CABLE EXITS ON THE LEFT REAR)

Pink Wire (Warning Two)
✓ Connect to Pink Wire of the Traffic Master

Yellow Wire (Warning One)
✓ Connect to either the Green or Purple wire of the traffic master (depending on the desired flash pattern)

Blue Wire (Left Arrow Direction)
✓ Connect to Dark Green wire of the Traffic Master.

Brown Wire (Center Arrow Direction)
✓ Connect to Yellow wire of the Traffic Master.

Green Wire (Right Arrow Direction)
✓ Connect to Blue wire of the Traffic Master.

Please see page 10 for instructions on how to change between center output options. Configure to apply power to the brown wire (Center Option 1)

Note: If you are using optional wiring, then the Dark Green and Blue wires must swap.
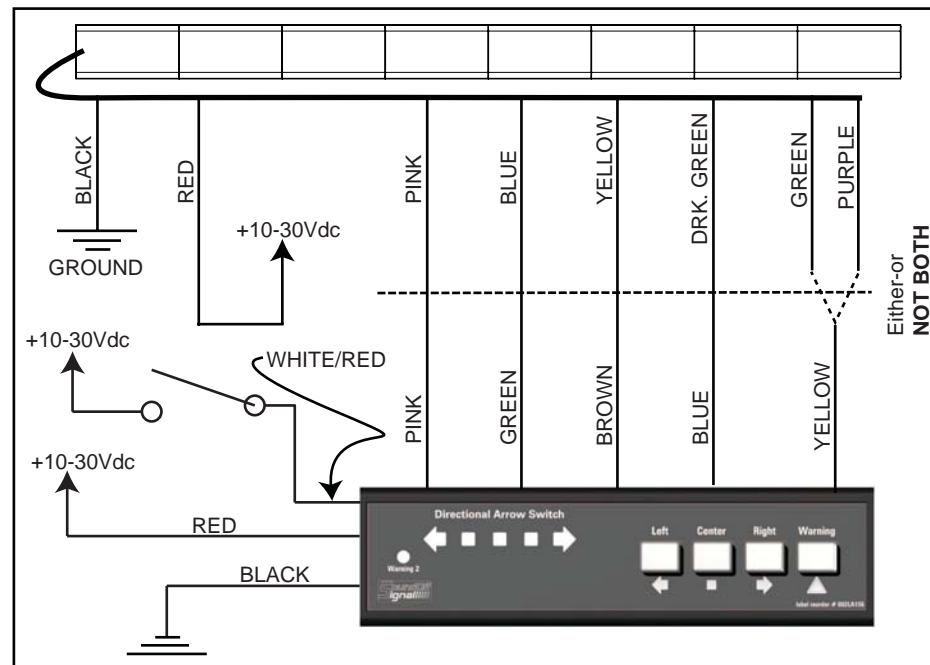Blue Wire (Left Arrow Direction)
✓ Connect to the Blue wire of the Traffic Master

Green Wire (Right Arrow Direction)
✓ Connect to the Dark Green wire of the Traffic Master.

Note: End Warning can be used with the other arrow functions at the same time. With the Warning two RED LED illuminated, pressing any of the arrow functions to have the end warning on as well as the center lights of the traffic Master On. To turn off the end warning, press the warning button. To turn off the arrow functions press the arrow button.

INSTRUCTIONS FOR CONNECTION WITH PREDATOR
WARNING BAR: EPRD4MDO(x), EPRD6MDO(x), EPRD8MDO(x)

Directional Arrow Switch Wire Color	Function	Predator Warning Bar Wire Color	Function
Blue	Left Arrow Direction	Blue	Left arrow Direction
Brown	Center Arrow Direction	Brown	Center arrow Direction
Green	Right Arrow Direction	Green	Right Arrow Direction

Relays Pins		Connected to	Wire Color
87		Predator Warning Bar	Red
85	Ground	Ground	
86	Power	Directional Arrow Switch	Red / Black
30	power	+12 V	
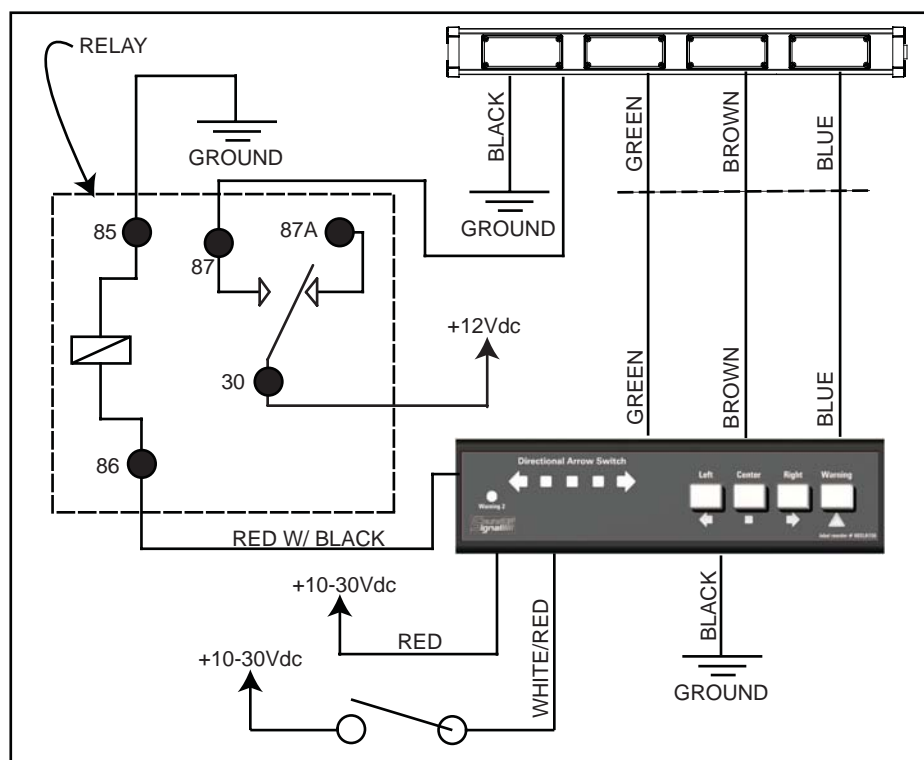
Product Configuration Mode:
By holding down the Left and Warning Buttons together for 2 seconds, product configuration mode can be entered. The unit will make a long "beep", and all of the buttons will turn green when product configuration mode has been entered.

Changing the level of brightness on the red LEDs:
The level of brightness can be changed (high, low, and off) by pressing the Left button in product configuration mode.

Changing level of sound:
The volume of the speaker can be changed (high, low, and off) by pressing the Right button in product configuration mode.
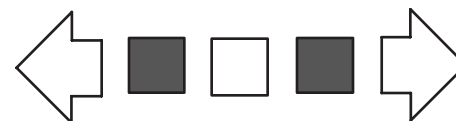
Changing between Center output options:
Which wires the Center button applies power to can be changed in the product configuration mode by pressing the Center Button.

When the Yellow LED in the middle is lit, the unit will apply power to the Brown Wire
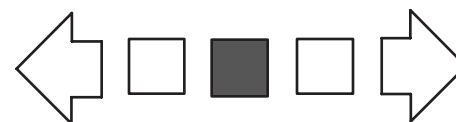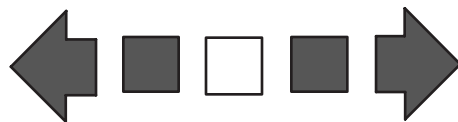

When the second and fourth LED's are lit, the unit will apply power to the Blue and Green wires.

Pressing the "Left" Button will apply power to the Blue wire (Left Arrow Direction), and display the left arrow pattern on the yellow LED's.


Pressing the "Center" button will apply power to the Brown Wire (Center Arrow Direction), and display the center out pattern on the yellow LED's.

Pressing the "Right" button will apply power to the Green wire (Right Arrow Direction), and display the right arrow pattern on the yellow LED's.


Pressing the "Warning button will apply power to the Pink and Yellow Wire, and display an alternating pattern on the yellow LED's.
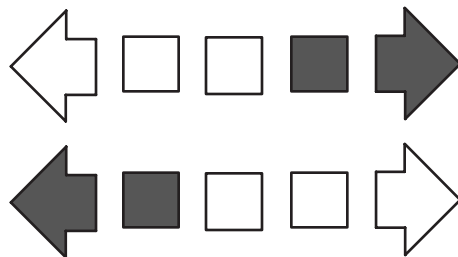
SIREN WITH PROGRESSIVE SWITCH

If a siren with a Progressive switch is installed in your vehicle, and you wish to monitor/override the output of your progressive switch, the directional arrow switch can still be used. Connect the Directional arrow switch as indicated below, then connect the output of your Progressive switch to the desired line. The Directional Arrow Switch will indicate which line is active.
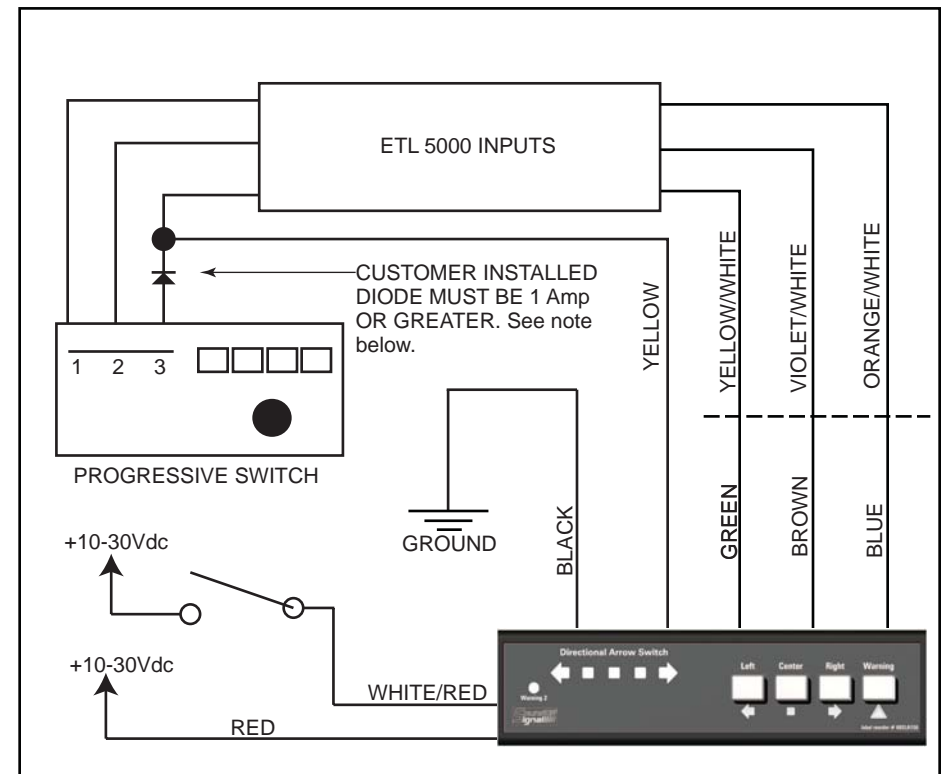
IMPORTANT!: Customer installed diode (i.e. 1N4004) shown above **MUST** be installed or damage to the Directional Arrow Switch could occur.

OPERATION OF DIRECTIONAL ARROW SWITCH

User Input	Arrow Controller Function	Wire Output
Left Button	Turn on Left Arrow indicator	Left_Out & Pwr_Cntrl
Center Button	Turn on Center Arrow Indicator	(Mode 1) Center_Out & Pwr_Cntrl or (Mode 2) Left_Out & Right_Out & Pwr_Cntrl
Right Button	Turn on Right Arrow Indicator	Right_Out & Pwr_Cntrl
Warning Button	Directional Warning & End Warning	Warn1_out & Pwr_Cntrl & Warn2 *
Left Wire	Turn on Left Arrow Indicator	NA
Right Wire	Turn on Right Arrow Indicator	NA
Center Wire	Turn on Center Arrow Indicator	NA
Warning One Wire	Turn on Warning 1 Indicator	NA
Warning Two Wire	Turn on Warning 2 LED	NA

*Default Warning Button operation mode is Mode #6 (See other modes on page 10)