LC-1 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

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

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LC-1 (Lambda Cable)
QUICK START GUIDE
The complete instruction manual is on the CD

⚠ Warning! ⚠

1) The Oxygen Sensor used with 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.

LC-1 (Lambda Cable)
QUICK START GUIDE

1. The LC-1 has 7 stripped ends. The **RED** cable should be connected to a switched 12V power source. Make sure the connection is fused with a fuse of minimum 5A. The **BLUE** wire should be grounded to the power source ground or to chassis ground, the **WHITE** and the **GREEN** wires should be connected together and connected to a ground away from the blue wire. The **YELLOW** wire is analog output 1 and **BROWN** wire is analog output 2. Lastly, you have a **BLACK** wire which is the calibration wire. If you have the XD-1 this wire will not be used and should be taped away.

2. Optionally, connect a indication LED (1.2-2.2V, 1-30mA is recommended) between the calibration wire and ground. (Please reference chapter 3.1 in the LC-1 manual for complete instructions.)

3. **Do not connect the sensor yet.**

4. Switch 12V supply to the LC-1 on and wait for 20 seconds.

5. Switch the 12V supply off after 20 seconds.

6. Connect the sensor to the sensor interface connector. **The sensor must be exposed to air for the first time calibration.**

7. Switch the LC-1 on and wait for 2 minutes.

If you connected a LED to the calibration button, you will at first see the LED blink slowly and steadily. If it blinks for a fixed number of pulses, then switches off for 2 seconds and then repeats, you have an error code. See manual for details.

Slow and steady blinking indicates that the sensor is warming up to its optimum operating temperature. The warm-up period will last for about 30 seconds for a cold sensor, depending on the sensor type used.

After the sensor is warmed up the meter automatically calibrates the sensor heater controller to the particular sensor. During this 20-second period the LC-1 collects, regulates, and calculates sensor specific data required to quickly reach operating temperature in the future. After the first time use the meter will use these values to regulate the sensor's temperature. During the heater calibration the optional LED will blink fast and steady.

After that period the LC-1 will automatically perform a free air calibration. During this 2 second period a connected LED will go off. The LC-1 will now calibrate itself by using air as a reference gas with known oxygen content.

After the free air calibration is finished the LED should light up steady and continuously, indicating correct operation of the LC-1.

Programming analog outputs

1. Connect the 2.5mm stereo to DB-9 cable to the serial OUT port of the LC-1.

2. Connect the terminator plug (2.5mm male plug with no cable) into the Serial IN connection of the LC-1.

3. Launch *LM Programmer*

⚠️ *To gain access to the complete LC-1 and XD-1 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.*