



Lithium battery balance charger CB86-PLUS

User Manual



Radiolink Electronic Co., Ltd
Web Site: <http://www.radiolink.com.cn>

 **Warning : High powered product ,please use it within sight !**

INTRODUCTION

Thank you for purchasing Radiolink high precision independent balance charger CB86-PLUS .

CB86-PLUS, open the era of high precision independent balance charge, integrate 6 ways for charge current and equipped exclusive charging circuit for every single battery cell, which realize batteries don't affect each other in independent balance charge system. Support max 6A charge current for 8 battery packs charging with capacity analyzed and inner resistance assessed, compatible with 1S-6S battery packs. 0.001V balance precision, better than the average 0.01V. Unique USB flash drive upgrade. Charging diaries, including initial voltage, complete voltage and charge-discharge voltage, etc. Analyses of every battery cell's capacity in each group and assess of internal resistance. Precision voltage and trickle repairing restore the high-power of over-discharged battery. Suggestion :when you read this manual,please connect the charger and other related equipment ,operating while reading. Any questions when using CB86-PLUS, please refer to the manual or call our after_service +86-755-88361717 or login BBS (such as www.rcgroups.com, www.5imx.com, www.rcfans.com) to check the issues related answer to questions.

Due to unforeseen changes in production procedures , the information contained in this manual in subject to change without notice.

more information please check our website as below:

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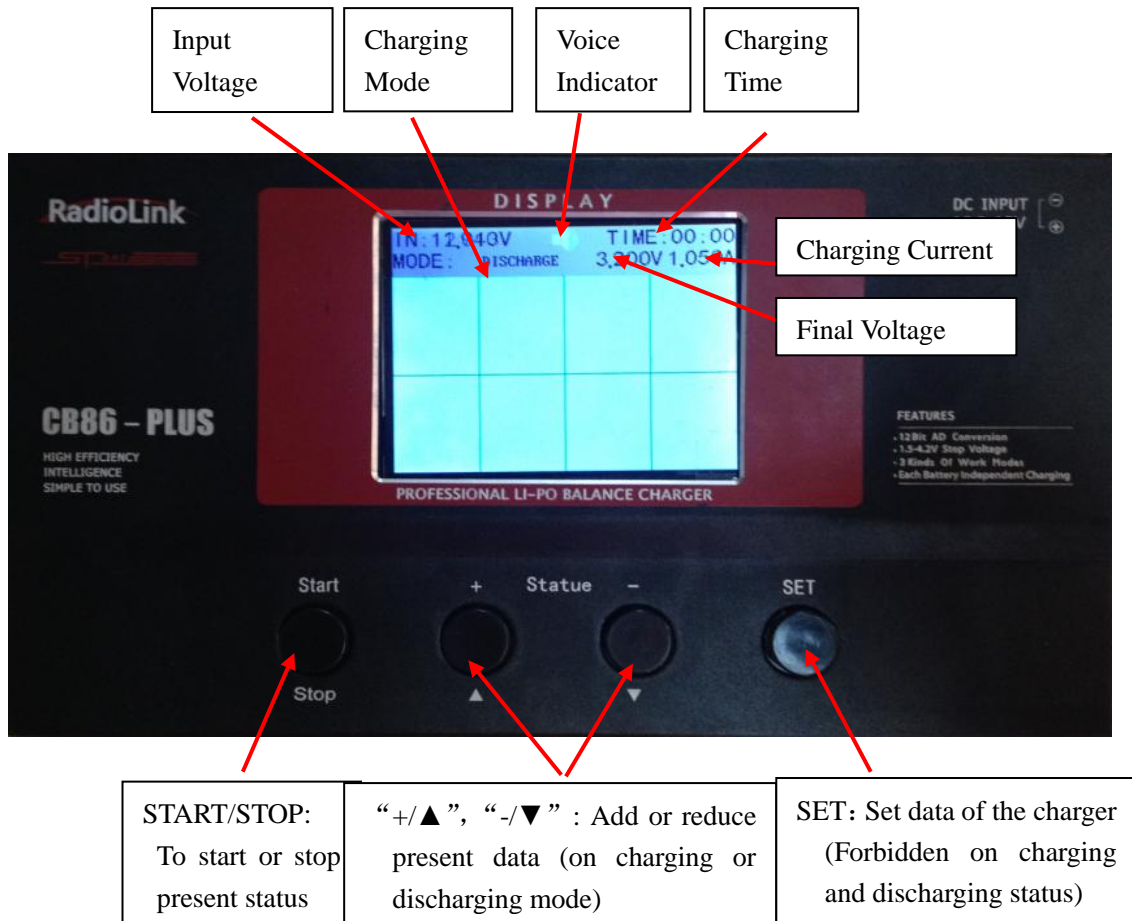
Programming and User questions

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一、Function:



CB86S Technical data:

Input Voltage: Voltage range 10.5-15V(The charge will not work with wrong input power polarity, warning when input power voltage over 15V and less than 10.5V, temperature over 48C° will auto-start fans)

Voice Indicator: ON/OFF

Time setting: Charging or discharging time from 0 to 99 minutes and 59 second

Charging Mode: Cycle charging, parallel charging, discharging, voltage measure

Charging voltage: 0.00V-4.23V, setting precision 0.01V;

Discharging voltage: 2.00-4.23V, setting precision 0.01V;

Charging current: 0.0-6.0A, setting precision 0.1A;

Discharging current: 1.05A

二、Operation:

1、Connection

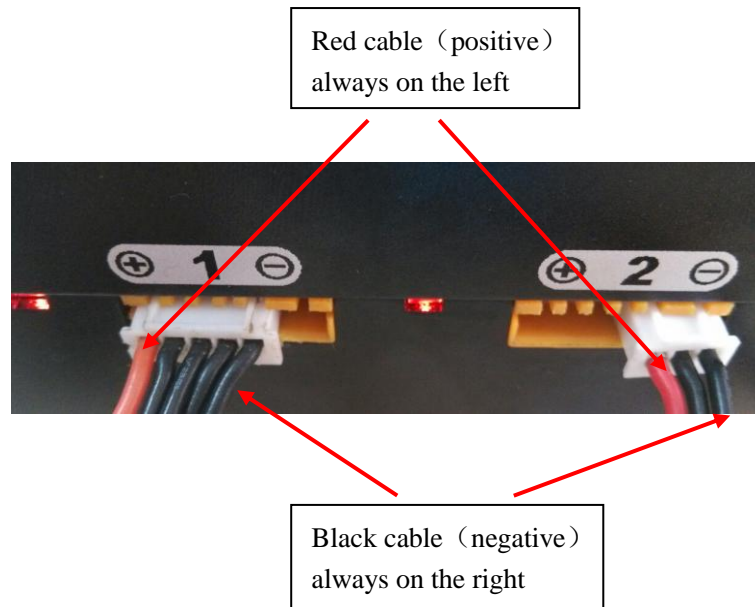
Connect the charger with a DC power source of output voltage 10.0-5V and current not less than 15A.

Balance plug:

CB86S contains 8 balance ports, it can charge 8pcs 6-cell Lithium battery at the same time connecting 1S-6S batteries freely by the following sketch. Mind the polarity of

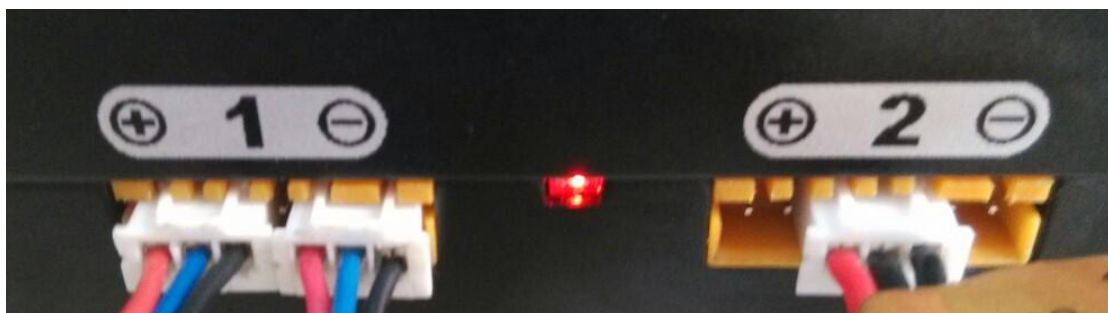
batteries (black cable is negative and it shall connect with right side, the red positive connecting to left side.)

Diagrammatic sketch:



The above sketch is shown by a 4-cell and a 2-cell batteries connected in two ports. Also you can connect a 6-cell battery in one port, or 3 pcs 2-cell in different port, or 2pcs 3-cell batteries to different port. Shown by sketch below:

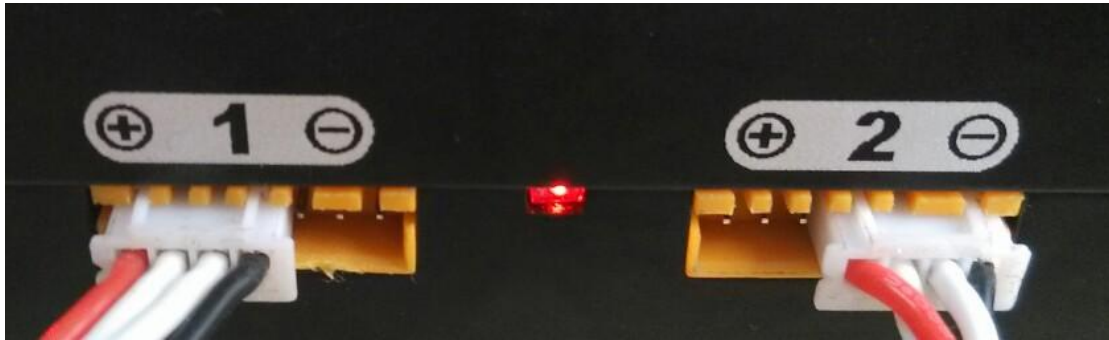
(1) connect with 3pcs 2-cell batteries:



(2) connect with one 6-cell battery:



(3) connect with two 3-cell batteries:



2、 Button instruction:

START/STOP:

To start or stop the current status, it is available at any time, so it's important to finish all parameter (voltage and current) setting for charging or discharging before press this button.

SET:

Only the charger is not working, this button is enabled. Press SET to enter menu of setting for VOICE, FUNCTION, CURRENT, VOLTAGE and BETTERY GROUP. When one of the options displayed reversed, use the button key “+/ \blacktriangle ” or “-/ \blacktriangledown ” to get the relative data.

Voice indicator:

When the charging stopped, press SET to choose the option VOICE INDICATOR, and use “+/ \blacktriangle ” or “-/ \blacktriangledown ” to set voice ON or OFF. Then press SET to choose the next option.

Charging port:

When the charging stopped, press SET to choose the option PORT, press “+/ \blacktriangle ” or “-/ \blacktriangledown ” to choose the port and then press SET for next option.

Function:

When the charging stopped, press SET to choose FUNCTION, press “+/ \blacktriangle ” or “-/ \blacktriangledown ” to select different status: CYCLE CHARGING, PARALLEL, DISCHARGING, VOLTAGE MEASURE, and then press SET for next option.

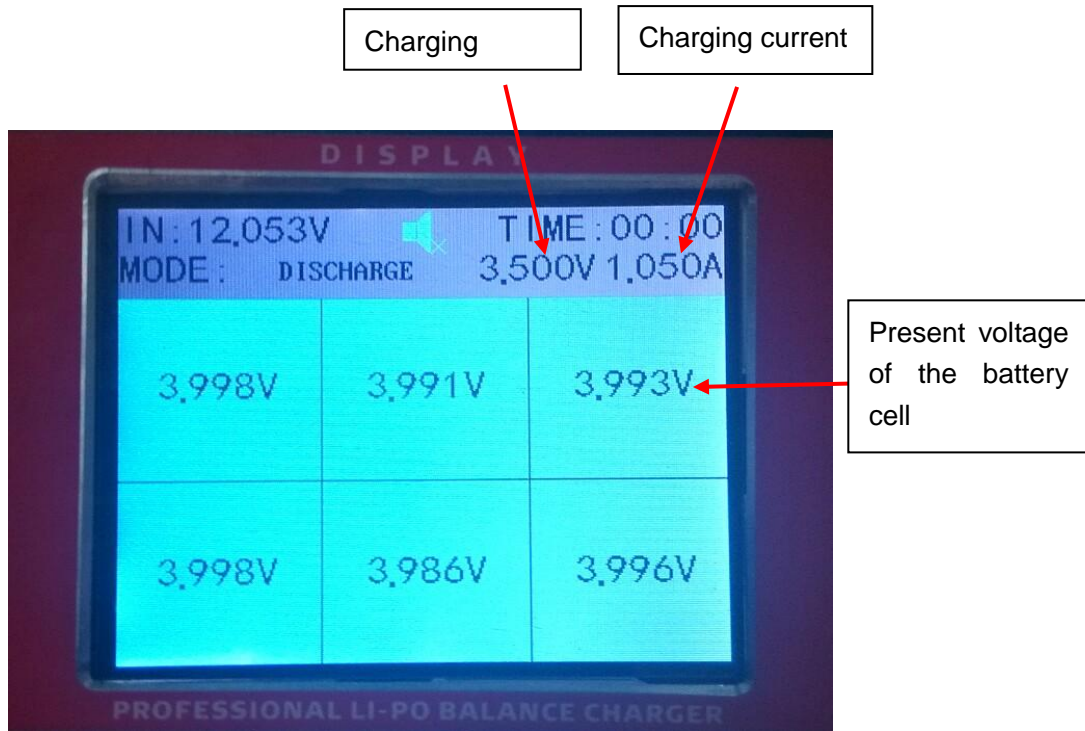
Voltage and current setting:

When the charging stopped, press SET to choose the option VOLTAGE/ CURRENT, and then press “+/ \blacktriangle ” or “-/ \blacktriangledown ” to set voltage and current, then press SET for next option.

3、 Operation

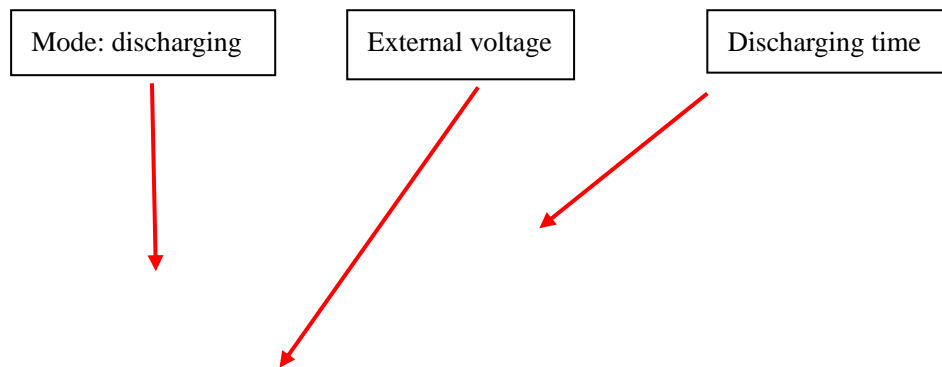
Connect the charger with a DC power source of output voltage 10.5-15V and current not less than 15A, and then connect a 6-cell battery with it, power on the charger.

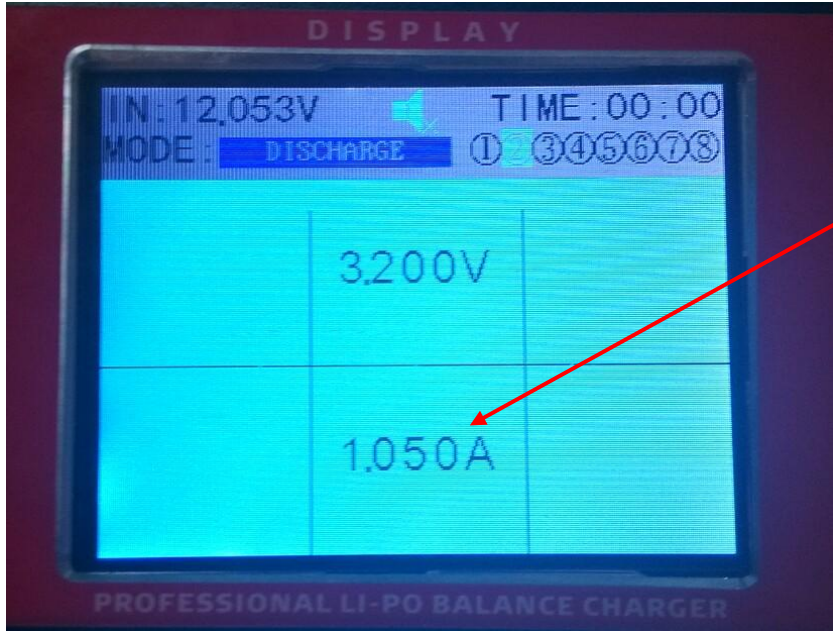
(1) Interface powered on



1

(2) Press the key SET, set the mode CHARGING or DISCHARGING. Press the key "+/▲" or "-/▼" to set voltage of discharging. Below sketch shows discharging setting interface: (discharging current is not settable, and charging voltage and current can set by yourself)



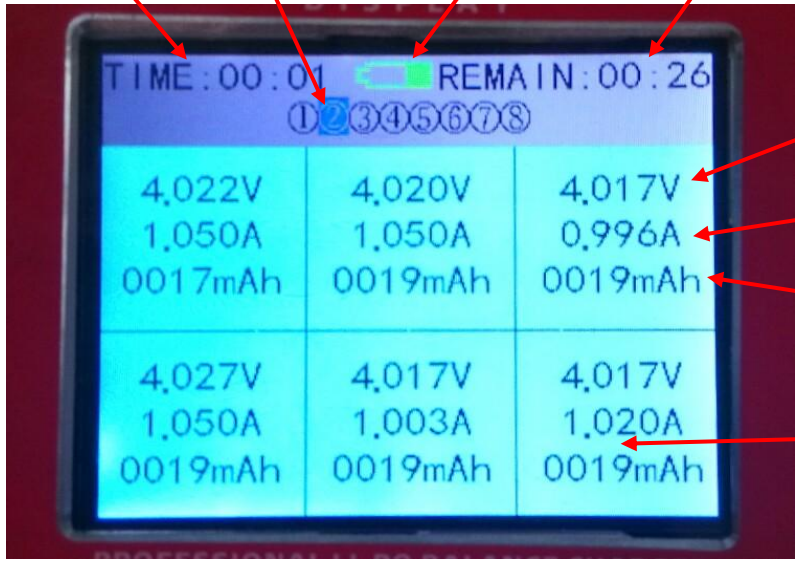


Discharging current is a fixed value (in charging mode, you can set the current)

2

(3) Press the key STOP to pause the present status, and press the key SET till the cursor comes to MODE, then press the key “+/\u25b2” or “-/\u25bc” to change the mode CHARGING, and press the button START to start charging. Below is charging interface:

Time charged Port charged Charging status mark Time left



Cell voltage

Cell charging current

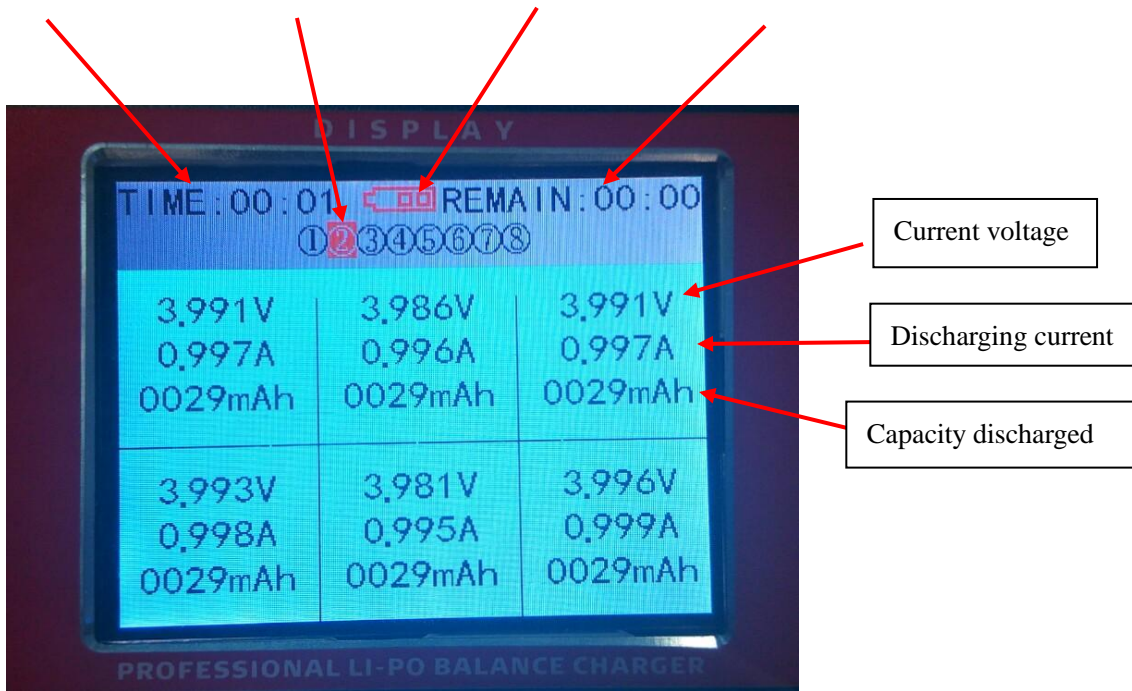
Capacity charged

Cell charging status

3

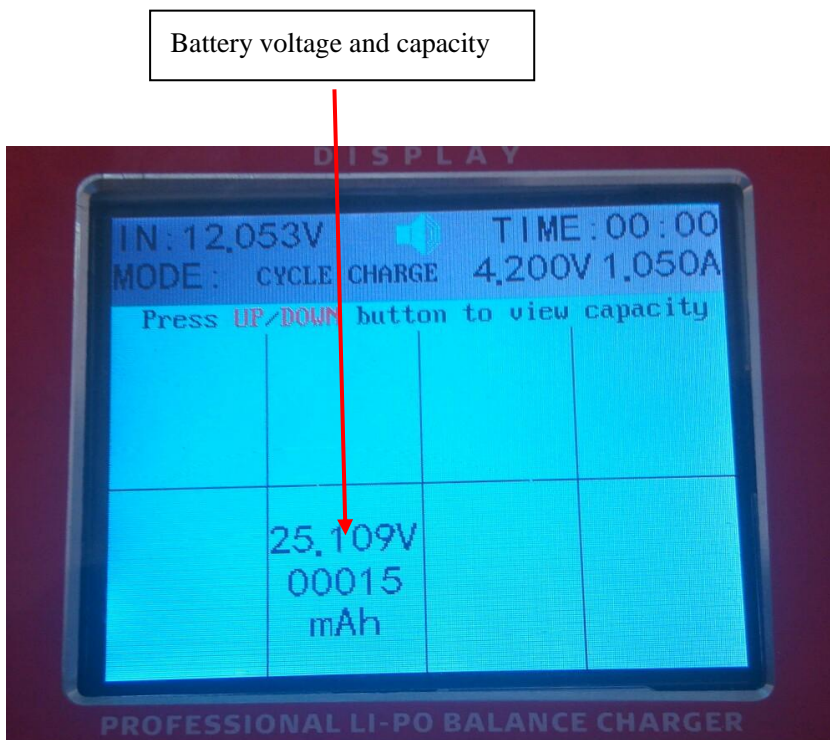
(4) press the button key STOP to pause the present status, and press SET till the cursor comes to MODE, then press“+/\u25b2” or “-/\u25bc”to choose mode DISCHARGING, and press the button key START to start discharging, shown as below:

Discharging time Discharging port Discharging mark Discharging time left



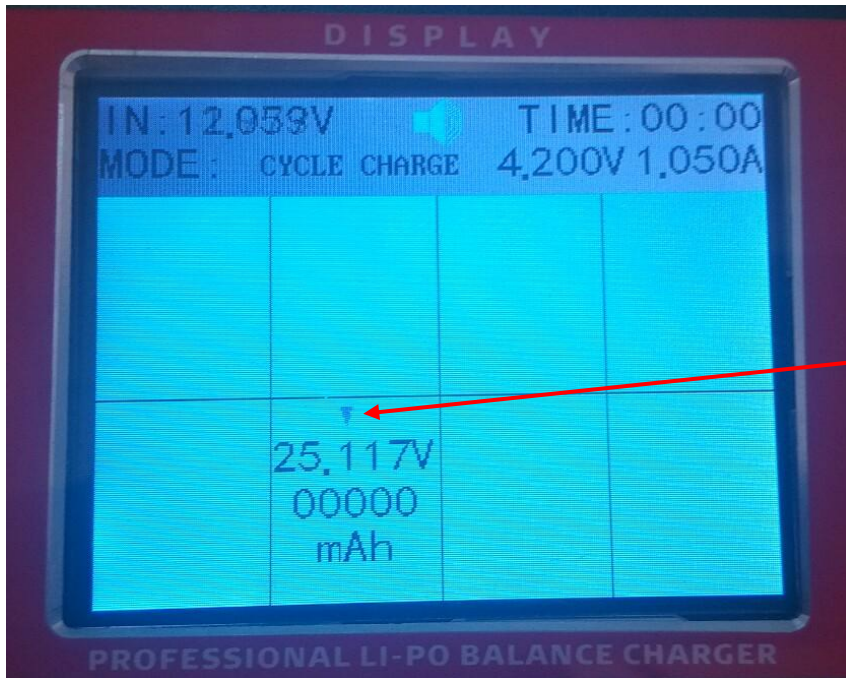
4

(5) When charging or discharging finished, press the button key STOP to check present voltage and current and every battery cells capacity. Below shows the interface:



5

Press the button “+/\u25b2” or “-/\u25bc” and now the cursor \u25bc shift from every port. All of the checks display the relative port batteries capacity. Below shows the current port battery status:

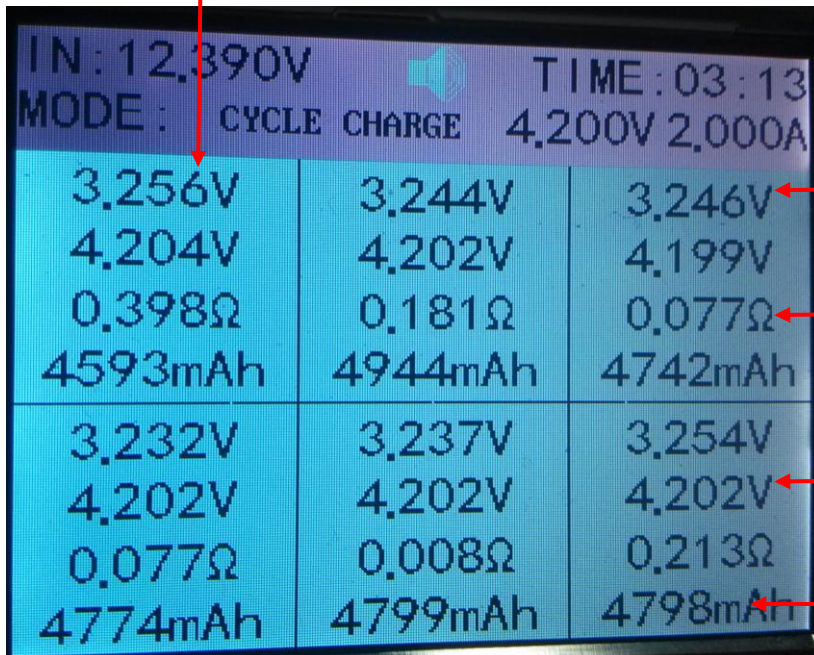


press “+/ \blacktriangle ” or “-/ \blacktriangledown ”
and the cursor \blacktriangledown shifts
from different ports

6

And then press SET to find battery capacity of different cells. See the below sketch:

Each cell represents the port is a
power-saving core rechargeable battery
case



Initial voltage

Cell resistance

Current voltage

Charged capacity

7

And then pres the button key START to return to charging status.

NOTE: 1) on the status shown by sketch 7, press SET to go back to the interface shown by sketch

6, and press “+ / ▲” or “- / ▼” till the cursor ▼ disappeared, or the voice indicator enabled, now press the key SET to go back to the sketch 2 to set voltage and current and charging mode etc.

2) On the interface shown by sketch 7, press “+ / ▲” or “- / ▼” to find other port batteries capacity.




模型专用锂电池充电管家 CB86-PLUS 产品说明书



深圳市乐迪电子有限公司

网址: <http://www.radiolink.com.cn>

 警示：此类产品属于高功率输出产品，请在视野范围内使用！

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一、功能菜单：



START/STOP
键：开始/停止运行选中的功能

“+ / ▲”，“- / ▼”键：增减数据。（在充电/放电状态时按此键无效）

SET 键：设置充电器的功能（在充电/放电状态时按此键无效）

CB86S 的参数指标说明：

输入电压：充电器输入电压，范围为 10.5-15V；

音效设置：开/关；

时间设定：可以设置充放电时间，范围为 0-99 分 59 秒；

工作模式：轮充/并充/放电/电压检测；

充电电压设置：0.00V-4.23V，可设置精度为 0.01V；

放电电压设置：2.00-4.23V，可设置精度为 0.01V；

充电电流设置：0.0-6.0A，可设置最小精度为 0.1A；

放电电流设置：1.05A，固定值，不可自定义。

二、操作说明：

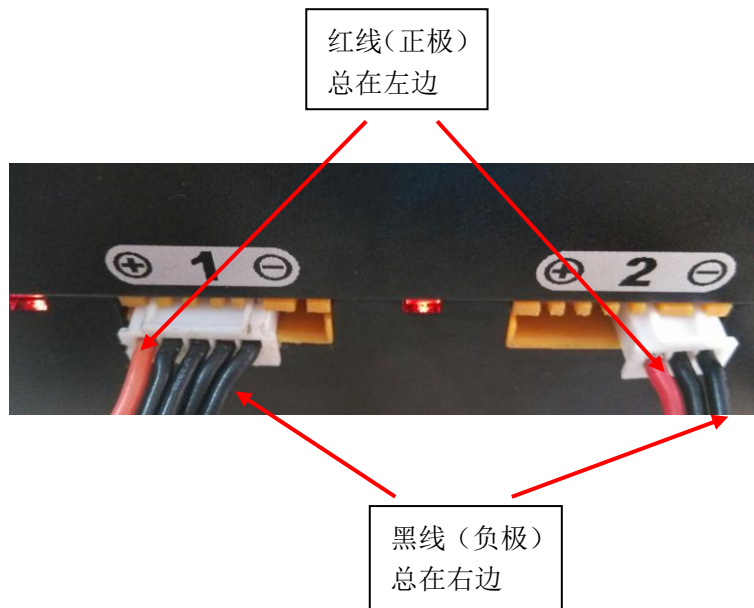
2、电池与充电器的连接

用一个输出电压为 10.5-15V 和电流不小于 15A 的直流电源连接到充电器。

平衡头的连接：

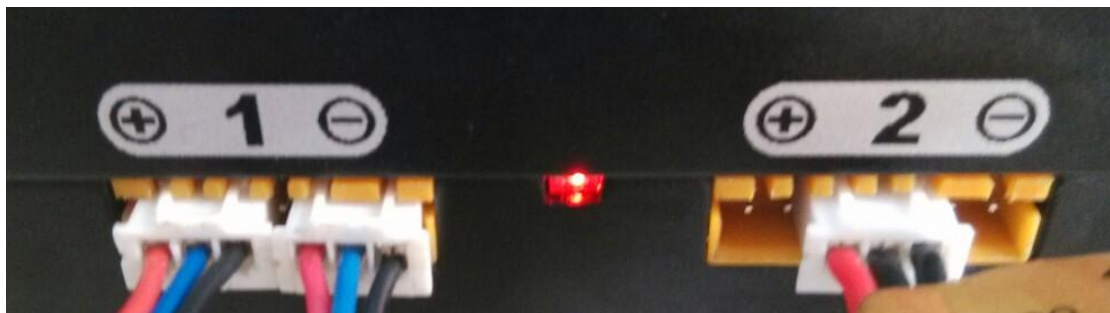
CB86S 充电器包含了八个集成的平衡头，最多可以连接 8 组 6S 锂电池或锂聚合物电池，1S-6S 可以任意接。连接方式参见以下图片，注意电池正负极，通常负极（黑色线）总是接在右边接口，正极（红色线）总是接在左边接口。

建议接法如下图：



以上图片是 1 个 4S 和 1 个 2S 分别连接在两个串口上。同样也可以用 1 个 6S 连接在一个串口上，或者 3 个 2S 连接在不同的串口，或者 2 个 3S 连接在两个串口，如下图所示。

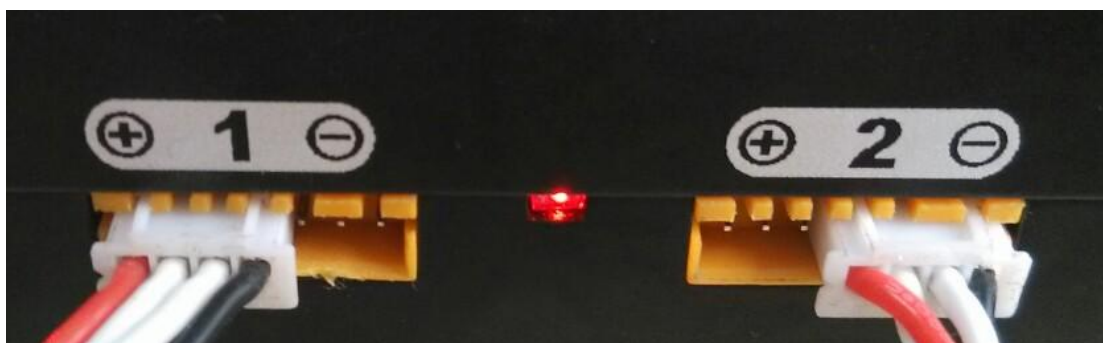
(1) 3 个 2S 连接方式：



(2) 1 个 6S 连接方式：



(3) 2 个 3S 连接方式：



3、按键功能说明：

START/STOP 键：

开始或停止当前的工作状态这个键在任何时候都有效，所以当您设置功能模式和充/放电电流和电压时，一定要确认所有的参数设置正确才能按下此键。

SET 键：

当充电器只有在停止状态下，按 SET 键才能进入功能选择和状态设，否则按此键无效。按 SET 键切换音效、功能、电流、电压、电池组，当其中一个功能处在反显状态时，使用“+/ \blacktriangle ”或“-/ \blacktriangledown ”键才能调整该功能状态。

音效设置：

当充电器在停止状态下，按 SET 键切换到音效模式，然后按“+/ \blacktriangle ”或“-/ \blacktriangledown ”键选择打开或关闭音效，选择好后按 SET 键进入下一个状态设置。

充电端口选择：

当充电器只有在停止状态下，按 SET 键切换到平衡充编号下，然后按“+/ \blacktriangle ”或“-/ \blacktriangledown ”键选择要首先工作的端口，选择好后按 SET 键进入下一个状态设置。

功能模式选择：

当充电器在停止状态下，按 SET 键调到功能模式处，按“+/ \blacktriangle ”或“-/ \blacktriangledown ”键切换不同的功能：轮充/并充/放电/电压检测，选择好后按 SET 键进入下一个状态设置。

如何设置充电电压和电流：

当充电器在停止状态下，按 SET 键调到电池电压/电流处，按“+/ \blacktriangle ”或“-/ \blacktriangledown ”键增或减到想要的电压/电流，调整好后按 SET 键进入下一个状态设置。

4、操作指引

用一个输出电压为 10.5-15V 和电流不小于 15A 的直流电源连接到充电器，然后将一个 6S 的电池按照以上说明连接充电器，电源上电。

(1) 开机界面说明

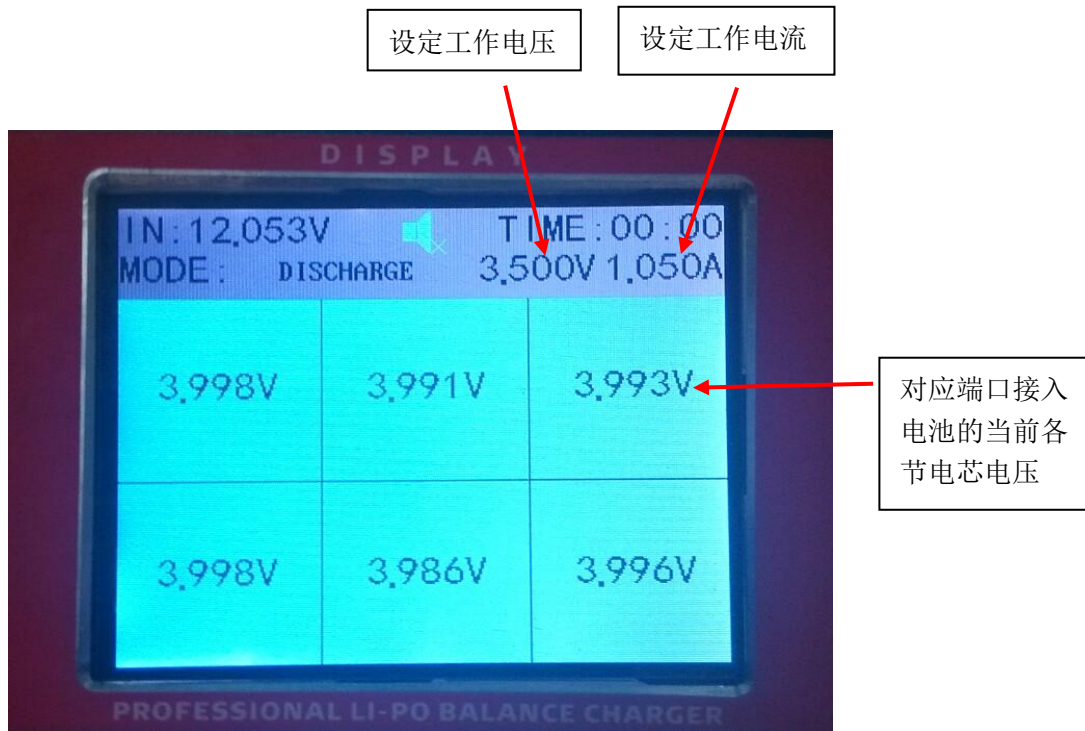


图 1

(4) 按下 SET 键，根据需要设置功能模式为充电或放电，按“+/ \blacktriangle ”或“-/ \blacktriangledown ”键可以设置放电电压。以下为放电电压设置界面(放电电流为固定值，充电模式电压电流都可以设置)。

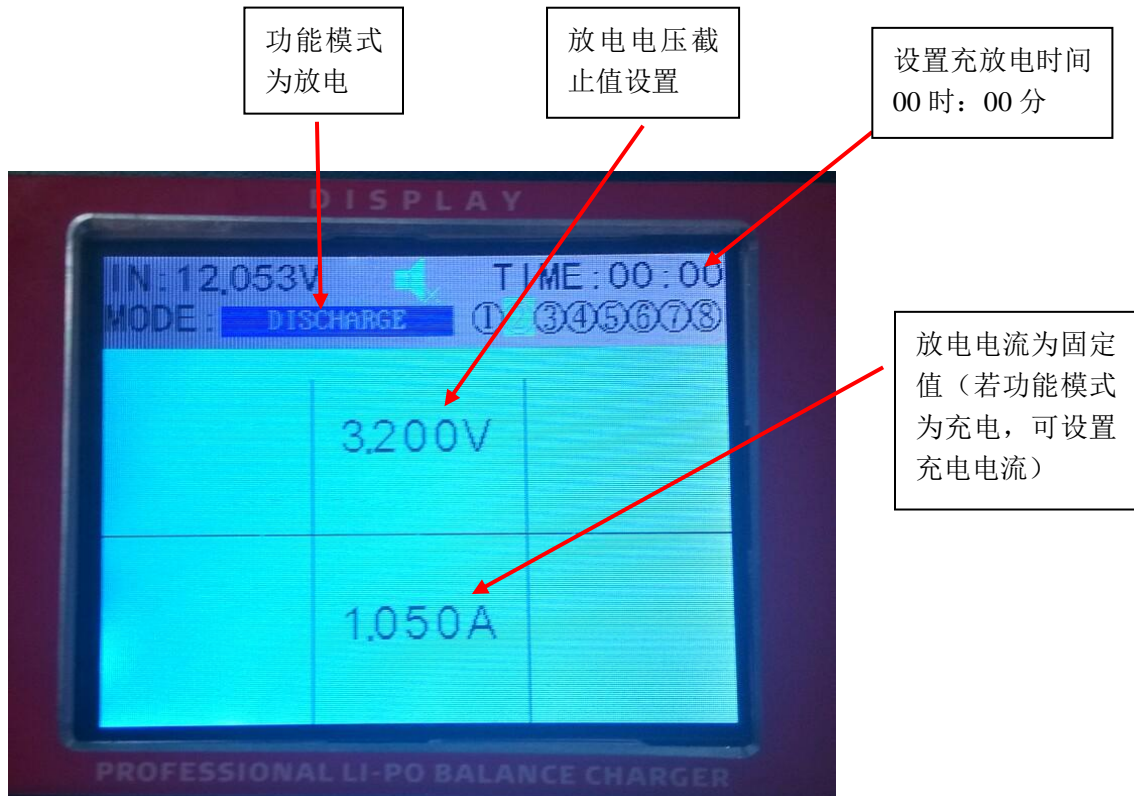


图 2

(5) 按 STOP 暂停当前工作状态, 按 SET 键至光标移动到 MODE, 按 “+ / ▲” 或 “- / ▼” 键设置功能模式为充电, 按 START 键开始充电, 充电界面说明如下:

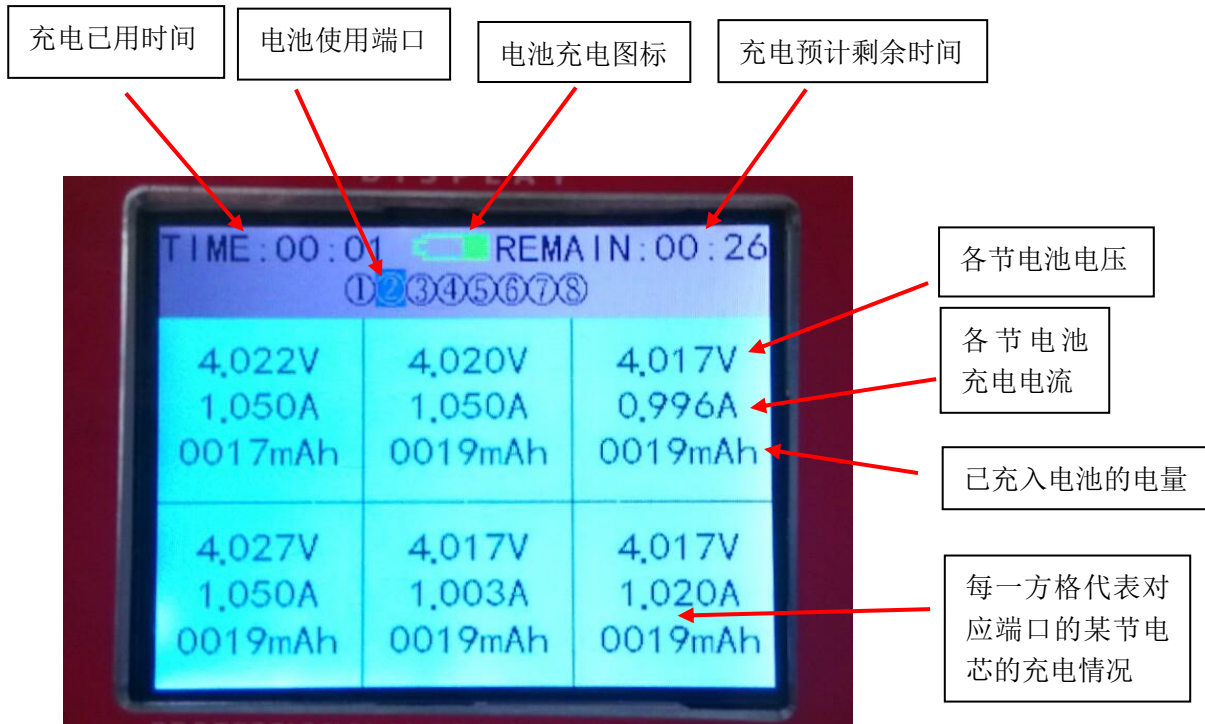


图 3

(4) 按 STOP 暂停当前工作状态, 按 SET 键至光标移动到 MODE, 按 “+ / ▲” 或 “- / ▼” 键设置功能模式为放电, 按 START 键开始放电, 放电界面说明如下:

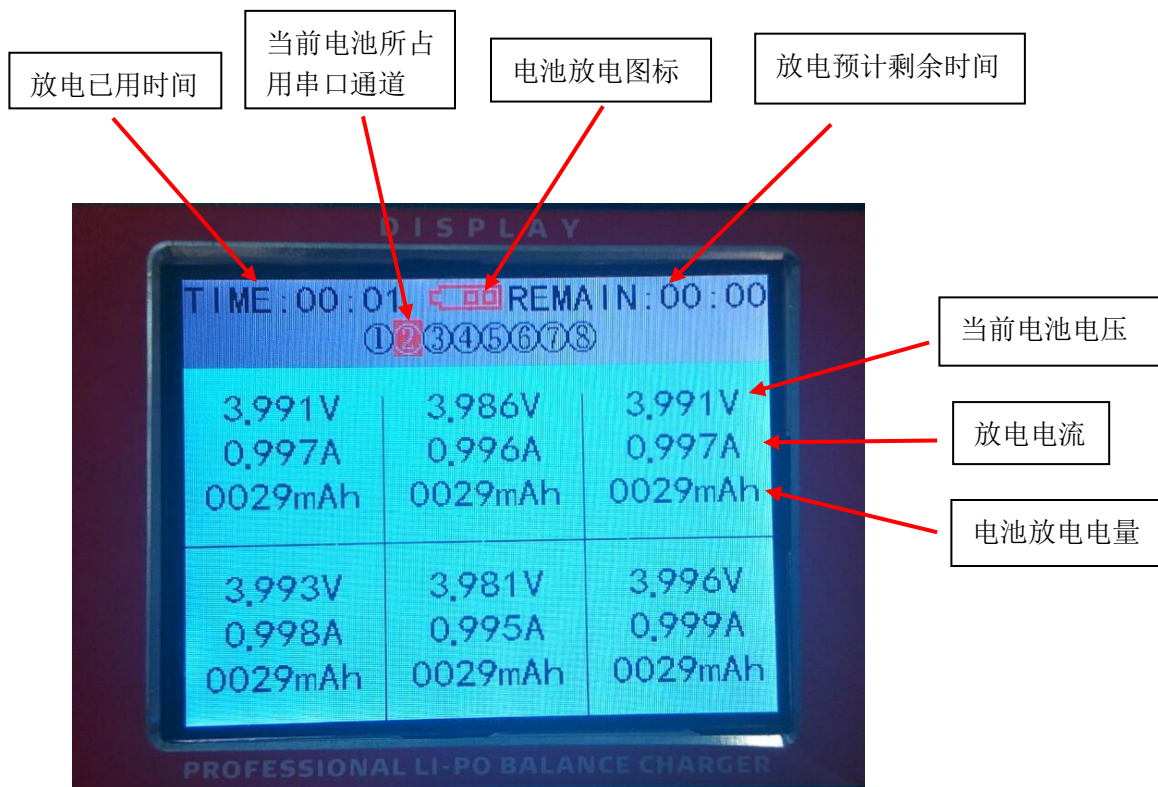


图 4

(6) 当电池充满电或放完电时，或按下 STOP 键可以查看当前电压电流值以及各节电池的电量情况，下图为充电时按下 STOP 键时的停止充电界面。

显示对应端口所接电池的总电压和充电电量的

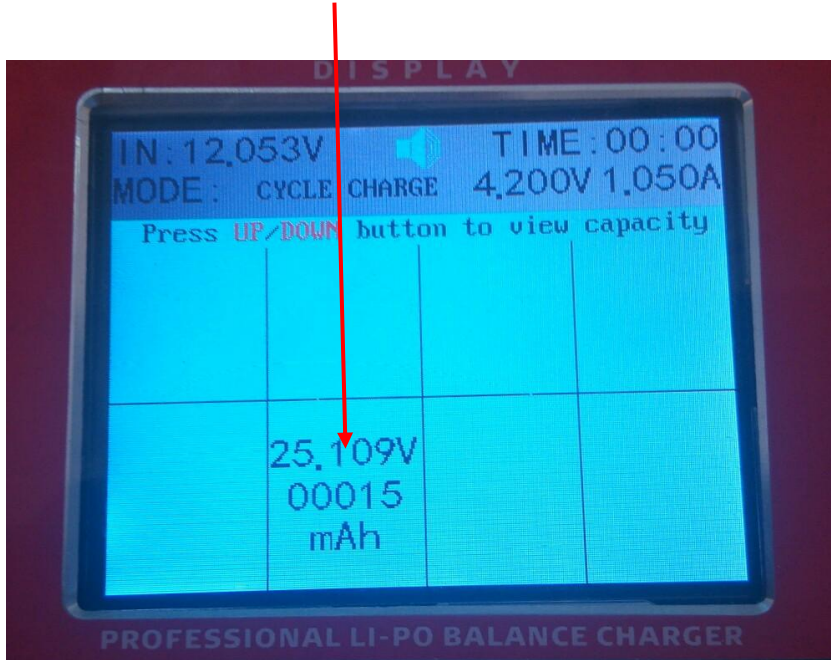
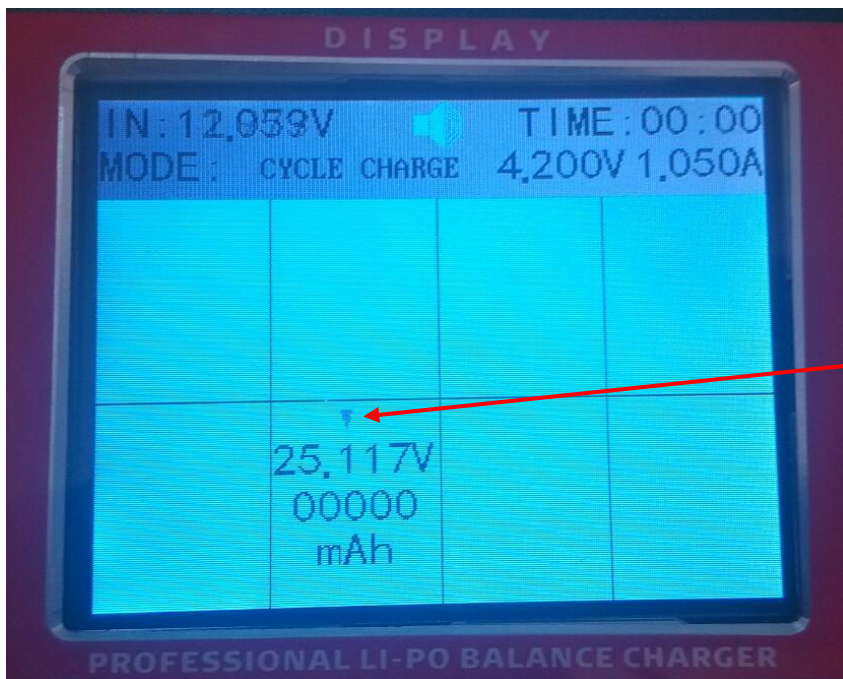


图 5

按“+/\u25b2”或“-/\u25bc”键可以看到光标▼在各个端口移动，每个方格显示各个端口的总电量情况。如下图中的▼表示当前选择所查看该端口的电池充电详细情况。



按“+/\u25b2”或“-/\u25bc”键可以看到▼在各个端口移动。

图 6

再按下 SET 键可以详细查看该端口所接每节电池的电量情况。如下图。

每一格代表该端口的电池某节电芯充电情况

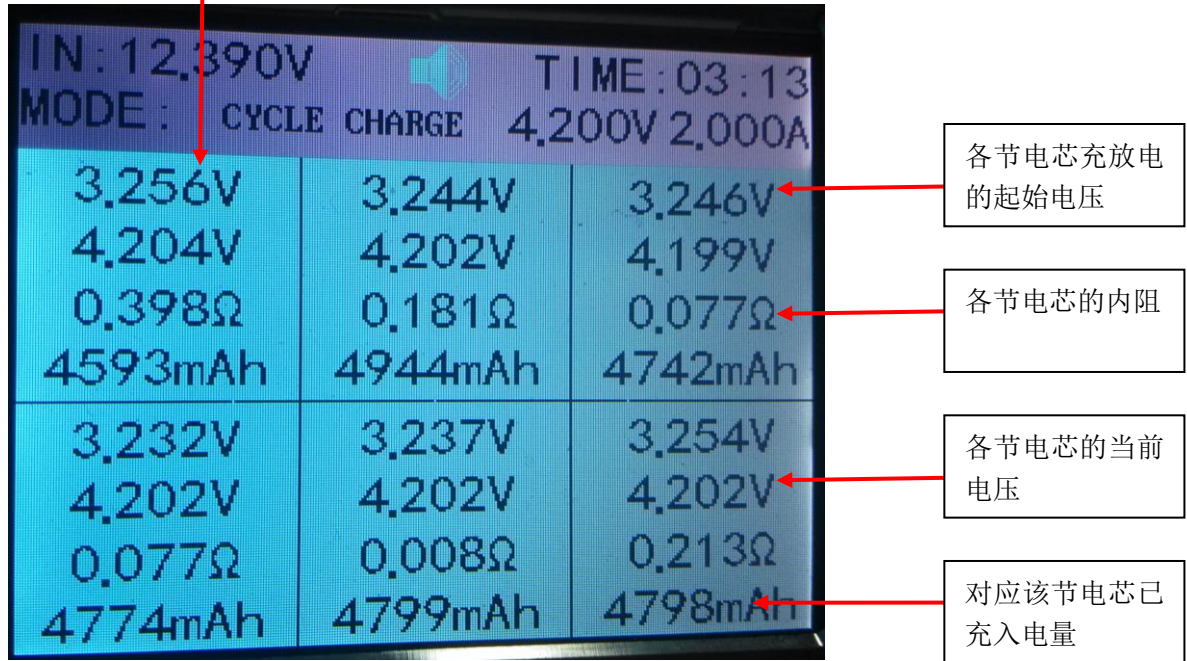


图 7

再按 **START** 键即可回到充电状态。

注：1) 在图 7 界面下，按 **SET** 键可返回至图 6 界面，按 “+/**▲**” 或 “-/**▼**” 键至 **▼** 光标消失，或提示语出现。此时再按下 **SET** 键可以回到图 2 界面进行设置电压电流值，充电模式等。

2) 在图 7 界面下，按 “+/**▲**” 或 “-/**▼**” 键可以查看其它端口所接电池的电量情况。