

Manual - Air Fuel Ratio/ Lambda



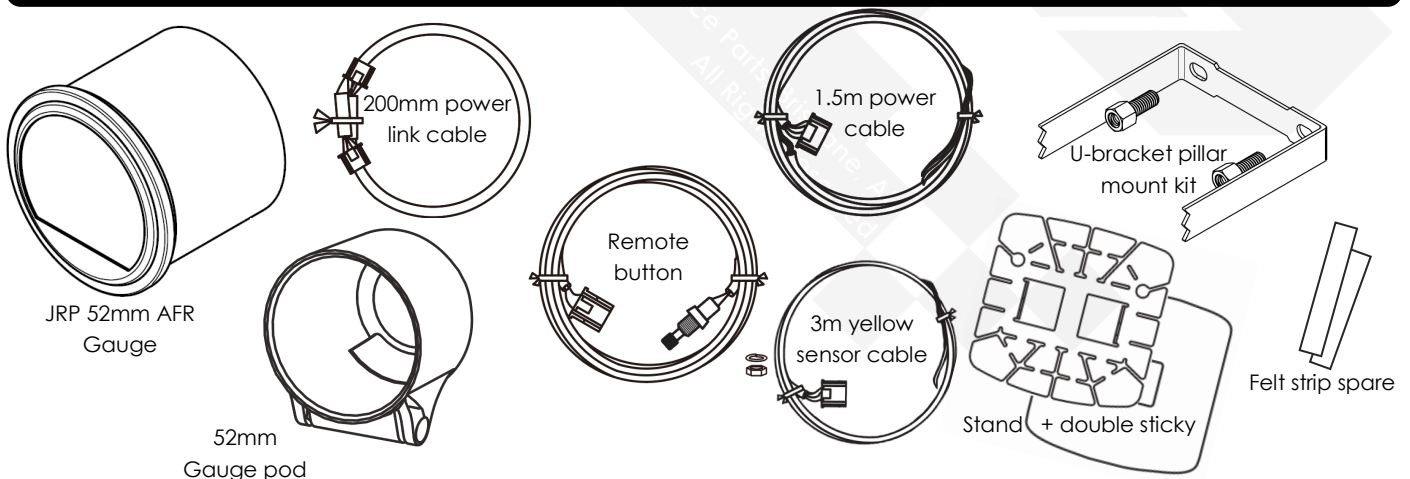
⚠ WARNING - Please Read Entire Manual Carefully!

- Do not change settings while driving.
- This product is designed to work with 12 Volt (v) vehicles only! This product will not operate on 6v or 24v systems.
- Take care reading through this manual, if you're not sure ask JRP via Email/ FB Messenger. For best results professional installation may be required for some components.
- Do not disassemble or modify this product. Such actions will not only void the warranty, but may also damage or destroy the product.
- Do not perform installations of this product immediately after the engine has been switched off. Engine and fluid in the cooling system are extremely hot at this time and can cause serious burns if touched.

➔ Main Features

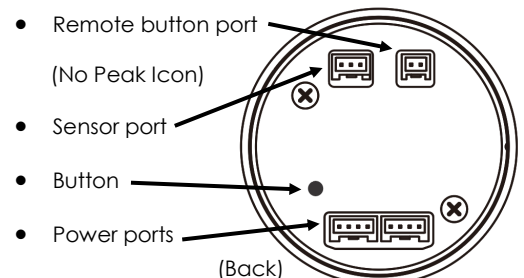
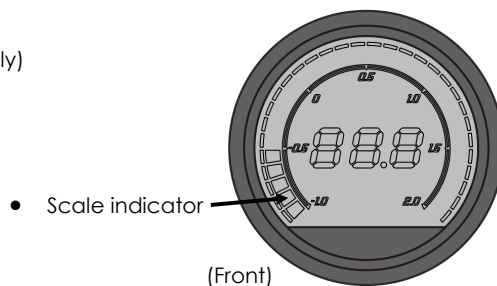
- 📺 Air fuel/ Lambda Display, Petrol 10-20 AFR, Lambda 0.68-1.36, Diesel 10-40 AFR
- 📁 Internal EEPROM. Gauge will retain some settings after being disconnected from vehicles battery, (if wired correctly [Page 2](#)).
- 📺 High contrast vertically aligned Liquid Crystal Display (LCD), no shadows when backlight is turned off. Different colour values can be chosen for night and day running mode.
- ⚠ Warning values can be programmed to trigger a warning buzzer with 3x different chimes.
- 🔊 The warning buzzer can be set 4x different sound levels: Off, low, medium, high.
- 🌞 Brightness can be set to 5 different values. For both night and day running mode.
- ❤️ 3x different movements can be set for indicator display type.
- 📊 Peak values obtained during operation will be stored, this can be reviewed and cleared at a later time (value will remain stored between engine cycles or trips).

📦 What's Included In Your Kit?



📺 Gauge Specifications

- Power-supply voltage:
8v to 18v DC (12v vehicles only)
- Current consumption:
+B line: MAX 120mA
IGN line: MAX 120mA
ILM line: MAX 2mA



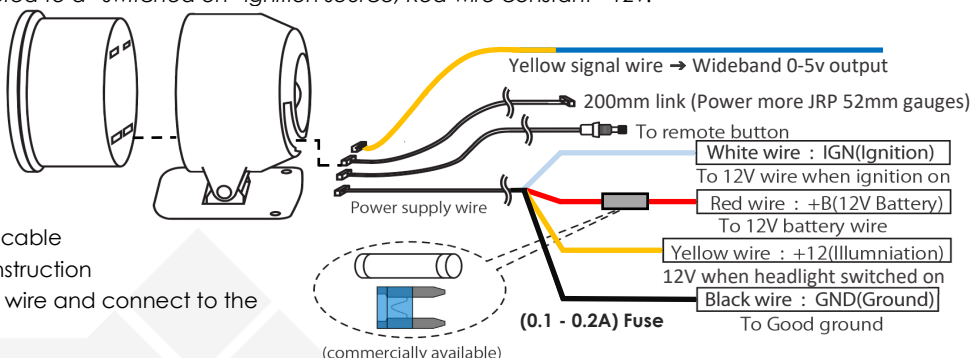
⚡ How To Connect Your Wiring

Test your gauge in isolation before adding it to your vehicle's power system. Black wire: To the Negative (-) terminal of the battery
Red wire & White: To the Positive (+) terminal of the battery, after gauge has booted, disconnect and install as below.

***WARNING! Settings will not be saved on gauge if Red & White are connected at the same power source permanently.**

White wire should always be connected to a "switched on" ignition source, Red wire constant +12v.

- Disconnect the negative terminal on the battery. Connect the power wires as shown. Warning! Always install a fuse where +12v is indicated.
- Connect the yellow wire to your Wideband output signal. 0-5v analog linear signal (Take special care to follow cable grounding requirements in the Spartan instruction manual. (Optional) Install remote button wire and connect to the gauge.
- Install 1x felt sticky strip if required (included) on inside edge of pod.
- Reconnect negative battery wire and start using the gauge.



Warning: Resistor spark plugs are required for accurate gauge readings, as they reduce EMI/RFI that can disrupt sensors. Non-resistor spark plugs create electrical noise and interference, which may affect the operation of the gauges and their sensors.

🔧 Common Button Operation

- To make changes to your new gauge use the button on the back of the gauge or the remote button included in each kit. (Both provide the same function). The button can be used to scroll through the menu. Short press will take you through the menu options, long press on the displayed option will take you into the setup menu for that selection. Make adjustments to that menu option using short presses, when the setting displays the required value, wait five seconds to return to live data to be display - Saved. (This will confirm and save your set up option). [See page 3 for detailed button operation.](#)

Note Day and night time modes can be set to display different settings shown in a table on page 3. You have to enter the night time mode to make changes to night time menus. **(Night mode is triggered from a 12 volt signal input from the yellow power wire).**

📐 Gauge Mode Configuration

There are 3x different display modes available for the JRP 52mm AFR/ Lambda GearX gauges.

- **RF 1 - Petrol 10-20AFR:** This display mode will show AFR display range appropriate for a petrol powered vehicle. The numeric readout in the centre of the gauge displays AFR values to one decimal place, the outside scale type readout as AFR.
- **RF 2 - Lambda 0.68-1.36:** This display mode will show Lambda display range appropriate for all fuel types. The numeric readout in the centre of the gauge displays Lambda values to two decimal places, the outside scale number are disabled, however the sweep still shows.
- **RF 3 - Diesel 10-40AFR:** This display mode will show AFR display range appropriate for a Diesel powered vehicle. The numeric readout in the centre of the gauge displays AFR values to one decimal place, the outside scale number are disabled, however the sweep still shows.

To change the Wideband display configuration of the JRP 52mm AFR gauge you will need to enter the top configuration menu. To do this, simply press and hold the button on the back of the gauge or the remote button while live data is displayed. After 5 Second you should hear an audible "Beep." Then with a short press you will navigate through the three "AF" options displayed above. Once you've selected the wideband Air Fuel mode required for your application, wait for live data to return to the display. Your settings will now be saved.

Note to use the Diesel readout on these gauges, you must be using a wideband controller that has had the 0-5v analog out set to scale 10 - 40 AFR, example the Spartan 3Lite, 3D & ADV can do this where the Spartan 2 can not

If you want to reuse an old Spartan wideband for alternatively fuelled vehicle Contact JRP, some Spartan products may be reprogramed a second time.

