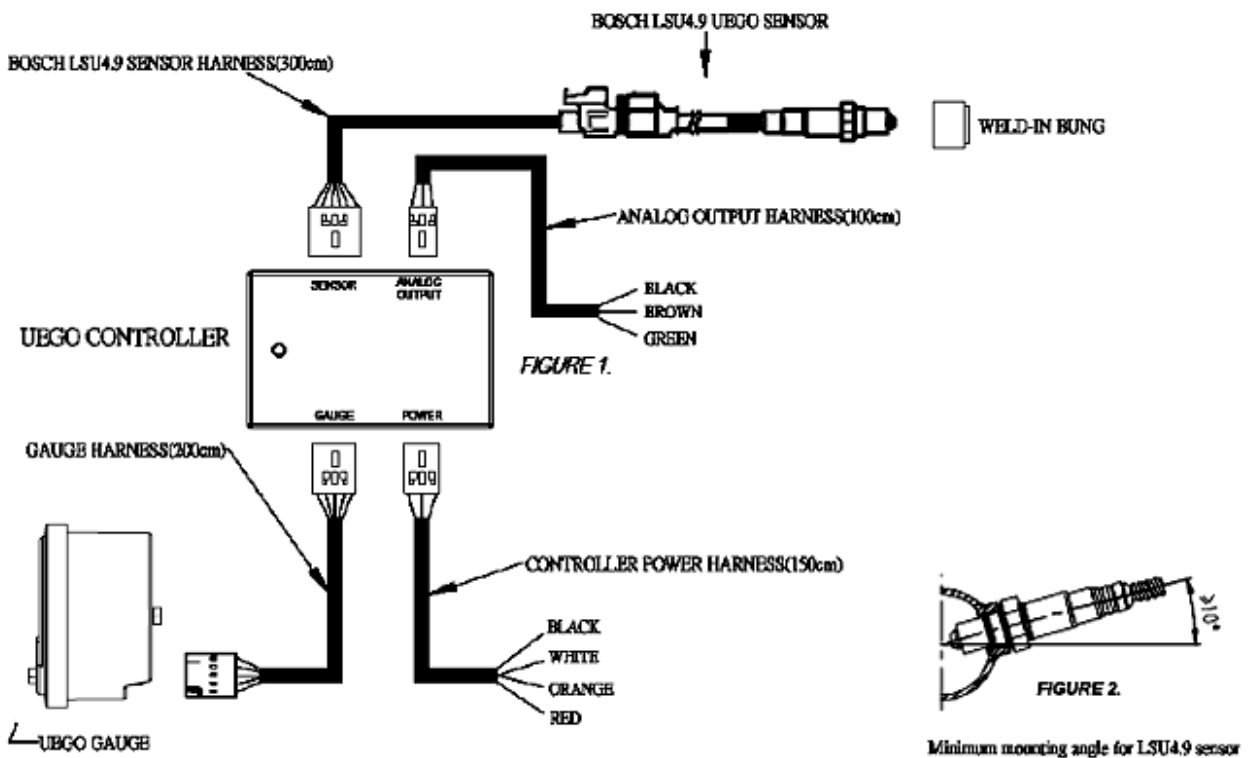# 60MM PREMIUM EVO WIDEBAND
AIR/FUEL RATIO GAUGE WITH ANALOG OUTPUT

UEGO CONTROLLER INSTALLATION INSTRUCTIONS:

RED - 12v CONSTANT POWER (+)

WHITE - 12v ACCESSORY POWER (+)

BLACK - ENGINE GROUND (-)

ORANGE - CONNECT TO 12v HEADLIGHT SWITCH (+) .

BOSCH LSU4.9 UEGO SENSOR

BOSCH LSU4.9 SENSOR HARNESS(300cm)

WELD-IN BUNG

ANALOG OUTPUT HARNESS(100cm)

SENSOR

ANALOG OUTPUT

UEGO CONTROLLER

BLACK
BROWN
GREEN

FIGURE 1.

GAUGE

POWER

GAUGE HARNESS(200cm)

CONTROLLER POWER HARNESS(150cm)

BLACK
WHITE
ORANGE
RED

UEGO GAUGE

FIGURE 2.

Minimum mounting angle for LSU4.9 sensor

A WELD-IN M18 X 1.5 BUNG IS SUPPLIED FOR SENSOR INSTALLATION. MOUNT THE O2 SENSOR IN THE EXHAUST SYSTEM AT LEAST 18 INCHES DOWNSTREEM FROM THE ECHAUST PORT. IF YOU ANTICIPATE HIGH EGT'S (OVER 800C), RUN A TURBOCHARGER, RUN AT HIGH RPM FOR EXTENDED PERIODS OF TIME OR PLAN ON RUNNING LEADED RACE FUEL THEN YOU MUST MOUNT THE SENSOR AT LEAST 36 INCHES OR MORE DOWNSTREAM OF THE EXHAUST PORT AS ALL OF THESE CAN CAUSE THE SENSOR TO OVERHEAT. ON TURBOCHARGED ENGINES THE UGEO SENSOR MUST BE INSTALLED AFTER THE TURBO CHARGER, IF NOT, THE PRESSURE DIFFERENTIAL WILL GREATLY AFFECT THE ACCURACY OF THE UNIT. FOR ACCURATE READINGS, THE SENSOR MUST BE MOUNTED BEFORE CATALYTIC CONVERTERS AND/OR AUXILIARY AIR PUMPS. TO PREVENT COLLECTION OF LIQUIDS BETWEEN THE SENSOR HOUSING AND SENSOR ELEMENT DURNING THE COLD START PHASE, THE INSTALLATION ANGLE SHOULD BE INCLINED AT LEAST 10° FROM HORIZONTAL WITH THE ELECTRICAL CONNECTION UPWARDS, SEE BELOW (FIGURE 2)

VOLT	LAMBDA	GASOLINE AFR
0.00	0.683	10.00
0.16	0.705	10.32
0.31	0.725	10.62
0.47	0.747	10.94
0.62	0.768	11.24
0.78	0.790	11.56
0.94	0.811	11.8
1.09	0.832	12.18
1.25	0.854	12.50
1.40	0.874	12.80
1.56	0.896	13.12
1.72	0.918	13.44
1.87	0.939	13.74
2.03	0.960	14.06
2.18	0.981	14.36
2.34	1.003	14.68
2.50	1.025	15.00
2.65	1.045	15.30
2.81	1.067	15.62
2.96	1.087	15.92
3.12	1.109	16.24
3.28	1.130	16.54
3.43	1.152	16.86
3.59	1.173	17.18
3.74	1.194	17.48
3.90	1.216	17.80
4.06	1.236	18.10
4.21	1.258	18.42
4.37	1.280	18.74
4.52	1.301	19.04
4.68	1.322	19.36
4.84	1.343	19.66
4.99	1.356	19.98

1. **CALIBRATION MODE:**

   PRESS THE BUTTON ON THE CONTROLLER FOR 3 SECONDS TO CALIBRATE THE CONTROLLER. WHEN THE LED SCREEN DISPLAYS [2], THE CONTROLLER IS CALIBRATING.

2. **SENSOR ERROR DIAGNOSIS:**

   WHEN THE LED SCREEN DISPLAYS [3], IT IS A SENSOR ERROR CODE. PLEASE CHECK IF THE SENSOR IS DISCONNECTED OR DEFECTIVE.

3. **ORIGINAL MANUFACTURE SETTING MODE:**

   PRESS THE BUTTON THE CONTROLLER FOR 8 SECONDS TO OPERATE THE ORIGINAL MANUFACTURE SETTING OF THE CONTROLLER. THE LED SCREEN WILL DISPLAY [2] FIRST. AFTER THE LED SCREEN DISPLAYS [4], THE ORIGINAL MANUFACTURE SETTING IS PROGRAMMED.

4. **ANALOG OUTPUT WIRE HARNESS INSTRUCTION:**

   BLACK – ENGINE GROUND

   BROWN – WIDE BAND ANALOG OUTPUT 0-5V (0V → 10AFR, 5V → 20AFR)

   GREEN – NARROW BAND ANALOG OUTPUT 0-1V (0V → 20AFR, 1V → 10AFR)

60mm EVO SERIES WIDEBAND OPERATION INSTRUCTIONS

There are five setting modes in this gauge, **Color Mode**, **Peak Mode**, **Warning Mode**, **Brightness Mode,** and **Sound Mode**. At any time when the gauge is in the normal mode, the color Mode can be changed by pressing $< \blacktriangle >$ or $< \blacktriangledown >$.

1. **Color Mode:**
   1) There are four color options in one gauge: White, Red, Green and Blue.
   2) Press $< \blacktriangle >$ or $< \blacktriangledown >$ to select a color.

2. **Peak Mode:**
   1) Press $< M >$ to enter into the Peak Mode.
   2) After 5-second of no button activity or press $< M >$, the gauge will return to the normal mode.
   3) When the peak value is displayed, press and hold $< M >$ 3-second to clear the previous peak value.
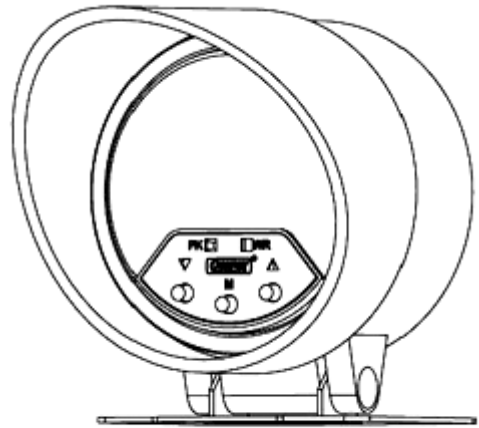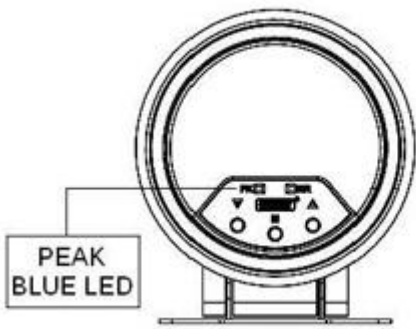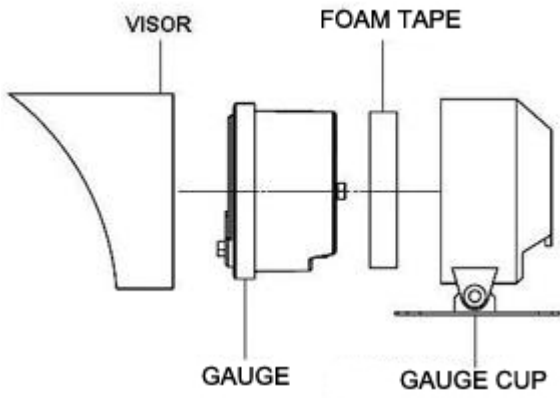
3. **Brightness Mode**
   There are six stages of brightness for both daytime and nighttime available for users to select the preferred brightness.
   1) Hold $< \blacktriangle >$ for 3-second to enter to the backlight brightness mode. When the PK and WR LED are flashing, the daytime brightness can be selected.
   2) Press either $< \blacktriangle >$ or $< \blacktriangledown >$ to select the backlight brightness.
   3) In order to set the nighttime backlight brightness, the orange wire of the power wire harness should be connected to a headlight 12v switched source (+).
   4) When the headlight 12v switched source (+) is on, the nighttime brightness can be selected.
   5) Press $< M >$ or after 5-second of no button activity, the gauge will return to the normal mode.

4. **Sound Mode:**
   1) Hold $< \blacktriangledown >$ for 3-second to turn the sound on/off.
   2) When the sound is enabled, you will hear two beeps. When it is disabled, you will hear one beep.

VISOR

FOAM TAPE

GAUGE

GAUGE CUP

PEAK
BLUE LED

Complete Set