BATTERY STATUS MONITOR — Fitting Instructions

DESCRIPTION

The BSM is a limited range LED (Light Emitting Diode) voltmeter, designed to monitor the voltage across a 6V or 12V lead-acid battery in an automotive situation. The original analogue BSM has been proven in the harsh motorcycle arena for many years and is used in CAA type approved "micro-light" aircraft. The digital BSM is a significant upgrade to this successful product, with more features in a smaller and lighter package. The BSM is protected against electrical abuse including reverse connection and unlike an analogue meter it is immune to vibration. The digital BSM has built in **ambient light detection**, which reduces the LED brightness under low light (night driving) conditions.

TYPES

There are a number of different electrical types of BSM, ensure you have the correct version for your application. The BSM is fitted to an instrument panel using the supplied *bezel*. Electrical versions are available for conventional 6V and 12V systems. A further version is available for 12V 'Pre-charged' applications where the battery is initially charged and then discharged in use; such systems are used on some racing machines, caravans and gliders.

FITTING

Drill a 14.0mm hole (tight $^{9}/_{16}$"). Place the bezel through the hole from the front. From behind the panel push the BSMs LED through the bezel until it clicks. If the panel material is thin it may be necessary to use silicone sealant to secure the bezel at the rear.

CONNECTION

Join the positive (RED) and negative (BLACK) wires to the ignition circuit and earth, according to the system's polarity. On the handlebar version one core of the 'figure-of-eight' cable has a feint ridge running along the outside, this is the positive lead. For positive earth systems RED (ridged) will be to earth and BLACK to ignition. If the BSM fails to light up the connections could be reversed; the unit will not be damaged, try again! Be aware that voltage drops from heavy loads (headlamp) may effect (lower) the BSM results.

READINGS

Conventional charging system colour chart:

6-Volt	12-Volt	Colour	Meaning
<5.38	<10.75	RED – slow flash	Extreme under voltage – recharge battery now.
6.0	12.0	RED	Battery low or under load (without charging).
6.25-6.75	12.5-13.5	ORANGE to YELLOW	Fully charged (engine not running)
>6.9	>13.8	GREEN	Charging
>7.63	>15.25	RED – fast flash	Over-charging – investigate!

Pre-Charged system colour chart

Voltage	Colour	Meaning
<10.5	RED – slow flash	Recharge battery immediately
10.5	RED	Capacity nearly exhausted
11.0-12.0	ORANGE to YELLOW	Discharging
>12.5	GREEN	Fully charged (at rest)
>13.8	GREEN flashing	Battery on charge
>15.25	RED – fast flash	Over-charging – investigate!

Note: The BSM is designed as a warning device and not a calibrated voltmeter.