

OptiMATE6

ampmatic

**New technology for
12V automotive and
marine battery care**



Saves neglected batteries other chargers can't

Optimizes battery power and life

24/7 automatic storage control

Early warning of battery problems

***ampmatic*[™] current control with cell equalization**

The new **OptiMate[™]6 ampmatic[™]** is the world's most advanced and versatile battery charger, maintainer and tester. An all in one unit, which is stylish and robust in a weatherproof enclosure that includes wall mounts and cables rated down to -40°F/°C, specifically for users in the water & snow markets.

Each time you connect the **OptiMate 6** to a battery the microprocessor automatically diagnoses the condition and automatically chooses the best charge current & program. **OptiMate 6** is able to correctly initialize & charge new sealed batteries where the user is adding the acid pack to the battery. This enhanced multi-stage version of the acclaimed OptiMate desulfation program will automatically save many "dead" batteries. The eco friendly program ensures low power consumption while keeping your battery maintained, fully charged and safe, month after month, prolonging its life by up to 400%.

OptiMate 6. Battery performance guaranteed !

- | | | | | | | | | |
|--------------------------|-----------------------|--------------------|---------------|---------------|----------------------|----------|----------------------|-------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Low Volt
Start (0.5V) | TEST before
charge | Pulse
'wake up' | Turbo
SAVE | Pulse
SAVE | Controlled
CHARGE | OPTIMIZE | TEST after
CHARGE | OptiMate
maintenance |



How it works

- 1. Initialisation:** OptiMate6 will only activate if the battery voltage measures at least 1.8V.
- 2. Programming:** the **ampmatic™** processor checks the battery's condition to determine the appropriate charge program.
- 3. Desulphation and recovery:** if necessary, 2 or 3 stages of high voltage and oscillatory pulsing are applied to recover neglected, flat batteries (removed from the vehicle *) from sulphation to a chargeable state.
* The voltage is limited to 16V if the microprocessor detects the battery may be connected to vehicle circuitry.
- 4. Bulk charge:** the **ampmatic™** processor actively adjusts charge current to match battery characteristics, achieving a complete charge in the shortest time.
- 5. Short-circuited / dead cell check:** Charge acceptance is continuously monitored to detect internal damage and prevent unnecessary charging of a battery that cannot be recovered.
- 6. Absorption and equalisation:** for 10 minutes the current is delivered in pulses with voltage controlled between 13.7 and 14.3V, aiding cell voltage equalisation and improving the battery's overall power delivery.
- 7. Charge verification:** the voltage is limited at 13.6V while the **ampmatic™** processor monitors the current absorbed by the battery. If this reveals a less than optimal charge, the program reverts to absorption for a further 10 minutes.
- 8. Voltage retention test:** is conducted for 30 minutes during which no charge current is delivered, with 5 possible test results indicating the battery's general state of health. A green (voltage > 12.7V) result extends the test up to 12 hours, to check for excessive self discharge (even a partly damaged battery may initially retain sufficient power, but lose power faster than normal there-after) or higher than expected power loss through the vehicle's electrical system.
- 9. Charge maintenance:** The **MAINTENANCE CHARGE CYCLE** consists of 30 minute float charge periods at a voltage of 13.6V followed by and alternating with a 30 minute 'rest' (no charge current) periods.
The voltage retention test and maintenance charge cycle will repeat 24 hours after the start of the very first test and continue to repeat for as long as the charger remains connected.
The alternating charge and 'rest' maintenance program provides the recommend maintenance voltage for AGM / GEL batteries whilst reducing the average voltage as required by STD filler cap batteries, making it ideal for indefinite and 100% safe long term maintenance charging of any type of 12V lead-acid battery.

Technical Specifications

Ideal for 12V lead-acid batteries	3Ah to 240Ah, AGM (MF), Standard, GEL and AGM spiral cell
Program control	ampmatic™ microprocessor
Output current (bulk charge)	0.4A – 5.0A
Automatic desulphation	multistage (high voltage, turbo and pulse mode)
Charge time limit	72 hours (maintenance time: unlimited)
Maintain / test cycles	30 min/30 min (alternating hourly), extended 12 hour test
Charge retention test	Range: 12.2 - 12.7V. GOOD (green) = battery voltage > 12.7V
Size	220 x 90 x 61 mm / 8 ¾ x 3 ½ x 2 ½ inches
Weight	740g / 1 ½ lbs
Enclosure type	Fully sealed (IP54), 4 x wall mount tabs
Input cable length	2m / 6ft
Output cable length	2m / 6ft
Accessories included	O-1 fused eyelet set, weather protected O-4 clamps set for bench charging
Operation temperature range	From -40°C <-> 40°C / -40°F <-> 104°F
Warranty	3 years
AC supply	100-240Vac 50-60Hz 1.5A@100V / 0.85A@240Vac
Reverse drain current	less than 0.1mA
Power usage (no battery connected)	0.0089kWh / day
Ratings / approvals : Safety, EMC, Energy efficiency, enclosure seal rating	IP54, CE, NRTL (UL & CSA), SAA (AU & NZ), PSE (Japan) approved by TUV Sud. BC (California Energy Compliant).