

R3 Racing Battery Check

Your solution to battery problems

Fitting instructions

Fit a split ring to one end of each of the steel securing pins.

Position the Battery Check on to the top of the battery, making sure to fit the cable along the top underside and out through the corner gap as indicated overleaf. Fit the cable tie around the charger socket such that when the Battery Check is connected the charger socket does not disappear under the cover!

Each pin can now be inserted and should fit underneath the top lug of the standard Rotax battery carrier. Once fitted insert the 'R' clip through the hole at the other end of the securing pin.

Finally connect the power plug into the charging socket on the wiring harness. The meter should now be working.

Different voltages

The normal battery voltage is the same voltage you would normally read with a voltmeter. (As you may already be doing between races.)

The minimum race voltage is the voltage that the battery goes down to whilst racing with the engine flat out.

The engine start voltage is the voltage that the battery drops to when you start your engine.

Typical voltage values	Normal voltage	13v
	Race voltage	12 to 12.5v
	Engine start voltage	9 to 10V

These are typical voltages but will vary with battery brand and to some extent with temperature. Lower at low temperatures.

Why do I need these voltages?

We have seen several problems during racing which can easily be avoided. Sometimes a 2 stroke engine will start remarkably easily with the merest turn of the engine. This means that although the battery is in a poor state of charge you may start the race, but may not finish it! On other occasions it may not even start the engine. Then a quick battery change is necessary. The Battery Check allows this with a quick and easy pin release system. More importantly by using the Battery Check, you should not even get near to these disastrous conditions.

It is not easy to measure the charge condition of a Sealed Lead Acid (SLA) battery. Certainly not quickly. However if you measure its voltage under various load conditions then you are able to detect when the battery is about to fail, or become exhausted. Measuring the voltage under start and run conditions gives a very good picture of the condition of the battery. This is precisely what the R3 RACING Battery Check does for you.

Operation

The Battery check connects directly into the charger socket fitted on the wiring harness and draws its power (very small) from this connector. The display then shows the normal battery voltage.

When the engine is started the Battery Check detects this, measures the low voltage reached with the starter motor engaged (the engine start voltage) and resets the minimum race voltage.

By depressing the Low Volts button you can display the minimum race voltage. Further by holding the button down for 3 seconds or more you can read the engine start voltage.

Each time you start your engine these voltage are reset. This means that you do not need to reset the instrument at all during a race day - just read the battery condition. The microprocessor inside the Battery Check takes complete care of the operational side all on it's own! Alternatively you may manually reset the minimum race voltage only, by pressing and holding the Reset button for 1 second.

Electrical Specification

- * Voltage display to tenths of a volt
- * 7.8mm high LCD display
- * Automatic or manual operation
- * Operating range 8 to 16V
- * Current draw less than 7mA
- * 2.5mm Power socket

Mechanical Specification

- * Strong steel construction
- * Powder coated for protection
- * Stainless steel location pins & clips
- * Weight is a mere 300gms

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