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# LCD CHARGER & DISCHARGER

**Model:** KDS POWER RC-6S

## USE MANUAL

Please read the manual thoroughly before using the charger.

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# Lithium pile LCD balance charger & discharger

## KDS POWER RC-6S

### Manual

#### A.Specifications:

Operating voltage range: DC 11.0- 16.0V

AC 100- 240, -50/ 60 HZ 12V DC 5A adaptor

Max. charge power: 50W

Max. discharge power: 5W

Charge current range: 0.1-5.0A

Discharge current range: 0.1-1.0A

NiCd \ NiMH battery cell(s): 1-15cells

li-ion \ Polymer cell(s): 1-6 series ( Note: support Li-Fe battery, i.e. A123)

PB battery voltage: 2-20V

#### B.key-press function

**Batt. Type / Stop button:** button for battery type and stop, with this button you can switch in main menu after connecting electricity. During charging, you may stop it by pressing this button at any moment;

**Dec. / Inc. < Status > button:** button for decrease and increase, when setting various value, Dec. is to decrease, while Inc. is to increase, during charge, press these two buttons to browse different information for battery;

**Start / Enter button:** button for start and confirm.

#### C. Operating explanation

Turn on power, main menu will be displayed immediately

Then you can press Batt. Type / Stop button, switch among the main menus, they are as follows:

##### 1)Program Select

LiPo Batt

Main menu for charge or discharge for LiPo battery series

##### 2)Program Select

NiMH Batt

Main menu for charge or discharge for NiMH battery

##### 3)Program Select

NiCd Batt

Main menu for charge or discharge for NiCd battery

##### 4)Program Select

Pb Batt

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Main menu for charge or discharge for Pb battery

5)Program Select

Save Data

Menu for saving data

6)Program Select

Load Data

Menu for loading data

7)User Set

Program->

Menu for user program

(1)Lithium battery charge or discharge

1.) Charge

Main menu will be displayed after start machine

Program Select

LiPo Batt

Press Start / Enter button to confirm

Screen display

LiPo Charge

\*.\*A \*.\*V(\*S)

This is lithium battery charge, not balance charge. ( apply to lithium battery without balance connector)

Press Inc. >, screen display:

LiPo Balance

\*.\*A \*.\*V(\*S)

This is the balance charge function of lithium battery, what we often use for model is balance charge, so you should operate here, as follows:

Press Start / Enter button, the figure before A will glitter

Press Dec. < or Inc. > to change the value, this is choice for charge current, lithium polymer battery can't excess 1c, i.e. 4400mzh battery chooses 4.4a at most, while 2200mah battery 2.2a at most, analogy in this way; 0.5c is recommended to choose i.e. 4400mah battery choose 2.2a, the rest may be deduced by analogy

Dec. < decrease the value, Inc. > increase the value

Press Start / Enter button, the figure before V(\*S) glittering

Press Dec. < or Inc. > to change value, this is to choose battery rating voltage, multiple of 3.7, it usually is 7.4v for car-use battery, i.e. 2S (each 3.7v=1S)

press Start / Enter button for long time, the following screen will appear:

Battery Check

Wait...

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If battery connect is incorrect, it will display:

Connection Break

If connecting correct, it will display:

The top line: R: \*Ser S: \*Ser ( Note: R: \*SER is the number of battery cells which charger inspect automatically, S: \*SER is the number of battery series you set up, if those numbers are different, don't start to charge, and avoid damaging battery)

The low line: switch between Cancel(Stop) and Confirm(Enter)

Now please press Start / Enter button to start charge, while press Batt. Type / Stop button to cancel charge, and return to setup interface

Charge interface:

Li\*S \*.\*A \*.\*V

BAL \*\*:\* \*\*

First line: lithium battery cells number, prompt charge current, prompt battery total voltage

Second line: charge indication, charge consuming time, electricity capacity charged

Charge indication: it display BAL during charge, while FULL after charging completely

During charging, you can press Batt. Type / Stop button at any moment to stop charging

During charging, you can press Dec. > button at any moment to browse separate voltage of each single battery

During charging, you can press Inc. < button to browse each enactment parameter at any moment

## 2.) discharge

Go on pressing Inc. > button in the main menu of charge & discharge for lithium battery, the screen will display the following interface:

LiPo Discharge

\*.\*A \*.\*V(\*S)

Press Start / Enter button to choose discharge function(s)

Operation method is the same as that of charge, just to correctly set up discharge current and end voltage, increase or decrease voltage by multiple of 3, while set 6.0V(2S) for 7.4V lithium battery

Note: discharge connector and balance charge connector have to be connected at the same time, then you can charge or discharge lithium battery

supplement: LiPo Charge / LiPo Fast CHG is used for charging lithium polymer battery without balance connector and lithium polymer fast, but not for battery with balance \*\*. Because lithium battery core has specific voltage limitation, you must use balance charger to do balance charging on voltage to avoid any danger because of one piece of low voltage while another voltage too high  
LiPo Storage function is to store lithium battery, if you don't want to use lithium battery for long, please charge this lithium battery fully, and then use this function, discharge to the voltage for long storage, the method of usage is similar with that of charge, the difference is the maximum

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discharge current is 1A at most

(2)NiMh battery charge or discharge

1.) charge

In main menu press Batt. Type / Stop button to choose:

Program Select

NiMh Batt

This is NiMh battery charge mode, press Start / Enter button, and the screen will display:

NiMh Charge Man

Current \*.\*A

Press Dec. < or Inc. > button to change the value, this is to choose charge current, normally it is better to choose 1C~1.5C current to charge on battery.

Change forced charge current and the control for automatic charge current

NiMh Charge Man

Current \*.\*A

Charge current choice interface before this, default is charge current by hand, i.e. back is Man typeface. Under this charge method, charger will work as per the charge current you set up, that is to forcedly use the charge current you set up, which is not recommended, so KDS POWER RC-6S can be also changed to automatically charge current control.

Method to change:

In the interface of choosing charge current:

NiMh Charge Man

Current \*.\*A

Press Start / Enter button, and the current figure of charge will glitter. Press Dec.and Inc. at the same time for 0.5s, and it will change into automatic charging current control, the display of the screen is:

NiMh Charge Aut

Cur Limit \*.\*A

If you change the state of the figure which is glittering, it is the peak value current when charging now. It would be thought as the maximal control of charging current, the charger will control the current automatically, but it won't exceed the figure you set.

Press Start / Enter for a long time after setting the current, display:

Battery Check

Wait...

It will show the following figure if the battery and the connecting have no problem..

NiMh \*.\*A \*.\*V

CHG \*\*\*.\*\*\* \*\*\*\*\*

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The display content is the same as the LiPo, the display content after full charge is the same too. It is full charge when display "FULL"

\*\*\* Press Batt. Type / Stop to stop charge during charging at any moment.

\*\*\* Press Start / Enter to change the current during charging at any moment, remember reconfirming after changing.

\*\*\* Press Dec. < or Inc. > to see the parameter during charging at any moment.

## 2.) Discharge

Choose the function of NiMh Discharge, interface:

NiMh Discharge

\*.\*A \*.\*V

The operating method is the same as charging. It can work after setting the discharge current and the ending voltage of discharge. The voltage setting of NiMh Discharge is 0.9V/cell, so please setting 7.2V battery to 5.4V

### (3) NiCd Discharge

The same as NiMh Discharge

### (4) LiPo Discharge

The same as NiMh Discharge

### (5) Charger setting

As a common player, you don't pay attention to generic setting. Such as LiPo testing voltage, NiMh and D.Peak, Waste Time, only keep it default

User Set

Press Start / Enter button in the interface

User Set

Program->

LiPo

V.Type \*.\*V

Set the voltage of LiPo according to the actual change. Choosing LiPo 3.7V, LiIo 3.6V, LiFe 3.3V

USB/Temp Select

Temp Cut-Off 80C

The Protection for over-heat or using USB to test

This is upgrade function, the charger does not come with temperature detector, USB and CD for the time being.

Safety Timer

On 120min

This is the automatic cutoff time of charging, the default is open. It will be cut off after charging 120s. it is recommended to set it to be open., or change the figure according to the charging

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time.:

### Capacity Cut-Off

#### On 5000mAh

The limitation of the charger capacity, that is the charging will stop once exceed the capacity of the figure. The limitation can prevent over charging, but you should set a proper value according to actual setting, or maybe the battery won't be charged fully. For example, to the battery of 5000mAh, it only could be cut off when setting it 6000mAh. Because it is the power which released by the charger, but not the power chargerd. Some power which is not charged into the battery because of heating or other inside consume, we could set the value to 1.2 times of the capacity of battery by fast charge.

You could set it Off if you don't need it, and there will be no the limitation for charger capacity.

#### (6) save the data /load the data

##### 1.) save the data

The charger will load the data which was loaded last time when you trun on the charger every time. The data of the new charger is [01]. It is inconvenience that you should set the current and the voltage when charging. So you need to set a data in common use, and save it. Or you could set more common use data, and load them directly when you need it.

In the interface of keeping data:

#### Program Select

##### Save Data interface

Press Start / Enter button, it will display:

Save [01] \*\*\*\*

\*.\*V \*\*\*\*mAh

01 is glittering, that is the mode number you used, pressing Dec.<orInc.>to change the mode number you like to change.

Press Start / Enter, and it will display glittering at the top right corner. You can presse Dec.<or Inc.> button to change the type of the battery. And then press Start / Enter buton for long.

after changing the type for the battery.

And then you could change the setting of the routine current and voltage. pressing Start / Enter for long to save the data, display interface:

Save...

Turn back to the main interface

\*\*\*the mode of NiMh / NiCd has:

#### NiMh Cycle

##### DCHG>CHG 1

The setting is the circular charge and discharge setting between discharging and charging. It is

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used for new battery or the battery which has stored for a long time,It is recommended to set to:

NiMh Cycle

DCHG>CHG 3

Discharge, and then charge, do this for 3 times, it will work after the last charge .

## 2.) Loading the data

in the interface of loading data:

Program Select

Load Data

Press Start / Enter button, it will display:

Load[01] \*\*\*\*

\*.\*V \*\*\*\*mAh

The figure 01 will glitter

Press Dec. <or Inc. > button to the data number you need, and then press Start / Enter for long ti,

it will display:

Load...

come back to the main interface after loading the data successfully:

Program Select

Li\*\* Batt