

Altronic Distributors warrants this product for one year from date of purchase from Altronics or its resellers to the consumer. If this item is part of an installation or another product, please contact the installer or supplier for your warranty.

During the warranty period, we undertake to repair or replace your product at no charge if found to be defective due to a manufacturing fault. The warranty excludes damage by misuse or incorrect installation (i.e. failure to install and operate device according to specifications in the supplied instruction manual), neglect, shipping accident, or no fault found, nor by use in a way or manner not intended by the supplier.

For repair or service please contact your **PLACE OF PURCHASE**.

If this item was purchased directly from Altronics please make a warranty claim by:

1. FOR MAIL ORDER CUSTOMERS (includes school and trade orders),

a) Calling your nearest store location and quoting your tax invoice number.

b) Upon contacting Altronics, we will issue an R.A. (Return Authorisation). As Altronics have a number of service agents throughout Australia, a copy of the R.A. will be emailed, faxed or mailed to you with full instructions of how and where to send the goods. The freight for shipping goods back to Altronics for all repairs is at the customers expense.

c) A copy of the R.A. form, (or at the very minimum, the R.A. number) must accompany the goods to effect the repair.

d) Altronics will pay the return freight to the customer where the warranty claim has been accepted.

e) Please quote the R.A. number in any correspondence to us.

2. FOR OVER THE COUNTER PURCHASES to make a warranty claim, please return the goods to us in any of our stores, with a copy of your proof of purchase (tax invoice).

a) Upon leaving the goods at one of our stores, an R.A. number will be issued to you.

b) Once repaired, you will be contacted, advising that the goods are ready to be collected from the store.

It is at Altronics discretion as to whether the goods will be repaired or replaced (whilst under warranty); and as to whether identical goods will be used to replace the item due to changes of models / products.

Note: Under no circumstances should you attempt to repair the device yourself or via a non-authorised Altronics service centre, as this will invalidate the warranty!

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

6V/12V 4.5A/1A Automotive Battery Charger

Operating Instructions



Features

- Short circuit and reverse polarity protected • Overheating protection
- Includes car accessory plug lead, battery clamps and ring terminal lead
 - Suits 6V and 12V cells • AGM and Flooded charge modes
- Defective cell detection • Trickle charge function • IP65 rated

M 8534A 6V/12V Battery Charger

Overview

This compact charger is suitable for all lead acid type and Lithium (LiFePO4) type batteries. It will charge 6V/12V cells using a 5-stage charging circuit. It incorporates AGM and Flooded charging modes for use in various climates. The circuitry automatically diagnoses the battery state and delivers the appropriate charge current to maintain optimum performance. The charger may be permanently connected without overcharging or damaging the battery, which is ideal for seldom used vehicles.

Package Contents

- Battery charger
- Operating instructions
- Cable with battery clamps
- Cable with o-ring connectors
- Cable with cigarette lighter plug

Specifications

Operating voltage:	100-240V a.c. 50/60Hz
Charge end voltage:	7.2V or 14.4V or 14.7V (+/- 0.25V)
Charging current:	4.5A +/- 10% (AGM, Flooded & Lithium LiFePO4 mode) 1A +/- 10% (6V & 12V motorcycle mode)
Rechargeable battery type:	Any 6V or 12V lead-acid batteries (SLA batteries, AGM, GEL) 12V Lithium (LiFePO4) batteries
Battery charge capacity:	1.2Ah - 120Ah
Battery maintenance capacity:	1.2Ah - 150Ah
Protection Type:	IP65 (casing)
Dimensions	203 x 48 x 67mm

General Warnings

- The battery charger may only be operated with a supply voltage of 100-240V a.c. 50/60 Hz. And it can only charge one battery at a time.
- This product is only suitable for charging 6 and 12V lead-acid batteries or 12V Lithium (LiFePO4). Never use it to charge different rechargeable batteries (e.g. NiCd, NiMH) or even normal non-rechargeable batteries! There is a risk of fire and explosion!
- Maintenance, adjustments and repair work may only be carried out by a specialist or a specialised workshop with access to appropriate spare parts if required.
- If you notice any damage, do not use the battery charger anymore.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- Battery capacity must accord with the charger rated battery capacity.
- The unauthorized conversion and/or modification of the product is unsafe and is not permitted.
- The product may only be set up, used or stored in places that are not accessible to children. Danger to life!
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Do not leave packaging material lying around carelessly. It might become a dangerous toy for children!
- The product is not a toy. It is not suitable for children. Pay particular attention when children are present!

SAFETY INSTRUCTIONS

Please read through the operating instructions completely before operating the device. They contain important information for correct operation.

The warranty/guarantee will be void if damage is incurred resulting from non-compliance with these operating instructions! We assume no liability for any consequential damage! We do not assume any liability for damage to property or personal injury caused by improper use or the failure to observe the safety instructions!

Product Features

- Charges multiple types of Batteries: **This charger is programmed to charge Lead-Acid, GEL, AGM, Lithium (LiFePO4) Batteries.**
- Fully Automatic multi-stages charging system: Microprocessor constantly monitors battery voltage and automatically delivers the appropriate currents to allow the batteries to be used over a prolonged period, which means that it is ideal for the maintenance of seasonally used motor vehicles, boats and motorcycles so that the batteries are always ready to go and in perfect condition without damaging the batteries.
- Auto-Memory: The charger will return to last selected mode automatically after power re-started.
- Battery Recovery capability and dead battery detection: Capable to recover slightly sulphated batteries and automatically identifies in case of dead battery.
- Switch-Mode Technology: Switch mode charger has high efficiency in terms of less heat lost, much faster response during charging, compact Size, and Light Weight.
- Low Power Saving: Charger is programmed to reduce amount of charging current once the battery is fully charged.

Protection Features

- Spark Resistant Short Circuit and Reverse Battery Protection: Prevents charger damage if battery leads are accidentally reversed
- Over Voltage Protection: Prevents high voltage spikes from damaging sensitive electronic components in the charger
- Electronic Current Limiting: Prevents overheating and damage caused by shorts or excessive loads
- Automatic Over-temperature Protection: Prevents charger damage from the events of abnormal ambient temperature or malfunction of components
- IP65: Dust and Splash resistant

Please note that the charger is protected with built-in thermal safety feature whereby the operating temperature of the electronic is constantly being monitored. If the operating temperature exceeds the pre-set safety level, the power of the charger will be reduced to prevent overheating. The result is that the output current will be reduced until the temperature drops sufficiently for a safe full performance again.

Notes on rechargeable batteries

- Make sure you observe all safety instructions and charging instructions of the battery manufacturer.
- Before connecting the battery to the battery charger, disconnect the battery from any loads or cables (turn off the loads first!).
- Always disconnect the ground connection from the battery before disconnecting the positive terminal.
- Disconnect the battery from the battery charger before connecting any loads to the battery.
- When connecting or disconnecting the battery, sparks might be produced. Therefore, make sure there is sufficient ventilation!
- Observe the polarity when connecting the battery to the battery charger. Red charger terminal is positive (+), black charger terminal is negative (-).
- Batteries must not be short circuited or thrown into fire. Risk of fire and explosion!
- Never try to dismantle or tamper with any type of batteries!
- Lead-acid batteries contain aggressive and corrosive acids. Avoid skin or eye contact with battery fluids!
- On skin contact, clean the affected areas thoroughly with water and soap. On eye contact, rinse the effected eye immediately with clear and cold running water! Then consult a doctor immediately!

Charging a Lead-acid Battery

First make sure your battery is 6V or 12V lead-acid, or 12V Lithium (LiFePO4) battery.

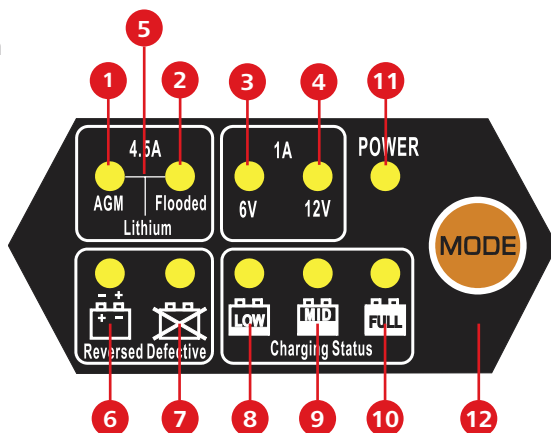
1. Do not charge batteries with different operating voltages!
2. Disconnect all loads from the battery. If the battery is installed in a vehicle, turn off the ignition and any other loads.

NOTE: Observe the instructions and safety information of the vehicle to find out how the vehicle battery should be charged. Modern vehicles are equipped with sensitive electronic parts and controls that can be damaged if you do not proceed properly!

3. Connect the battery charger to the mains power supply (100-240V a.c. 50/60 Hz).
First connect the clamp to the negative terminal and then to the positive terminal.
4. Select a function using the mode button.
5. Connect the battery charger to the battery with the correct polarity. If the polarity is not correct, LED 6 will be lit.
6. If the Charging loop is in short circuit, LED 7 will be lit.
7. This battery charger is equipped with an automatic memory function, i.e. whenever AC supply is connected, it starts in last selected mode.
8. After the charging process is completed, disconnect the battery charger from the mains supply, in reverse sequence to the connecting procedure (Step 3).

M 8534A 6V/12V Battery Charger

Function Diagram



1	Mode 1 – AGM (14.7V/4.5A for Lead) in Low ambient temperature, Suitable for charging 12V batteries 25Ah - 120Ah
2	Mode 2 – Flooded (14.4V/4.5A for Lead) in normal temperature, Suitable for charging 12V batteries 25Ah - 120Ah
3	Mode 3 - 6V Motorcycle (7.2V/1A) - Up to 7.2V, Suitable for charging 6V small batteries < 24Ah
4	Mode 4 - 12V Motorcycle (14.4V/1A) - Up to 14.4 V, Suitable for charging 12V small batteries < 24Ah
5	Mode 5 - 12V Lithium (14.4V/4.5A) in normal temperature, Suitable for charging 12V Lithium (LiFePO4) batteries 25Ah -120Ah (AGM + Flooded LED's Lit)
6	LED 6 - Cables connected with reverse polarity
7	LED 7 - The charging loop is in short circuit, or the battery is defective
8	LED 8 - Charging Indicator (below 50%)
9	LED 9 - Charging Indicator (below 75%)
10	LED 10 - Battery full (flashing > charging in progress over 75%, lit > fully charged)
11	Power/Standby Indicator
12	MODE button

Operating Modes

Mode Select

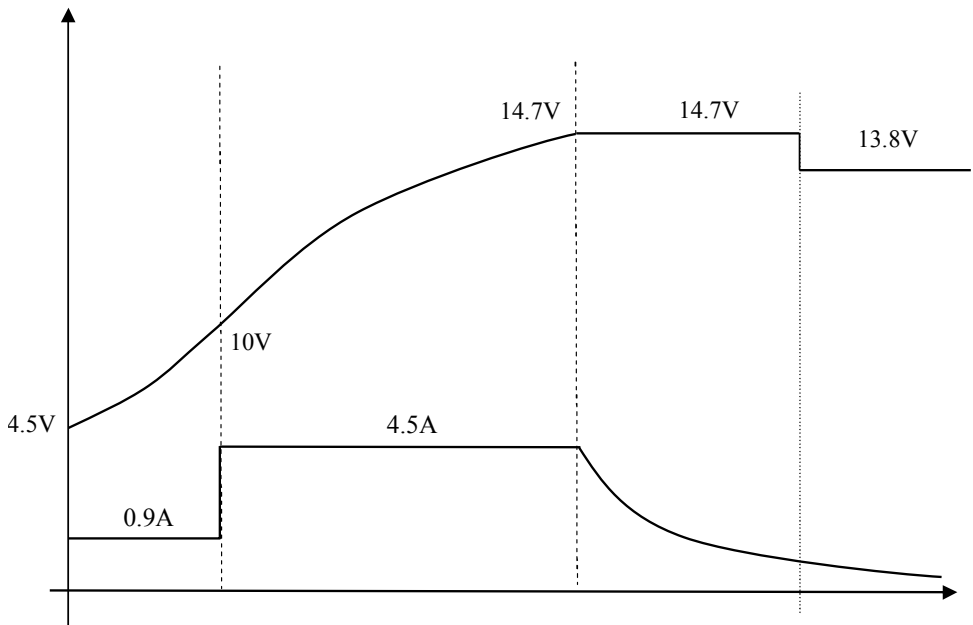
Press the MODE button (12) to activate or deactivate the selected mode.

Mode 1: AGM mode (14.7V +/- 0.25V)

- This mode is suitable for all lead-acid batteries (also SLA, GEL, and AGM) with a capacity above 25Ah at low ambient temperature.
- To select this mode, press the MODE button (12) until LED 1 'AGM' lights up. The charging process starts automatically (4.5A +/- 10%), LED 1 is lit.
- When the battery is fully charged (14.7V +/- 0.25V), LED 10 'FULL' lights up. The device automatically switches to float or maintenance charging.

NOTE: You can also use this mode with AGM batteries specified by the manufacturer to be suitable for a higher charge end voltage. Please observe the charging instructions of the battery manufacturer.

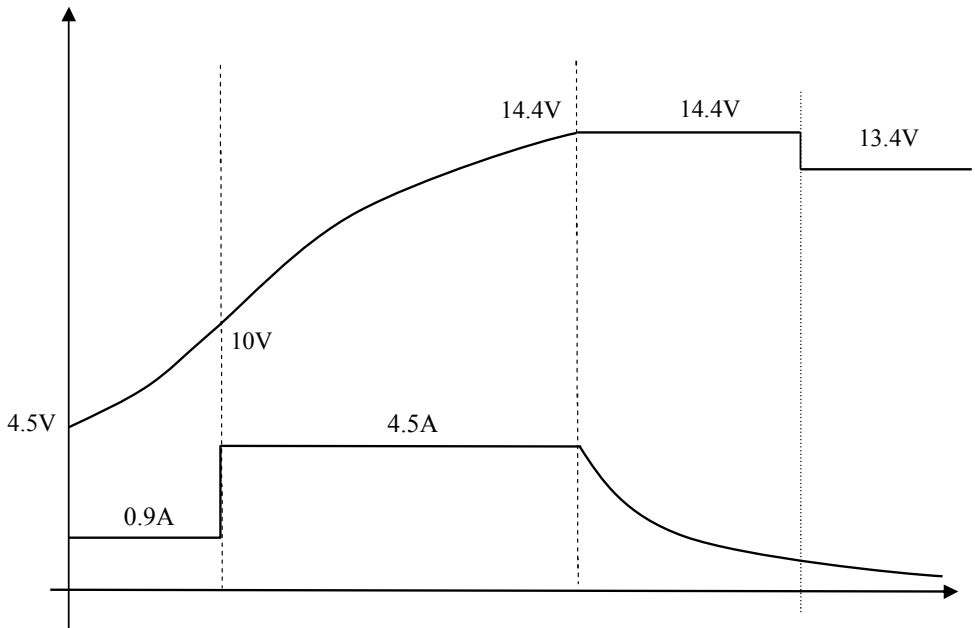
Charging Profile for 14.7V battery



Mode 2: FLOODED mode (14.4 V +/- 0.25 V)

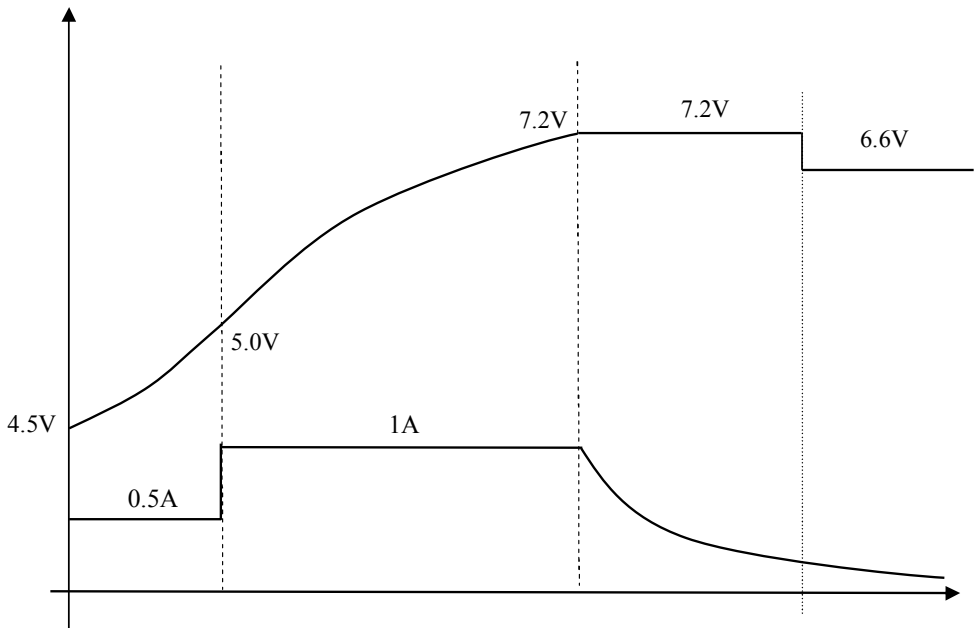
- This mode is suitable for all lead-acid batteries (also SLA, GEL, and AGM) with a capacity above 25Ah at normal ambient temperature.
- To select this mode, press the MODE button (12) until LED 2 'FLOODED' lights up. The charging process starts automatically (4.5 A +/- 10%), LED 2 is lit.
- When the battery is fully charged (14.4V +/- 0.25V), LED 10 'FULL' lights up. The device automatically switches to float or maintenance charging.

Charging Profile for 14.4V battery



Mode 3: 6V Motorcycle mode (7.2 V +/- 0.25 V)

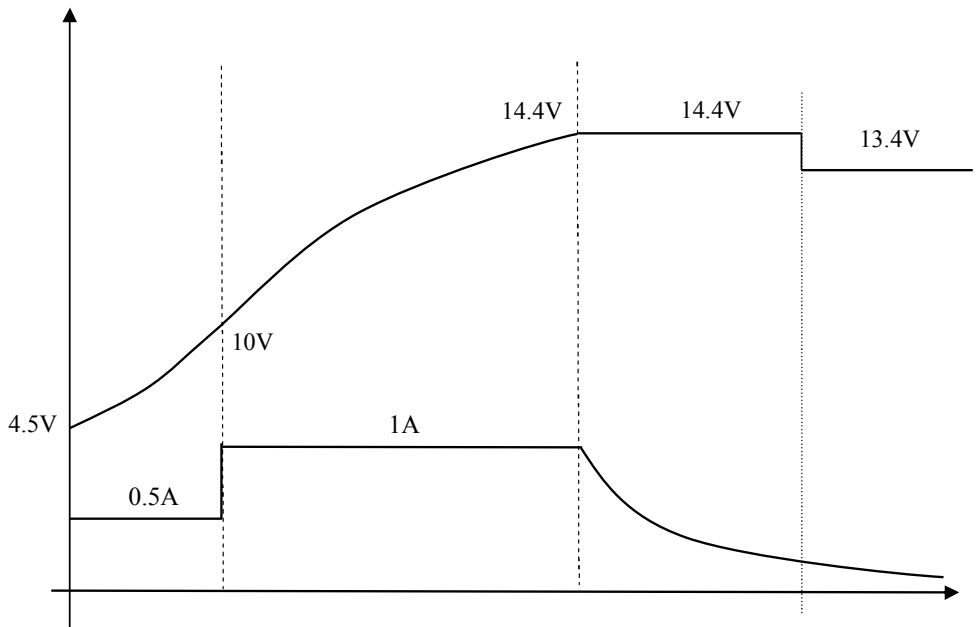
- This mode is intended especially for 6V batteries with a capacity below 24Ah, e.g. for 6V motorcycle batteries.
- To select this mode, press the MODE button (12) until LED 3 '6V' lights up. The charging process starts automatically (1 A +/- 10%), LED 3 '6V' is lit.
- When the battery is fully charged (7.2V +/- 0.25V), LED 10 'FULL' lights up. The device automatically switches to float or maintenance charging.

Charging Profile for 7.2V battery

Mode 4: 12V Motorcycle mode (14.4 V +/- 0.25 V)

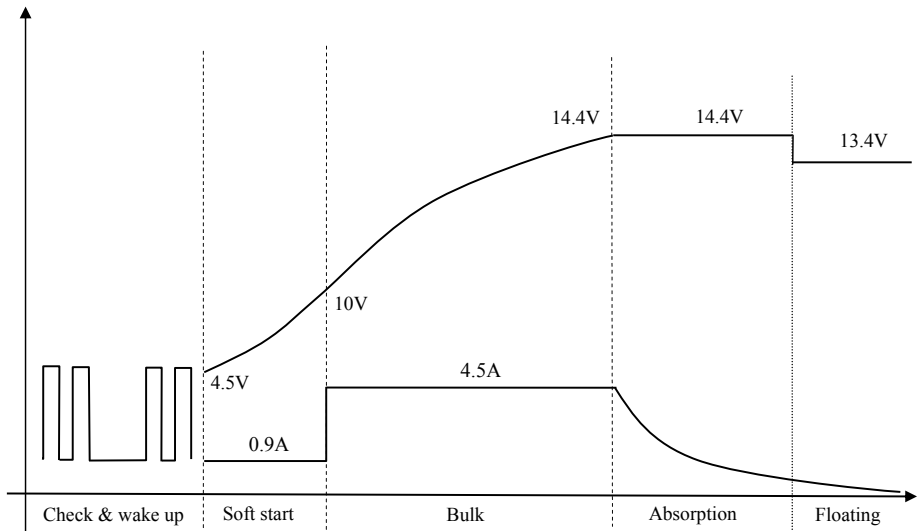
- This mode is intended especially for 12V batteries with a capacity below 24Ah, e.g. for 12V motorcycle batteries.
- To select this mode, press the MODE button (12) until LED 4 '12V' lights up. The charging process starts automatically (1A +/- 10%), LED 4 '12V' is lit.
- When the battery is fully charged (14.4V +/- 0.25V), LED 10 'FULL' lights up. The device automatically switches to float or maintenance charging.

Charging Profile for 14.4V battery



Mode 5: Lithium (LiFePO4) mode (14.4 V +/- 0.25 V)

- This mode is intended especially for 12V Lithium (LiFePO4) batteries (LiFePO4).
- To select this mode, press the MODE button (12) until LED 1 'AGM' and 2 'FLOODED' light up. The charging process starts automatically (4.5A +/- 10%), LED 1 and 2 are lit.
- When the battery is fully charged (14.4V +/- 0.25V), LED 10 'FULL' lights up. The device automatically switches to float or maintenance charging.

Charging Profile for 12V Lithium battery

Regeneration function

This function is designed to regenerate deep-discharged batteries. It cannot be directly selected. If a deep discharged rechargeable battery is connected to the charger, the regeneration mode is the first mode to start.

Low charging current are used to try and bring the deep discharged rechargeable battery to a normal battery voltage again. When the battery reaches a normal voltage, the charger will continue charging using the regular process.

Defective rechargeable batteries

The charger recognises defective rechargeable batteries automatically. In this case the selected charging programme will not be started. LED 7 lit.

Cleaning

Disconnect the battery charger from the battery and the mains voltage before cleaning it. Clean the outside of the product with a clean, dry, and soft cloth. Do not use harsh cleaning agents to avoid discolouration.

Caution

- Operation under adverse ambient conditions must be avoided under all circumstances. Adverse ambient conditions include: ambient temperatures above 40°C, flammable gases, solvents, vapours, dust, and relative humidity above 80%.
- Do not use the battery charger inside a vehicle. The battery charger must not be used in the vicinity of flammable substances or gases.
- Ensure that there is sufficient ventilation during operation. Never cover the battery charger or the connected battery.
- Never charge lead-acid or Lithium (LiFePO₄) batteries in containers or poorly ventilated rooms.
- Explosive gases can be generated during the charging process!
- Keep the battery charger as well as the battery away from ignition sources. Do not smoke while handling the battery charger or the battery! There is danger of explosion!
- Never operate the device immediately after it has been taken from a cold to a warm room. The condensation generated can cause malfunctions and there is also the risk of an electric shock!

Disposal

At the end of its useful life, this product must **not** be disposed of together with normal household waste, but has to be dropped off at a collection centre for the recycling of electrical and electronic devices. This is indicated by the trash can symbol on the product, on the instruction manual or on the packaging.

The materials of which this product is made are recyclable pursuant to their labelling. With the reuse, the recycling of the materials or other forms of scrap usage you are making an important contribution to the protection of the environment.

Please ask your local administration office for the appropriate disposal centre.