



# TITANIUM SMART CHARGER

The Acumen Titanium is a microprocessor-based battery charger and maintainer for all types' of 12V lead/acid batteries. DO NOT use to charge LiON, NiCd or NiMH batteries.

The system incorporates a liquid-crystal voltmeter. This voltmeter will also be powered when the system is connected to a battery, even if the mains lead is not connected. It is designed for use on a 12Vdc nominal system! DO NOT connect to higher voltages.

## SPECIFICATIONS;

Input; Volts; 220/250 AC, 50/60Hz  
Output; DC 12V Nominal, 0.8 V  
Minimum Battery Voltage to enable charging to begin; 2.3V

## CONTENTS;

1 x Acumen Platinum DUO 2-circuit battery charger  
1 x Battery "eyelet" lead with waterproof connector,  
Splash-proof fuse holder and 5 AMP fuse.  
1 x Crocodile lead for temporary connection to the battery  
1 x 3M battery charging extension lead  
1 x UK Mains Lead  
1 x European Mains lead  
1 x Wall bracket  
4 x screws/fixings for mounting bracket



## SAFETY FIRST! READ BEFORE USE!

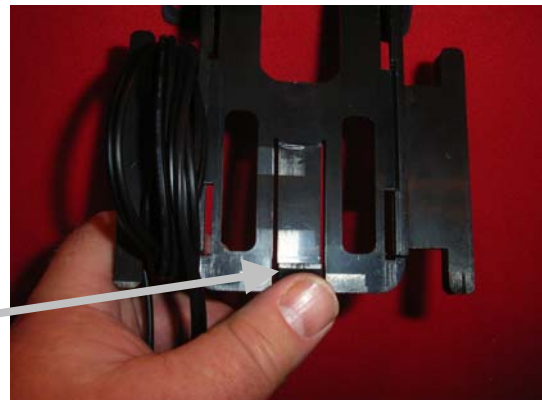
**Battery Acid is corrosive. Wear protective clothing and avoid contact, particularly with the eyes. Flush spillages on the skin or in the eyes with plenty of water and seek immediate medical advice.**

- Charge batteries in a well ventilated area. The gases released from the battery are explosive
- Ensure there are no naked flames while charging
- Ensure the battery is adequately vented and that vent tubes, if fitted, are not obstructed
- Risk of Electrocution. The charger is splash proof (IP42) but not designed for outdoor use
- Ensure the battery posts are clean and dry for a good contact
- The charger has it's own internal safety protection for overload, reverse polarity, and shorts
- Always wash your hands after handling lead-acid batteries









## MOUNTING THE UNIT;

Mount the wall bracket to the desired position  
Using the 4 screws and wall plugs as required.

The Titanium charger will slide into the bracket  
until you hear a click.  
To remove the charger from wall bracket, depress  
the latch slightly to allow the charger to slide out.



## USER INSTRUCTIONS;

1. Connecting to the battery.  
**NOTE!** Although the AcumenTitanium incorporates “spark suppression”, Acumen recommend the leads are connected to the battery being charged BEFORE switching on the main supply. Because of the “spark suppression” facility in the unit, the unit may take up to 15 seconds before it commences charging.  
**NOTE!** During ‘Recovery Mode’ for deeply discharged batteries the charger will increase its output voltage. We recommend the battery is disconnected from the vehicle, to prevent possible damage to vehicle components.
2. Connect the Red Clip/Red-tagged eyelet to the positive terminal of the battery. This terminal is usually marked ‘+’ or marked in **RED**  
Connect the Black Clip/Black-tagged eyelet to the negative terminal of the battery. This terminal is usually marked ‘-’ or marked in **BLACK**
3. Connect to and switch on the mains power supply. The ‘power on’ Green LED’s  will illuminate (If not, check the power supply and the fuse in the mains plug, if applicable)  
**NOTE!** If the reverse polarity LED  illuminates and an internal beeper will give an audible warning. Reverse the Red and Black lead connections.
4. The charging LED  will illuminate while the charger tests, and if necessary, charges the battery.  
  
Charging will be at a constant 0.8Amps until the battery voltage stabilizes at 14.2/14.9 volts  
**NOTE!** If the voltage of the battery is less than 2.3 volts, the charging cycle cannot begin and the LED will not illuminate
5. The ‘Good’ battery LED  will illuminate only if the battery can ‘hold’ it’s charge and does not discharge itself  
**NOTE!** Even if you use the battery while the charger is connected and charging, the Green LED will remain illuminated. The Green, ‘Good Battery’ light means what it says; you have a good battery, regardless of its state of charge. If you disconnect the battery being charged, and restart charging again, the charger will revert to (4) above.
6. The ‘Weak’ battery LED  will illuminate if the battery voltage will not exceed 12.2 volts. This normally means the battery has a self-discharge rate which is very high – certainly higher than the charger can replace. Bear in mind that if you are using the battery at the same time (such as for powering lights) and the load draws more than 0.8 Amp, the charger will not be able to charge the battery and this symbol will illuminate. In this case, switch off the load (switch off the lights!) and try again. Do not discard the battery the first time this symbol illuminates.
7. The Blue ‘recovering’ LED  will illuminate when the battery voltage is between 2.3 and 12.2 volts. In this mode, the charger will attempt to recover the battery by charging at 18-22 volts at <200mA (less than 200 mA).  
**NOTE!** If the battery recovery is successful, the charger will automatically turn to the Charging LED  and the battery will continue to be charged.  
**NOTE!** If the battery recovery is unsuccessful, the BLUE LED  will flash and the audible warning will be heard.
8. The Acumen Titanium is warranted against defective material or workmanship for 3 years from the date of retail sale. Warranty will not extend to causes of failure as a result of abuse, damage, or repair/attempted repair by any unauthorised party. Your statutory rights are not affected.
9. All leads/cables/wall bracket etc are available separately. Visit our web site for more details

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