

## User Instructions

Thank you for purchasing a **Lithiumax RACE or RESTART LCD inc EV/HYBRID** LiFePO<sub>4</sub> replacement battery for your race or road car, SUV, 4WD, boat, motorcycle, go-cart, aircraft or powersport equipment. You have purchased the highest quality item made using the very latest in lithium materials technology. If maintained correctly, your Lithiumax battery should give you many years of high performance service. All Lithiumax batteries ship charged and ready to use.

**Note:** Ensure you are using the correct battery for the application for warranty purposes. Application guidelines:

300CA RACE3 with LCD	- Engines up to 1.3 litres inc race cars, motorcycles, go-carts, powersports and boats.
500CA RACE5+ with LCD	- Engines up to 2.5 litres inc race & track day cars, 4WD, powersports, motorcycles and boats.
300CA-700CA RESTART5 LCD	- Engines up to 1.8 litres inc race & road cars, 4WD, aircraft and boats.
700CA RACE7+ with LCD	- Engines up to 3.5 litres inc race & road cars, SUVs, 4WDs, aircraft and boats.
700CA RESTART7 with LCD	- Engines up to 3.0 litres inc race & road cars, SUVs, 4WDs, aircraft and boats.
900CA RACE9+ with LCD	- Engines up to 6.5 litres inc race & road cars, SUVs, 4WD, aircraft and boats.
900CA RESTART9 with LCD	- Engines up to 6.5 litres inc race & road cars, SUVs, 4WD, aircraft and boats.
900CA RESTART9 EV/HYBRID LCD	- Hybrid and PHEV vehicle engines up to 2.0 litres, all EV vehicles as ancillary battery.

**Note:** Turbocharged or supercharged vehicles multiply engine capacity by 1.5 for correct battery specification from above guidelines.

Press the button near the LCD screen, showing voltage (V). The battery should read between 13.1V and 13.4V when fully charged. Anything over 13.2V can be considered a usable full charge. The voltage and capacity meter has an auto-off power function except for the RACE3 units which can be switched on and off. Be sure to switch off after use.

### Fitting:

Use the supplied bolts to secure your terminal cables to the Lithiumax Battery. Ensure there is no pressure on the battery terminals from the cables, that may transfer vibration to the battery and potentially loosen the terminals. Alternatively you can use SAE OEM type terminal posts, available through your local dealer [www.lithiumax.com.au/contact](http://www.lithiumax.com.au/contact). Be sure to select the correct bolt size SAE terminals i.e. M5 or M6.

Use either the OEM battery mounting bracket, padding out with suitable material where required or you can purchase a dedicated Lithiumax aluminium mounting bracket or OEM fitting kit for all RACE & RESTART LCD battery models (Except RACE3 unit) from your local dealer [www.lithiumax.com.au/contact](http://www.lithiumax.com.au/contact).

Note: Ensure that you are not applying too much pressure when mounting your Lithiumax battery so that the battery casing is not compressed or deformed. An excessively deformed or compressed casing may void the warranty and could lead to thermal runaway.

Please note: There are only certain conditions in which Lithiumax batteries can be introduced or connected in parallel with another battery including deep-cycle batteries such as ElectriBank [www.electribank.com](http://www.electribank.com). Both batteries must be at a similar charge state (over 12.5V for the Lithiumax battery) prior to connecting in parallel. If the Lithiumax battery is below 12.5V do not connect with another charged battery else this may void the warranty. Ensure the Lithiumax battery is charged over 12.5V prior to parallel connection with another battery. This includes Jump Starting from a charged battery or battery pack.

**Battery Registration:** With many late model vehicles manufactured after 2000, as is the case with all new batteries, your Lithiumax battery may need to be registered with the ECU or PCM to operate correctly with your vehicles systems. Please consult your service agent and/or vehicle owners manual for details.

**Maintenance:** It is recommended that you use a dedicated Lithium battery charger or Lithiumax Fast or Tender Maintenance Charger for battery maintenance. These are available through your local dealer [www.lithiumax.com.au/contact](http://www.lithiumax.com.au/contact). Your regular vehicle or boat alternator or dedicated quality battery/trickle charger may be adequate for this purpose. The Lithiumax Fast and Maintenance Tender Charger is connected via the +ve and -ve terminals using the supplied connection harness eyelets or alligator clips.

**Note:** Ensure that you do not use a lead-acid conditioning/reconditioning or de-sulphation setting for your battery/trickle charger on Lithiumax batteries, as this will void the warranty. The AGM/Gel setting may be used in some cases if no dedicated lithium setting exists, however you need to ensure the AGM setting of your charger does not have a re/conditioning or desulphation function when charging. For RACE3 & RACE5 LCD batteries, do not charge over 14.8V or drain below 8V as this may void the warranty. For extended periods of storage it is advised that the battery is disconnected from the vehicle or a timer for the charger used, charging for up to 12-24 hours periodically, depending on the vehicle's systems drain.

**RESTART Function:** For Lithiumax batteries fitted with RESTART technology, the battery may provide a number of short voltage cuts below 12V to signal 'low-voltage'. The battery will then hard-cut at approx 11.2V. To RESTART the battery press the volt read-out button, the battery will RESTART and voltage will be displayed. You may or may not have adequate energy in the battery to start the engine at this point, depending on the engine size and type, there is a 60s window after button press to start the engine. The battery also has a protective hard-cut at 8V. Only charging will restore the battery's functionality at the 8V cut-out. Please note that the non-RESTART RACE3, RACE5 (Not RACE5+) units low-voltage cut-out is a soft-cut on discharge. These models will need to be disconnected from the source of the drain if below 10V and will continue to drain if not disconnected. The battery then must be fully charged prior to re-use. RACE5+, RACE7+ and RACE9+ models have an 8V cut-out only and require charging once this 8V cut-out is invoked. Press the button prior to charging. Do not jump start a battery that has invoked the 8V cut-out. See below.

**Warning:** Do not jump start the engine using an external power source with the terminals connected directly to your Lithiumax battery, as this may damage one or more of the internal cells and void your warranty. For jump starting purposes, disconnect the +ve terminal from the Lithiumax battery and jump directly to the +ve terminal cable. Once the engine has started, reconnect the +ve terminal cable to your Lithiumax battery in order to allow it to charge as normal.

**Note:** Be sure to pass these details on to your vehicle, boat, motorcycle, powersports, go-cart or aircraft service agent.