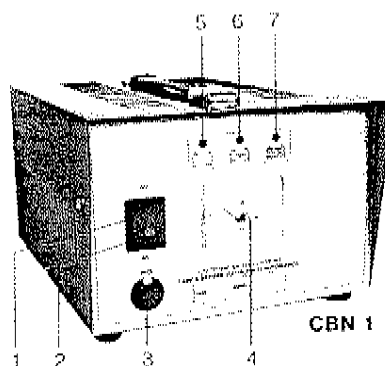


CBN 1 · CBN 2 · CBN 4

ELECTRONIC BATTERY CHARGER
ELEKTRONISCHES LADEGERÄT
CARICA BATTERIE ELETTRONICO
CHARGE BATTERIE ELECTRONIQUE



S.P.E. ELETTRONICA
INDUSTRIALE
CREVALCORE (BO) - ITALY



OPERATOR MANUAL

ENGLISH

GENERAL INFORMATION AND WARNINGS

- Automatic electronic battery charger suitable for deep cycle wet batteries.
- Fully automatic charging cycle with electronic setting; protected against overload, short-circuit at clamps and reversed polarity.
- Caution! The gases generated during charging are explosive. Do not smoke in the vicinity of the batteries. When working with cables and electrical equipment, avoid open flames and sparks.
- Never disconnect the battery while charging; this could cause sparks.
- Never use the equipment in the rain, in areas used for washing or in damp areas.
- Before charging, make sure that the equipment is suitable for the battery voltage, the power voltage available, and that the system is grounded.
- If necessary, replace the fuse with another of the same type and value as indicated on the rating plate.
- Control the water level after each charging process.
- Refill with distilled water only.
- Attention: Use protective glasses and gloves during battery maintenance. Battery acid causes injuries. In case of contact with battery acid, wash the affected parts with a lot of fresh water and consult a doctor if necessary.
- Use battery chargers only in well ventilated areas.
- Pay attention to any remarks of the battery manufacturer.

CONTROLS

- 1 Main switch: when in the OFF position, the equipment is cut off from the mains by 2 poles; when in the ON position, the equipment is powered.
- 2 Power on pilot light. It lights when the equipment is on, power is present and the fuse (3) is efficient.
- 3 Rapid mains fuse: acts as a general protection for the device.
- 4 Ampere gauge: serves to indicate the charging current.
- 5 Red control indicator: when it is lit and the ampere gauge signals the passage of current, this indicates that the charging cycle has begun.
- 6 Flashing yellow control indicator: it lights to indicate that the final stage of the charging cycle is in progress.
- 7 Green control indicator: it lights to indicate that the automatic charging cycle is finished.

OPERATION

- Set the main switch (1) to OFF and insert the power cord plug into a power socket.
- Connect the battery, respecting the polarity: the charge will not take place.
- Set the switch (1) to the ON position to start the automatic charging cycle. The various stages are marked by the indicators (5), (6), and (7).
- After charging, with the green indicator lit (7), set the main switch (1) to the OFF position and disconnect the battery.
- IMPORTANT: To repeat the charging cycle, it is necessary not only to switch the battery charger on and off, but also to disconnect and re-connect the batteries.
- IMPORTANT: Pay attention to the right battery voltage. Choosing the wrong voltage will destroy the battery immediately.

PROBLEMS	SOLUTIONS AND CHECKS
The power on pilot light (2) does not light.	Check for electricity in the socket and examine the fuse (3).
The charging cycle does not start: the ampere gauge (4) reads 0, the pilot light (2) is lit and the red indicator (5) is off.	Check the connection to the battery and make sure that the polarity is correct.
The charging cycle does not start: the ampere gauge (4) reads 0, the pilot light (2) is lit and the red indicator (5) is lit.	Make sure the battery is not too low: the cycle begins at voltages above 4 V.
The yellow indicator (6) does not light, even 15 hours after the start of the cycle.	Check the battery: it may have some defective components.

IMPORTANT:

If, after carrying out the above checks, the problem was not solved, please contact the technical service.

ELECTRONIC BATTERY CHARGER BLOCK DIAGRAM CBN MODEL

