






- To select this mode, press the button  until the LED indicator  lights up. After the indicator lit up the charger will automatically start charging.
- When the battery is fully charged, the LED indicator  will light up and charger will automatically switch to maintaining charge mode.

#### AUTOMATIC REGENERATION

- This mode is designed to regenerate deeply discharged batteries and cannot be separately set up. The charger after connecting to the battery, automatically recognizes the battery is deeply discharged and begin to charge the battery by using lower current. When the battery reaches normal voltage the charger start charging the battery normally. The maximum time of the regeneration mode is 20 minutes. If no adequate battery voltage can be achieved during this time, the charger will stop charging, the battery will be detected as defective and the indicator of damaged battery  will light up.

#### DETECTION OF DAMAGED BATTERY

- The charger is able to recognize if the battery is damaged, a short circuit occurs, positive and negative terminals are reversed. In this case the charger will not begin charging but the LED indicator  will light up.

#### CLEANING CHARGER

- Disconnect the charger from the battery and from the electrical outlet before cleaning. Use a dry and soft cloth to clean the outer surface of charger. Do not use any aggressive chemical cleaners.

#### CHARGER TECHNICAL SPECIFICATION

- Operating voltage: 100V - 240V ~50Hz/60Hz.
- Output voltage: 7.2V/14.4V ( $\pm 0.25V$ ).
- Charge current: summer/winter mode, 4.5A maximum. 6V/12V mode, 1A maximum.
- Suitable battery types: lead-acid, gel, AGM batteries with the voltage of 6V/12V.
- Recommended battery capacity: 1.2Ah - 120Ah.
- Battery maintenance capacity: 1.2Ah - 150Ah.
- Protection: IP65 (housing).

# EN

## AUTOMATIC LEAD ACID BATTERY CHARGER

**NAPB-A045-612**

**6V/12V, 4.5A**

#### APPLICATION INFORMATION

- The charger is designed for charging and maintaining 6V/12V standard lead-acid batteries, gel batteries and AGM batteries with the capacity of 1.2Ah - 120Ah. You might be exposed to the risk of damage of charger, short circuit, fire or electric shock if you charge other types of batteries than the charger is intended to.

#### PACKAGE CONTENTS

- battery charger
- operating instructions
- cable with connecting clips
- cable with connecting eyelets
- cable with cigarette lighter plug

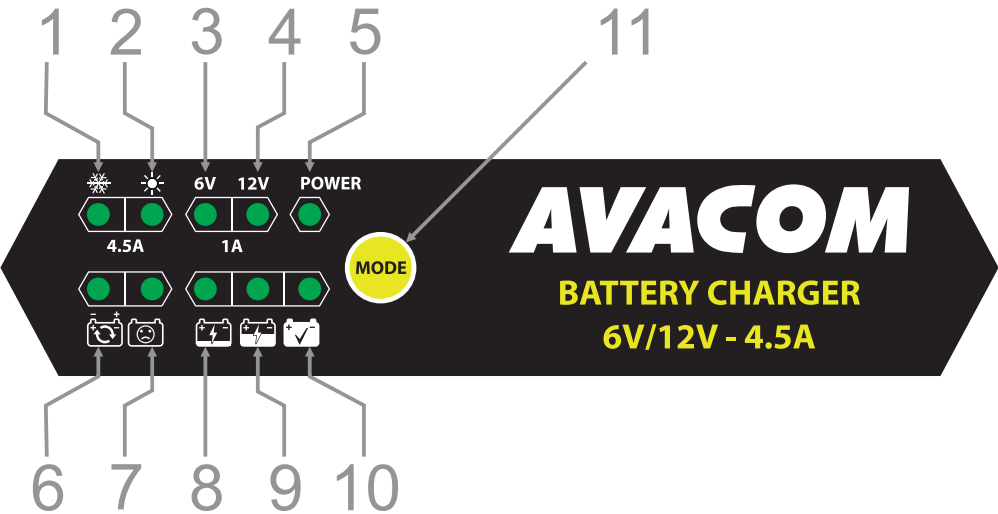
#### SAFETY INSTRUCTIONS

- Before using the charger please read the operating instructions that contain important information for working with the charger safely.
- The warranty cannot be applied if the charger gets damaged due to non-compliance with these instructions.
- The manufacturer is not liable for any consequential damages to property or personal injury caused by improper use or non-compliance with the safety instructions.
- For safety reasons the charger cannot be modified nor its technical specification changed in any way.
- The battery charger can only be used with the supply voltage of 100V - 240V ~50Hz/60Hz.
- Never use the device to charge other types of batteries (NiCd, NiMH, Li-Pol etc.). There is the serious risk of fire or an explosion if you do so.
- If you notice any damage on the product, stop immediately using the charger.
- Maintenance, installation or repair works may only be performed by an expert or a qualified workshop.
- Use only the original spare parts for repair work. The use of any other spare parts may lead to serious damage of charger and personal injury.
- When using the charger pay special attention if children are present. Do not allow children to play with the charger. Store always the charger out of their reach.
- Do not use the charger at an ambient temperature higher than 40°C and relative humidity above 80%.
- Charging lead-acid batteries may lead to the production of explosive gases. Do not try to charge non-rechargeable batteries.
- Do not use the charger in rooms where is the risk of presence of combustible gases, solvents, higher amounts of coal dust and other combustible materials. Make sure the room is properly ventilated during the charging process. Never use the charger in poorly ventilated rooms.
- Keep the charger as well as batteries away from any sources of ignition. Sparking may occur when the rechargeable battery is connected or disconnected. Do not smoke when using the charger.
- Never use the charger immediately after having taken it from cold into the warm room. Condensing moisture can cause damage and there is also the risk of electric shock.
- The charger can be only used by persons who have sufficient knowledge and experience with using similar devices.
- Before charging make sure the voltage of battery you want to charge is really 6V/12V.
- Before connecting the charger to the battery make sure the battery has been disconnected from all devices the battery is powering.
- Always disconnect the ground connection from the rechargeable battery first and only then the positive terminal. Ensure the correct polarity when connecting batteries to the charger (red terminal of the charger = plus/+ black terminal of the charger = minus/-).
- Follow strictly all safety instructions given by battery manufacturer. Never disassemble the battery.
- Lead-acid batteries contain corrosive acids. Avoid contact with eyes or skin. After contact with the skin, thoroughly clean the affected area with soap and water. If acid gets into eyes immediately rinse eyes with cold running water and immediately seek for medical help.

#### RECYCLING

- After the end of charger service life, the charger must be handed over to a collection point for recycling of electrical and electronic parts. Recycling symbols are written on the product and its packaging. Materials the charger is made of are recyclable according their specifications.

DESCRIPTION OF LED INDICATORS AND BUTTONS



1		Winter mode. The maximum voltage of 14.7V - 4.5A. Mode for batteries with voltage of 12V 25Ah - 120Ah. Suitable for charging at low temperatures. Recommended for AGM batteries.
2		Summer mode. The maximum voltage of 14.4V - 4.5A. Mode for batteries with voltage of 12V 25Ah - 120Ah. Suitable for charging at normal temperatures.
3		Mode for batteries with voltage of 6V. The maximum voltage of 7.2V - 1A. Suitable for charging smaller batteries 6V < 24Ah.
4		Mode for batteries with voltage of 12V. The maximum voltage of 14.4V - 1A. Suitable for charging smaller 12V batteries < 24Ah.
5		LED power indicator. LED indicator lit up - charger is plugged in.
6		LED indicator lit up - terminals are reversed.
7		LED indicator of damaged batteries. LED indicator lit up - battery is damaged/circuit is shorted.
8		LED charge level indicator. LED indicator lit up - battery capacity is below 50%.
9		LED charge level indicator. LED indicator lit up - battery capacity is below 70%.
10		LED charge level indicator. LED indicator flashes - battery capacity is above 75%, battery is charging. LED indicator lit up continuously - battery is fully charged.
11		Button for setting charging modes.

CHARGING

- First, make sure the voltage of lead acid batteries you want to charge is 6V/12V.
- Disconnect the battery from its operational load. If the battery is installed in the vehicle, turn the ignition off as well as other devices connected to the battery. Follow the safety instructions of the vehicle manufacturer. Modern vehicles are equipped by sensitive electronic components and controls that can be damaged if you don't strictly follow the instructions of the vehicle manufacturer.
- Plug the charger into the electrical outlet (100V - 240V ~50Hz/60Hz).
- Connect the red clip to the positive (+) terminal of the battery. Connect the black clip to the negative (-) terminal of the battery.
- If the positive and negative terminals are reversed the LED indicator will light up.
- If the battery is damaged or electrical circuit shorted the LED indicator will light up.
- The charger has a memory function. After connecting to the outlet it's in the mode that was set the last time.
- Now you can now select the operating mode by pressing the button , see below.
- After charging, unplug the charger from the electrical outlet.
- First remove the clip from the negative terminal and then the clip from the positive terminal.

OPERATING MODES

- WINTER MODE** (MAXIMUM CHARGING VOLTAGE 14.7V ± 0.25V, 4.5A).
  - This mode is suitable for all 12V lead-acid batteries with a capacity of 25Ah at low ambient temperatures.
  - To select this mode, press the button until the LED indicator lights up. After the indicator lit up the charger will automatically start charging.
  - When the battery is fully charged, the LED indicator will light up and charger will automatically switch to maintaining charge mode.
  - This mode can also be used for AGM batteries, if the manufacturer recommends higher charging voltages. Always follow the manufacturer's instructions.
- SUMMER MODE** (MAXIMUM CHARGING VOLTAGE 14.4V ± 0.25V, 4.5A).
  - This mode is suitable for all 12V lead-acid batteries with a capacity of 25Ah at normal ambient temperatures.
  - To select this mode, press the button until the LED indicator lights up. After the indicator lit up the charger will automatically start charging.
  - When the battery is fully charged, the LED indicator will light up and charger will automatically switch to maintaining charge mode.
- 6V CHARGING MODE** (MAXIMUM CHARGING VOLTAGE 7.2V ± 0.25V, 1A).
  - This mode is especially designed for smaller 6V batteries with a capacity of less than 24Ah, for example 6V motorcycle batteries.
  - To select this mode, press the button until the LED indicator lights up. After the indicator lit up the charger will automatically start charging.
  - When the battery is fully charged, the LED indicator will light up and charger will automatically switch to maintaining charge mode.
- 12V CHARGING MODE** (MAXIMUM CHARGING VOLTAGE 14.4V ± 0.25V, 1A).
  - This mode is especially designed for smaller 12V batteries with a capacity of less than 24Ah, for example 12V motorcycle batteries.