

## GAMMATRONIX INTEGRATED LED BATTERY CHARGE / LEVEL INDICATOR (Model 'E')

### Specifications :

12v or 6v dependent on model. Accuracy to +/- 0.2v. 10 to 20mA (depending on LED colour/status). Microprocessor controlled. Internally fused (self resetting) and reverse voltage protected. Unit will operate down to 3.8v and up to 16v.

### Function :

The unit is able to operate as a battery charge indicator, or a battery level indicator, on Lead-Acid type 6v or 12v cells, according to model. The voltage or charge state of the battery is indicated on the large 10mm tri-colour LED. The device makes a 'rolling average' of several measurements over the last 2 seconds, which will give a degree of immunity to false indications due to fluctuating battery loads.

The unit may be configured at installation time to run in one of two modes, selected by fitting a jumper link on the connector pins located at the rear of the PCB between the power leads. 6v versions run at half of the levels below.

### **Battery Charging Indicator Mode (No Link Fitted)**

Version	Red / Green Flsh	green	Yellow	Yell Flsh	Red	Red Flsh
12v DC	> 15.2v	13.2v	11.8v	11.5v	11.2v	<11.2v

### **Battery Level Indicator Mode (Link Fitted)**

Version	green	Yellow	Yell Flash	Yell Fast Flsh	Red	Red Flsh	Red Fast Flsh
12v DC	12.1v	11.8v	11.5v	11.2v	11.0v	10.7v	<10.7v

### Fitting :

The device is self contained and merely requires mounting in a 14mm dia hole and two supply wires connected. The device requires approx 29mm depth behind the surface of the panel. If installed in a vehicle, the unit can be connected as 'always on' or to operate only with ignition running.

**For 'Always On' operation, connect the RED wire to battery positive (or other permanent live feed), and the BLACK wire to battery negative. For 'Ignition On' operation, connect Black to negative supply, and Red to a switched feed from the ignition switch.**

If not wiring direct to the battery, accuracy may be affected slightly due to voltage drops / losses in wiring when connected to existing high current load circuits. The unit is internally fused but should have the wiring to it protected by an additional suitable local fuse of 2 Amps or less at a point close to the battery. It is possible your installation already has such a fused circuit available. If the unit is to be used outside and may get wet, seal the bezel into its mounting hole with a small amount of clear silicon or other sealant. The unit has inbuilt interference suppression, but in very noisy electrical environments it may require additional in-line suppression which can be purchased from car radio installation stores.

### Lead-Acid Batteries

Lead acid batteries exhibit different off-load voltages when discharged (or 'flat') than when under load. A flat battery off-load may read close to 12v or 6v, but will immediately collapse to a few volts if current is drawn. The Charge / Level Indicator LED is intended to give a correct reading for a battery UNDER LOAD or under charge. As with any other voltmeter, it may give an erroneous high reading if the battery is not connected to a load due to the battery's internal resistance off-load effects.

### Safety, end of life, and warranty statement



*This unit is an installable component and not a complete system in its own right and therefore requires installation. The installation, use and suitability in a given application is the responsibility of the installer. Any damages or consequences are limited to the replacement of the unit under the 12 month guarantee. Do not allow the unit to become damaged, wet, dismantled, or make modifications to the enclosure or internal parts. Do not use the unit outside of its operating voltage specification (according to model.) At end-of-life this product should be taken to suitable recycling facilities and not put into general household rubbish.*