

# OptiMate

**GB** Automatic charger for 12V lead/acid batteries. Not for charging dry cell or NiCad batteries. Input supply : 220/240V~. Output current : 0.6A, 12W (max.)

**ESP** Automático cargador para baterías de 12V plomo/ácido. No utilizarlo para cargar baterías, secas o baterías de tipo NiCd. Alimentación de la red : 220/240 V~. Corriente de carga : 0.6A, 12W (max.)

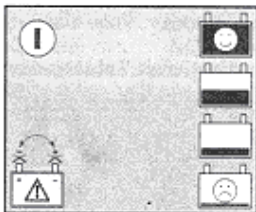
**NL** Automatische lader voor 12V lood/suur batterijen. Niet geschikt voor laden van droge - en Ni-Cad batterijen. Ingang : 220/240V~. Uitgangstroom : 0.6A, 12W maximaal.

## **GB** Instructions for Use: IMPORTANT: Read before charging.

**WARNING!** Batteries emit **EXPLOSIVE GASES - prevent flame or sparks near batteries.** Disconnect AC power supply before making or breaking DC/battery connections. Battery acid is highly corrosive. Wear protective clothing and avoid contact. In case of accidental contact wash immediately with soap and water. Check that the battery posts are not loose; if so, have the battery professionally assessed. If the battery posts are corroded, clean with a copper wire brush; if greasy or dirty, clean with a rag dampened in white spirit. Only use the charger if the input & output leads and connectors are in good, undamaged condition. **NOTE:** To connect charger to battery, crocodile clamps for quick connection and a cordset with eyelets for permanent connection are supplied. If using battery clamps, disconnect and remove your battery from the vehicle before charging and place in a well ventilated area. To connect the cordset, consult a professional service agent for assistance. Ensure the polarised two pole connector (for connection to charger) is situated away from the battery and restrained so as not to impede operation of any moving part of the vehicle. Prevent ingress of grime and dirt to polarised connector. Protect your charger from damp and humidity, both during use and in storage.

### LED (light emitting diode) indicator information panel

AC power present - **CLEAR**  
(POWER ON)



Battery connected inversely - **RED**  
(INVERSE POLARITY)

**GREEN** - Battery charged and ready for use. (BATTERY OK)  
**YELLOW** - Battery discharged, but charging normally. (CHARGING)  
**ORANGE** - Battery badly discharged/slightly sulphated; RECOVERING  
**RED** - Battery cannot retain charge, or slightly sulphated; SUSPECT

1) Connect the charger to the battery - RED clamp to POSITIVE (POS, P, +) terminal and BLACK clamp to NEGATIVE (NEG, N, -) terminal. If the "INVERSE POLARITY" LED (red) should indicate, your battery connections are inverted. The charger is protected against this error; no damage will result and it will automatically de-activate. Disconnect clamps and reconnect correctly.

2) Connect the charger to mains supply socket providing AC supply of 220 to 240V. The "POWER ON" LED (clear) should illuminate. If not, check your AC supply or connections.

3) When connections are correct, the "POWER ON" and one other right-hand LED should illuminate. **NOTE:** If only the "POWER ON" LED is illuminated after correct connections have been established, the initial battery voltage was below 2V and the battery is probably irrecoverable. It is normal for the "RECOVERING" LED to very briefly illuminate at the start as the charger always passes through this cycle. Thereafter, and as long as the charger is connected to AC supply and battery, the status & condition will be indicated by a LED as per panel above.

4) The charger will automatically charge and maintain the battery very close to its full charged capacity unless the battery is defective. During the "CHARGING" cycle the battery is charged at maximum output current to a voltage of 14.3V and then charging is switched to 'float' mode with the maximum voltage of 13.8V. The charger now checks if the battery voltage settles above 13.5V for a period of at least 30 minutes to ensure the battery is fully charged (or very nearly). If not, maximum charge current will again be applied and once the battery voltage again reaches 14.3V, 'float' charging will continue for 30 minutes, then the charger will stop for 30 minutes. The battery 'rest' voltage is checked. If after the 30 minute 'rest' period the battery voltage is above 12.2V thereby indicating that the battery is able to retain at least 50% or more of its charge, the "BATTERY OK" LED will illuminate. With maximum charge voltage set at 13.8V, the charger will, at 30 minute

intervals, continually 'float' charge and reassess the battery self-discharge rate for as long as the charger is connected to battery and AC mains supply, indefinitely, safely and without damage.

5) Should you at any time during charging observe the 'SUSPECT' LED illuminated, take the battery to a professional workshop equipped with a BatteryMate load tester & charger for assessment. The 'SUSPECT' LED will illuminate if the charger was unable to recover your badly discharged battery or if the battery cannot 'hold' its charge.

**NOTE:** In the latter case, if the battery is still connected to your vehicle electrical circuit, disconnect any current draining accessories and 'reset' the charging process by disconnecting and then re-connecting AC mains supply.

6) If the charger has been left connected to AC power and without being connected to a battery, accidental short circuiting of the output clamps will merely deactivate the charger and the charger circuit will 'reset'.

7) Disconnect charger first from AC mains supply and then the battery.

**NOTE:** It is essential to RESET the charger before reconnecting to another battery.

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