

### Standalone Gauge Kit Accessories:

- LMA-3: Auxiliary Input #3 (AuxBox- RPM, Temp, Duty Cycle, Acceleration, Boost/MAP): #3742
- Exhaust Clamp: #3728
- Stainless Steel Bung w/ Steel Plug" #3736
- HBX-1: Heat-sinking Bung Extender: #3729
- DL-32 (32 Channel Vehicle Mounted Data-Logging System) #3782

### Replacement Parts:

- Terminator Plug: #3750
- MTS 2.5mm to 2.5mm serial cable: #3760
- Bung/Plug set: #3735
- Sensor (Bosch LSU4.2): #3737
- Serial Programming Cable: #3746

Order parts, get support, find FAQ answers, and read case studies at [www.tuneyouengine.com](http://www.tuneyouengine.com)



**Warning!**

1) The Oxygen Sensor used in this device gets very hot in operation. Do not touch the hot sensor. Do not let a hot sensor touch a combustible surface. Do not use the sensor with or near flammable liquids or gases. Failure to heed these warnings may result in severe burns, explosions or fires. 2) When installed in the exhaust, the oxygen sensor **MUST** be connected and operating with the LC-1 whenever the car is running. An un-powered oxygen sensor will be quickly damaged when exposed to hot exhaust gases.



## STANDALONE GAUGE KIT QUICK START GUIDE

*The complete instruction manual is on the CD*



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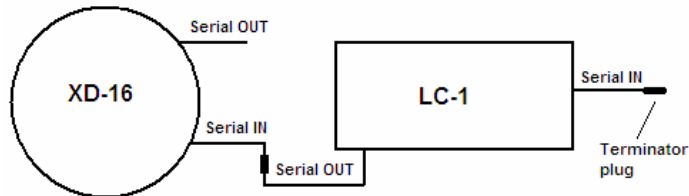
# STANDALONE GAUGE KIT

## QUICK START GUIDE

1. Connect the terminator plug to the serial IN port of the LC-1.



2. Connect one end of the 2.5mm cable to the serial OUT of the LC-1 and the other end to of the 2.5mm cable to the serial IN of the XD-16. Avoid connecting or disconnecting any of the ports labeled IN or OUT while the units are powered ON.



3. The LC-1 has 6 stripped wires. The **RED** wire should be connected to a switched 12V power source, make sure the connection is fused with a minimum fuse size of 5A. The **BLUE** and **WHITE** wires should all be grounded to the same ground source. Optimally, these (and the XD-16 ground) will be soldered to the same lug, and connected to a single point. When this isn't possible, connect each one to a separate lug, and attach in close proximity. Multiple lugs on the same bolt is not optimal, and can result in unwanted signal "noise." When possible, soldering is always better than crimping.
4. *Optionally*, the **YELLOW** (Analog out 1) and/or **BROWN** (Analog out 2) can be connected to the analog inputs of other devices such as data loggers, gauges, etc. The **BLACK** wire, calibration wire, will not be used in conjunction with the XD-16 in this application and should be taped off and tucked away.
5. The XD-16 has two stripped wires. The **RED** wire should be connected to a switched 12V power source. The **BLACK** wire should be grounded at the same place as the grounds of the LC-1.

### Sensor Calibration

6. Do not connect the sensor to the LC-1 or the exhaust yet.
7. Switch ON the 12V supply to the LC-1 and the XD-16 and wait 20 seconds. The XD-16 should be displaying an 'E2' error. *Note: If you see three dashes on the gauge please go back to step 2 and verify that the serial connections are correct and fully seated.*
8. Switch OFF the 12V supply after 20 seconds.
9. Connect the sensor to the sensor interface connector. **The sensor must be exposed to free air for the first time calibration.**

10. Switch ON the 12V supply to both the LC-1 and XD-16. The XD-16 will display the sensor warm-up sequence first.

The LC-1 will then proceed with a Heater Calibration. The XD-16 will display "HC" and count down from 9 to 0.

11. A Free Air Calibration is necessary to finalize the calibration process. Press the XD-16's button three times. "CAL" will begin flashing on the XD-16 display. Press the XD-16's button one more time to confirm the Free Air Calibration command; "CAL" will no longer flash and the XD-16 will send the command to the LC-1.
12. Attach the oxygen sensor to your vehicle's exhaust. (See chapter 3 of the LC-1 manual for details.)
13. **The Standalone Gauge kit is ready. Lambda/AFR measurements can now be taken.**



**To gain access to the complete LC-1 and XD-16 manual please install the software provided on the CD which was included as part of your kit. The manual will contain important information such as sensor placement, programming the analog outputs, and other tips & tricks.**