== AUTO-DIMMING LIGHT SENSOR ==

This lightbar is equipped with an Auto-Dimming Light Sensor, *Low Power Operation* will automatically activate when the ambient brightness is below the set-value (e.g. night time) and deactivate once prior condition is removed. The Auto-Dimming Light Sensor takes precedence over all other function wires.

== PC PROGRAMMING ==

All function wires may be customized and re-programmed to user's preference via optional Raiden FIT PLUS Programmer sold seperatly. for
- Light Sensor dimming values,
- Lighthead flash delay / flash groups / phases / flash patterns / colors,
- Low power %,
- Traffic arrow patterns,
- Wire precedence (priority),
- and etc.

RAIDEN Lightbar Configuration Tool is a piece of software that can be used to program your RAIDEN lightbar quickly and intuitively. Download software from the support utility site via this link:

https://service.juluen.com.tw/Utility

NOTE: For more instructions, refer to [Software Manual] from the support utility site.
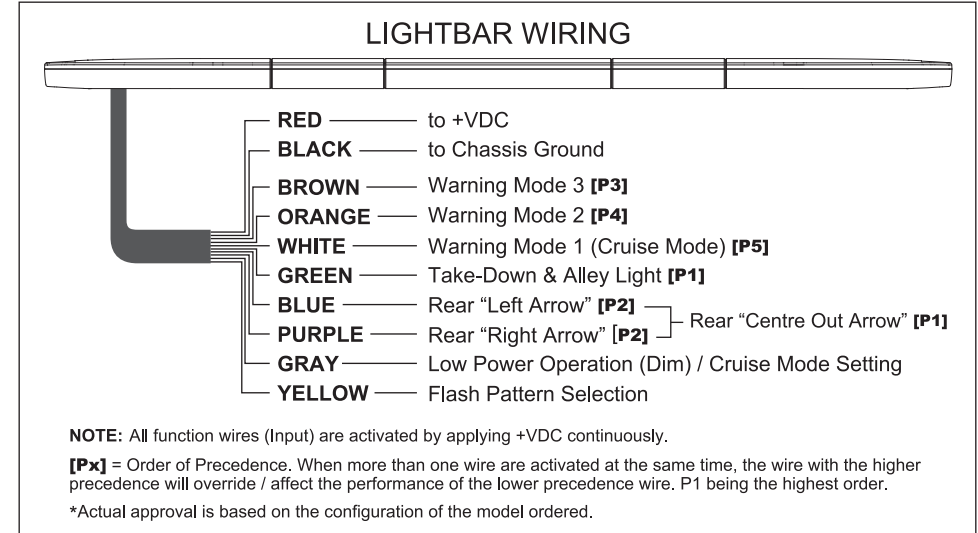
Operation Manual   Ⓡ

WIRING & FUNCTIONS
(BL/BD - Single/Dual Color - SAE) | (BE/BF - Single/Dual Color - ECE R65/R10)

Proper installation of the product requires the installer to have a good understanding of automotive electronics, systems and procedures. Different applications may require different functions. For optimum efficiency, it is highly recommended to determine, configure and test the required functions prior to installation.

LIGHTBAR WIRING

Wire	Function
RED	to +VDC
BLACK	to Chassis Ground
BROWN	Warning Mode 3 **[P3]**
ORANGE	Warning Mode 2 **[P4]**
WHITE	Warning Mode 1 (Cruise Mode) **[P5]**
GREEN	Take-Down & Alley Light **[P1]**
BLUE	Rear "Left Arrow" **[P2]** ⎤ Rear "Centre Out Arrow" **[P1]**
PURPLE	Rear "Right Arrow" **[P2]** ⎦
GRAY	Low Power Operation (Dim) / Cruise Mode Setting
YELLOW	Flash Pattern Selection

NOTE: All function wires (Input) are activated by applying +VDC continuously.

[Px] = Order of Precedence. When more than one wire are activated at the same time, the wire with the higher precedence will override / affect the performance of the lower precedence wire. P1 being the highest order.

*Actual approval is based on the configuration of the model ordered.

== POWER CABLE ==

1. Route power wires to the vehicle firewall towards the battery.
2. Install a fuse (user-supplied) to the end of the **RED** wire and connect it to the battery. (for correct fuse rating, refer to the Lightbar Specs.)
3. Connect the **BLACK** wire to the vehicle chassis-ground next to the battery.
   NOTE: Ensure that all wires of the power cable are firmly connected to the power source.

⚠ WARNING
- DO NOT USE THE POWER WIRE(S) AS THE LIGHTBAR ACTIVATION SWITCH. USE ONLY THE FUNCTION WIRE(S) TO SWITCH AND ACTIVATE.
- ENSURE THE POWER WIRE(S) ARE PROPERLY CONNECTED BEFORE ACTIVATING ANY FUNCTION WIRE(S).
- FAULTY CONNECTIONS MAY CAUSE THE LIGHTBAR TO MALFUNCTION AND / OR RESET TO ITS DEFAULT SETTINGS.
- DO NOT USE A HIGH PRESSURE POWER WASHER TO CLEAN YOUR LIGHTBAR; THIS MAY DAMAGE YOUR LIGHTBAR AND VOID ITS WARRANTY.

== FUNCTION WIRES (Input) ==

Connect each individual function wire to its switch.

WARNING MODE 1 & MODE 2 & MODE 3

1. Activate the desired Mode by applying **+VDC** to **BROWN, ORANGE** or **WHITE** wire.
   - **BROWN** wire for Warning Mode 3.
   - **ORANGE** wire for Warning Mode 2.
   - **WHITE** wire for Warning Mode 1 (Cruise Mode).

NOTE: If the lightbar is equipped with Dual Color lightheads, Warning Mode 2 will display in Color 2.

2. Each of the Warning Modes can select and store one pattern from the built-in flash patterns.
   To change flash pattern:
   i. While a Warning Mode is activated, tap **+VDC** to **YELLOW** wire:
      a. Once to next pattern. (refer to Flash Pattern chart)
      b. Quick 3 times to FP#1.
3. If a steady-burn pattern (cruise mode) is selected, number of activated lightheads can be set differently based on the user's application requirment. (by default, only Corner Section will be activated)
   To change the activated lightheads during a cruise mode:
   i. Activate a Warning Mode with its flash pattern selected to an steady-burn (cruise mode) pattern.
   ii. While the Warning Mode is activated, tap **+VDC** to **GRAY** wire quickly once to progressively scroll through different number of lightheads.

Flash Patterns

FP#	SAE(BL & BD Versions)	Grouping	FP#	ECE (BE & BF Versions)	Grouping
1	Single [SAE, CA13] *(Mode 2 & 3 Default)*	All	1	Double (Corners) [R65] *(Mode 2 & 3 Default)*	Corners
2	Double [SAE]	All	2	Double [2Hz]	All
3	Quad [SAE]	All	3	Quad [2Hz]	All
4	Quint [SAE]	All	4	Single [2Hz]	All
5	Mega	All	5	Triple [2Hz]	All
6	Ultra [SAE]	All	6	Double [2Hz]	Left-Right
7	Single-Quad	All	7	Quad [2Hz]	Left-Right
8	Single H/L	All	8	Single [2Hz]	Left-Right
9	Single-Triple-Quint	All	9	Triple [2Hz]	Left-Right
10	Single	Left-Right	10	ICAO Single *	Corners
11	Double	Left-Right	11	ICAO Single *	All
12	Quad	Left-Right	12	Clockwise Pulsing Chaser	All
13	Quint	Left-Right	13	Clockwise Pulsing Chaser Fast	All
14	Mega	Left-Right	14	Random	All
15	Ultra	Left-Right	15	Steady Max *	Adjustable
16	Single-Quad	Left-Right	16	Pulsing *	All
17	Single H/L	Left-Right	17	Steady 100% *	Adjustable
18	Single-Triple-Quint	Left-Right	18	Clockwise Pulsing Chaser *	All
19	Single	Outside-in	19	Cruise Mode (Steady 50%) * *(Mode 1 Default)*	Adjustable
20	Ultra	Outside-in	20	Clockwise Pulsing Scan *	All
21	Single	Side-by-side	21	Steady 1% *	Adjustable
22	Ulra	Side-by-side	22	Butterfly Pulsing Scan *	All
23	Single	Criss-cross	23	Pulsing Scan Wig-Wag *	Left-Right
24	Ultra	Criss-cross	24	Pulsing Scan Wig-Wag *	Outside-in
25	Clockwise Pulsing Chaser	All	25	Double-Double	Left-Right
26	Clockwise Pulsing Chaser Fast	All	26	Quad-Quad	Left-Right
27	Random	All	27	Triple-Blast	Left-Right
28	Steady Max *	Adjustable	28	Double-Double	Outside-in
29	Pulsing *	All	29	Quad-Quad	Outside-in
30	Steady 100% *	Adjustable	30	Triple-Blast	Outside-in
31	Clockwise Pulsing Chaser *	All	31	Swing II	Outside-in
32	Cruise Mode (Steady 50%) * *(Mode 1 Default)*	Adjustable			
33	Clockwise Pulsing Scan *	All			
34	Steady 1% *	Adjustable			
35	Butterfly Pulsing Scan *	All			
36	Pulsing Scan Wig-Wag *	Left-Right			
37	Pulsing Scan Wig-Wag *	Outside-in			
38	Double-Double	Left-Right			
39	Quad-Quad	Left-Right			
40	Triple-Blast	Left-Right			
41	Double-Double	Outside-in			
42	Quad-Quad	Outside-in			
43	Triple-Blast	Outside-in			
44	Swing II	Outside-in			
45	ICAO Single *	Corners			
46	ICAO Single *	All		* Dim Mode is not applicable.	

TAKE-DOWN & ALLEY LIGHT

Activate Take-Down & Alley(Corner) Lights in High Power steady-burn by applying the **GREEN** wire to **+VDC**. By default, Take-Down Lights are set at the second lightheads from the center of the lightbar. Alley lights are set at all three corner lights.

NOTE: If the lightbar is equipped with Dual Color lightheads, Take-down and Alley will display in Color 2.

To re-designate preferred Illuminated areas, tap **+VDC** to **YELLOW** wire while the Take-Down & Alley (Corner) Lights mode is on.
- Quick once to the next Illuminated areas.
  (refer to Illuminated Area chart).
- Quickly 3 times to reset to IA#1.

IA#	Illuminated areas
1	TDs & Alleys (Default)
2	TDs
3	Alleys
4	Front TD
5	Rear TD

TRAFFIC ARROW

Activate rear Traffic Arrow function by applying
- **BLUE** wire to **+VDC** for Left Arrow.
- **PURPLE** wire to **+VDC** for Right Arrow.
- Above 2 wires together to **+VDC** for Centre-out Arrow.

NOTE: If the lightbar is equipped with rear Dual Color lightheads, Traffic Arrow will display in Color 2.

To configure the Traffic Arrow flash pattern, tap **+VDC** to **YELLOW** wire while in a Traffic Arrow mode:
   a. Once to next pattern. (refer to Traffic Arrow Pattern chart).
   b. Quick 3 times to TP#1.

TP#	TA Flash Patterns
1	Sweep Single(Default)
2	Sweep Double
3	Sweep Triple
4	Sweep Single End-Double
5	Solid
6	Solid End-Double
7	Solid Chaser
8	Solid Fade
9	Blink Double
10	Blink Triple
11	Blink Solid

LOW POWER OPERATION / MANUAL DIM FUNCTION

Activate warning mode *Low Power Operation* by continuously applying **+VDC** to **GRAY** wire.

NOTE: Dim Mode is not applicable for flash patterns with ICAO, steady and pulsing pattern marked with * in Flash Pattern table.