

LiitoKala®

Product Manual

Engineer Lii-300

Thank you for using our product ----Engineer Lii-300, it is a high-end smart charger. Eight functions include dual channel independent charging / battery capacity test / internal resistance test / reverse protection/ short circuit protection / overcharge protection /USB 5V output and zero volts activated, also it can timely monitor the battery voltage automatically.

Engineer Lii-300 can be filled with different types of cylindrical lithium ion battery and AA\AAA cylindrical Ni-MH battery charging, widely used in the strong light flashlight, electric tools, instrument and meter, digital cameras and other electronic products battery. The use of safe, convenient carrying, powerful, is your home, travel good helper.

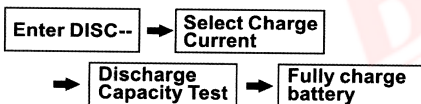
Warning:

- It can charge cylindrical li-ion battery and NI-MH battery, LiFePO4 battery is not available.
- Please read user's manual carefully before use. Note that charging battery by recommended charging current, do not exceed the recommended charging current.
- Don't use other power adapter.
- May be heating when charging or discharging, careful not to be burned.
- Please take out the battery, disconnect the power when stop to use.
- Used in door only
- This product testing data for reference only, please refer to the actual situation of professional equipment.

1

Discharge Mode:

- **Discharge mode:** Fully charge batteries first, and then discharge batteries to record discharging current and test battery capacity, after that the batteries will be fully charged.



- **Enter DISC--** —After the charger test the inner resistance of batteries, Long press mode button for 3 seconds to enter discharge mode under any circumstances;
- **Select Charge Current** —after entering discharge mode, the display will flash with "500ma" for 8 seconds, at the same time, you can choose 500ma or 1000ma through mode button. The System will lock the current you choose after 8 seconds, if there is no selection of current within 8 seconds, then the system will automatically charge battery with 500ma(the current you choose is the current for charging batteries.)
- **Discharge Capacity Test** —when the batteries are fully charged, the system will automatically discharge batteries with 500ma and record discharge current and test battery capacity. When the LCD show discharge

4



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Features:

- Two charge currents : 500mA/1000mA.
- Can charge different size (18650/26650/AA/AAA) of battery at the same time.
- Charge or discharge parameters for each battery can be showed in LCD display independently .
- Charge mode, different charging current for charging.
- Discharge mode(full charge first, then and discharge), battery capacity detecting.
- Charge and Discharge can be done at the same time.
- Each cell can be simultaneously or independently set the charge / capacity detection function.
- Variety of display mode, current (mA) / capacity (mAh) / voltage (V) / time (H) / resistance (mR).
- USB 5V output.
- Specialized with adapter.

Mode Description:

- The charger has two buttons, it is easy to control one slot respectively.
- Under any circumstance, press mode for 3 seconds to change charge mode or discharge mode, then slightly press to change current within 8 seconds, after you choose the right current, it will be in work state after 8 seconds. Under the work state, you can slightly press the mode to see the current(mA)/ capacity(mAh)/voltage(V)/time(h)/internal resistance(mR).

2

end, capacity test mode is over, and the current parameter flashing on the LCD is the actual capacity of batteries.

Fully charge battery —after capacity test, the battery charger will charge batteries with the current chosen before until the batteries are fully charged.

USB 5V Boost output:

- USB output is boost output only, output current is 1000mA, it is not available when connecting the power.
- USB output will charge the 5V electronic devices when put the batteries in the charger slots.
- Charger have two battery slots, any of one slot can do USB 5V boost output, we advise two batteries are put in two slots at the same time.
- Only 3.7V li-ion battery can support the USB 5V Boost output function. NI-MH battery is not available.

Specific Parameters:

- DC Input:12V/1.5A
- Charge current for li-ion battery:2*(4.2V 500mA), 2*(4.2V 1000mA)
- Charge current for NI-MH battery:2*(1.48V 500mA), 2*(1.48V 1000mA)
- Battery sizes:18650,26650,14500、AA、AAA etc.
- Discharge current:2*500mA
- USB Output:5±0.2V---1000mA
- End Way: battery voltage be monitored automatically
- Charger Dimension:140mm(L)*68mm(W)*31mm(H).

5

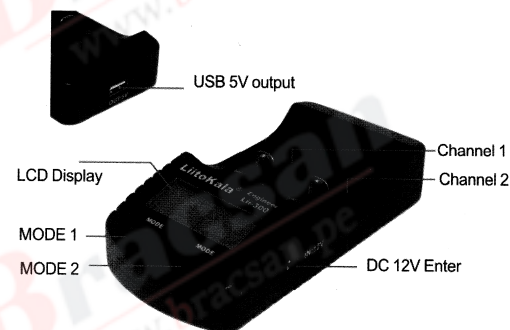
Work mode:

Charge Mode:

- When connected with power supply, all the LCD display will light on, if there is no batteries inside or bad batteries inside, LCD will show Null.
- When put batteries in the charger, the charger will test the inner resistance of batteries about 3 seconds, and then automatically under choosing current mode, LCD display will flash with "500mah" for 8 seconds, during those 8 seconds, you can choose 500ma or 1000mah through mode button to charge batteries, the system will lock the current you choose and charge after 8 seconds. If there is no choosing current within 8 seconds, the system will automatically charge batteries with 500ma, and it could not be changed at this time. If you want to change the charging current, you must replace the batteries.
- Users should be pay attention to the biggest charging current, if there is no need to quick charge, it would be better to charge with 500ma, which is the safest and the most favorable to batteries.
- Under charge mode, you can slightly press mode button and shift to check 4 units:charging capacity (mah)/charging time(h)/battery internal resistance (mR)/charging current(mA). After full charge of batteries, it will show Full and charge End in small size at the bottom line on the LCD display.

3

Indication map:



6