# User Manual IQ338XL

Please read the manual carefully before using this charger.

We thank you that you have decided to purchase our intelligent charger.


Li-Ion
NiMH
NiCd

9 120004 642806

Please follow the safety and care instructions in this manual, to be able to use this device efficiently and safely.

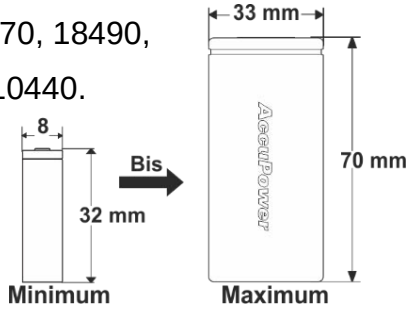
**Included in delivery:**
- Charger IQ338XL
- Power supply
- User Manual

**Important notes:**

- Use the IQ338XL charger only with Li-Ion / LiMnO2 cells with 3.6V-3.7V and NiCd, NiMH cells with 1.2V rechargeable batteries.
- With the IQ338XL you can automatically charge the following types of cells:

  **Li-Ion:** 33700, 26650, 26700, 22650, 18700, 18650, 17670, 18490, 18500, 17500, 17355, 16340 (RCR123), 14500, 10440.

  **NiMH/NiCd:** AA, AAA, A, Sub-C, C Baby, D Mono, 9V




- Do not use the charger with other types of batteries (for example: Alkaline or other Systems).
- Use the charger only in dry and closed rooms with normal conditions.
- If the charger is not in use, we recommend to disconnect the power cable from the socket.
- During the charging process, you should not leave the charger unattended.
- Keep the batteries out of the reach of children.
- When new batteries are in use for the first time, it might be required that the batteries need to be charged and discharged several times before they reach their optimum capacity.
- The charger must be used on a non-flammable base.
- Always use the right charging current for each battery. You can look for the right current in the manufacturer specification.
- Heat get produced if batteries get charged. It is very important to ensure that the charger is placed in an incombustible area (pay attention to carpets, paper, flammable liquids, furniture and so on).

**Inputs:**

DC 12V / 3,5A

**Outputs:**

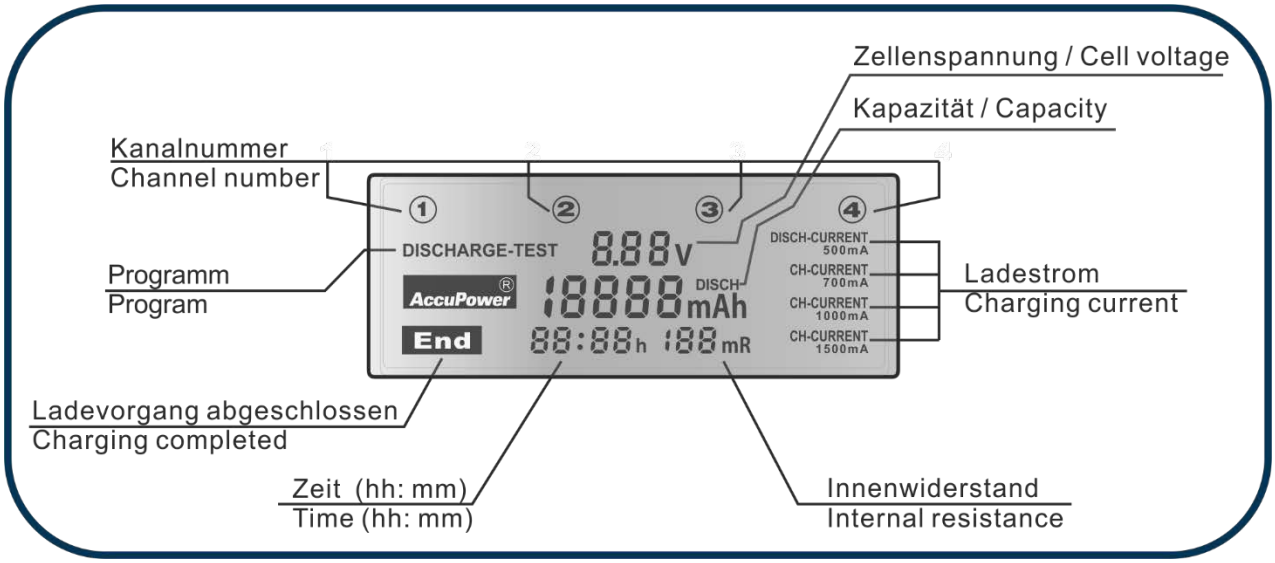
Six independent charging slots, two of them for 9V batteries
One 5W USB output 5V / 1000mA


**Buttons:**

- Battery slot select buttons (1, 2, 3, 4)
- Mode selection button (MODE)
- Charging current selection key (CURRENT)

**Display:**
The following values are apparent on the display during a charging process:

- Program (Charge, Charge Test, Discharge Test)
- Battery Voltage (V)
- Capacity (mAh)
- Elapsed time (hh:mm)
- Internal resistance (mR)
- Charging current (mA)
- „End“ (Appears if actual charging process finished)
- Channel number




**Display Description**

**Function Description:**

You can choose the following programs:

**Charge**
In this program you can charge the inserted batteries.

**Charge Test**
With „Charge Test” program you can measure the charged capacity of the batteries. The charger discharges the batteries in the first step, during the discharge process the LC Display starts to count the discharged capacity. After that, the battery gets charged completely in the 2nd step. Both capacity values (discharged as charged) are stored in the charger’s memory and can be retrieved after finish. So this test consists of the following steps:

1) Discharge (The capacity gets measured and stored and is available after end of the test)
2) Charge (The capacity gets measured and stored and is also available after end of the test)

If the channel button gets pressed for the first time, only the display lights up. After pressing it again, the shown capacity on the display switches between the measured charging and discharging capacity. Which one of them is displayed, is symbolized by the

label “CH” for charged and “DISCH” for discharged value over the unit “mAh”. Also the current is changing depending on the chosen current during the Charge Test. The used charging current is symbolized by „CH-CURRENT“ as well as the discharging current by „DISCH-CURRENT“.
Generally, the charging capacity value can be different to the discharging capacity value because of efficiency of the chemical reaction in the batteries.



This mode can also be used very well for refreshing batteries.

**Discharge Test**
The difference of „Discharge Test” program to „Charge Test” program is, that the batteries will get charged in the 1st step so that it can be discharged afterwards with the full capacity. This happens in the 2nd step. To complete the process, the battery gets charged completely again in the 3rd step. The process is as follows:

1) Charge (This capacity gets measured and displayed but not stored till the end)
2) Discharge (The capacity gets measured and stored and is available after end of the test)
3) Charge (The capacity gets measured and stored and is also available after end of the test)

The measured capacities can be, as well as in the “Charge Test”, retrieved by pressing the channel button. If a high charging current is chosen, it can happen in some cases that the full charging capacity is not reached (this depends on the quality and condition of the battery). A lower charging current is able to put more energy into the battery but therefore the procedure lasts longer. The procedure to see the chosen currents and the measured capacities is the same as for “Charge Test”. This is the best way to measure the current state of health of the battery (still available capacity of the cell).

At “Charge Test” and “Discharge Test” the discharging current will be selected automatically to 500 mAh. The table below shows the selectable charging current values followed by its discharging current.

| Selected charging current | 500 mA | 700 mA | 1000 mA | 1500 mA |
|---|---|---|---|---|
| Following discharge current | 500 mA | 500 mA | 500 mA | 500 mA |

For the 9V slots only charge function is available (charging current approx. 30mA).

**Charge:**

If you like to charge one or more batteries, it distinguishes between same type or different cells:

- **Batteries of the same type**
  Firstly, insert the batteries into the charger. The charger registers the inserted batteries and starts to identify the battery chemistry. By default, the charge process and a charging current of 500 mA gets selected automatically. The same conditions will be used for all inserted batteries and can be changed through pressing the mode button. If you want to change the settings, you can do that as long as the font is flashing. The desired program can be selected by pressing the MODE button as well as the charging current can be selected with the CURRENT button. After the font stops flashing, the program is activated and starts to charge/discharge the batteries.

  **TIP:** Disconnect the charger from the power, insert the batteries in the channels, connect the charger to the power again and select the wanted conditions through the LC Display flashes, as mentioned above.

- **Individual setting:**
  If you want to charge different batteries with individual settings, it is recommended to insert the batteries separately one by one. Only when all the settings via the appropriate keys were selected for the first battery and the font on the LC display stops flashing, the battery is taken from the charger. Now the next battery can be inserted and selected as described before. If you like to change the selected program, press the mode button for some seconds till the font starts to flash on the LC display and then it is possible to change the function through pressing the mode button again. If you like to change the current you can change it through pressing the CURRENT button, that's possible as long as the function flashes on the LC display, after some seconds the charger accepts the now selected information and stops flashing.

If the charger started the selected program, it can only be interrupted through removing the cells from the slots or pressing the mode button for some seconds. Short pressing of the mode button cannot interrupt the running program. This is a protection against unintentional cancel the program.

Because the charger shows important extensive information to each slot, the whole LC Display will be used for the selected slot, if you like to see the information for another slot, you have to press the selection button of the slot you like to check. Changing the selected slot does not influence the charging program.

There is no information for the two 9V charging slots on the LC Display. Near to the 9V channels you can see one LED for each channel. Through the charging process the LED is flashing and changes to continues lightning after the charging process is finished.

**LCD-Background Lightning:**

- **Eco-Mode:**
  The LCD background lighting, which is activated by pressing any channel button, switches off automatically after approx. 30 seconds to prevent unnecessary energy consumption and is activated again by pressing any channel button again for 30 seconds.

- **Permanent LCD-Background Lighting:**
  Pressing any button for 3 seconds activates a long-lasting backlight, by pressing any channel button for 3 seconds again, the backlight comes back to Eco-Mode.

- **Flashing LCD Backlight:**
  If the charging process of a battery ends, it will be indicated by an optical signal (5-time flashing of the backlight).

  If all inserted batteries in the charger are ready charged, it will be indicated by an optical signal (always flashing).

**Maintenance:**
The chargers is maintenance free, but should be cleaned sometimes. The charger should be disconnected from the power supply before start cleaning. Use only soft and dry tissues (like cotton textiles) do not use any liquid.

**Disclaimer:**

- The manufacturer and supplier is not responsible for incorrect or improper use and the resulting consequences.
- Any repair or modification that is not performed by the original supplier will void the warranty.
- The device may be used only by people who have read and understood such instructions.
- The information in this document are subject to change without previously pointed out.
- This product is not a toy. Keep out of reach of children.
- The reproduction of this manual or parts of there is permitted only with written permission of the manufacturer.

**Safety instructions:**

Please observe the following safety instructions:

- Use as described in the instructions, only NiCd, NiMH or Li-Ion batteries!
- The device is not approved for outdoor use. Protect it from high humidity, water, rain or snow. Keep the device away from excessive heat and direct sunlight.
- Do not dispose batteries in a fire!
- Do not use other than the supplied accessories. In particular, attention is drawn to use the supplied original power adapter for the battery charger.
- Unplug the power cord from the outlet when not in use.
- The device should not be used if it has received a blow or damaged in any other form.
- Don't use the charger for any other purposes than described in the instruction.
- Do not open or disassemble the unit, otherwise there is a risk for electric shock or fire.

**Note on disposal:**

Please inform yourself about the local collection points for electronic devices. Please check local environmental standards and do not dispose your old products with normal household waste. The charging unit may only be disposed of in waste management authorities set up collection points. The proper disposal of your old product will help the environment and health.
Rechargeable batteries must not to be disposed in domestic waste. Return used batteries to your dealer or to an authorised battery collecting point.

***NOTE:***
***Information and contents in this datasheet are for reference purpose only. They do not constitute any warranty or representation and are subject to change without notice.***

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