



材 质	80g书写纸彩色双面印刷
尺 寸	104X150mm(折叠后)
每台用量	1PC

制图版本



**TOUCH SCREEN**  
**TP1225HVC**

www.thunderpowerrc.com  
Thunder Power RC



**INSTRUCTION MANUAL**

*Specifications*

Input Voltage	[DC]	15.0 - 32.0 V
Charge Current	[A]	0.1 - 25.0
Discharge Current	[A]	0.1 - 25.0
Charge Power	[W]	1350W
Discharge Power	[W]	100W
Regenerate Discharge	[W]	max.1350
Balance tolerance	[V]	±0.01
Balance current	[mA]	max.1000
Charging Capability	NiMH/NiCd	1 - 30 cells
	LiPo/LiFe/Lilon/LiHV	1 - 8 series / 12series
Pb battery voltage	[V]	2 -40
Digital power	[V]	5 -50.4
Weight	[g]	1450
Dimensions	[mm]	154x162x84

折叠方式: 左右风琴4折+上下对折

<b>深圳市永航新能源技术有限公司</b> EV-PEAK Electronic Technology(HK) Co.,Ltd	物料编号	B0901-A1225-02	制 图	审 核	研发部 2018.03.31 蒋冬菊	业务部 2018.03.31 阙格
	物料名称	说明书				
	适用机型	A9-249	核 准			
单 位	mm	比 例	1:1	制图日期	20180326	

## TOUCH SCREEN TP1225HVG



www.thunderpowerrc.com  
Thunder Power RC

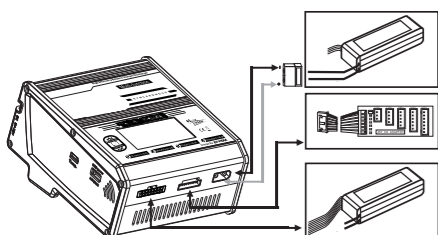
### INSTRUCTION MANUAL

### Specifications

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### Connection

Connection diagram in the balance charging /storage/discharge mode

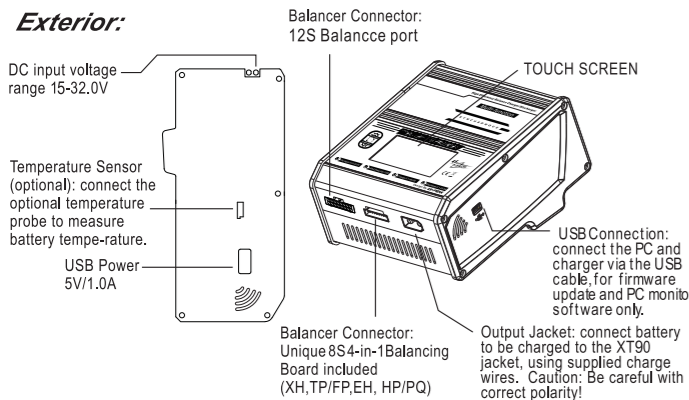


**WARNING:** Read the ENTIRE instruction manual to become familiar with the features of the product before operating.

**WARNING:** Never leave charger unattended, exceed maximum charge rate, charge with non-approved batteries or charge batteries in the wrong mode. Failure to comply may result in excessive heat, fire and serious injury.

**CAUTION:** Always ensure the battery you are charging meets the specifications of this charger and that the charger setting are correct. Not doing so can result in excessive heat and other related product malfunctions, which can lead to user injury or property damage.

Note: the 12S and 8S balance port cannot be used at the same time!

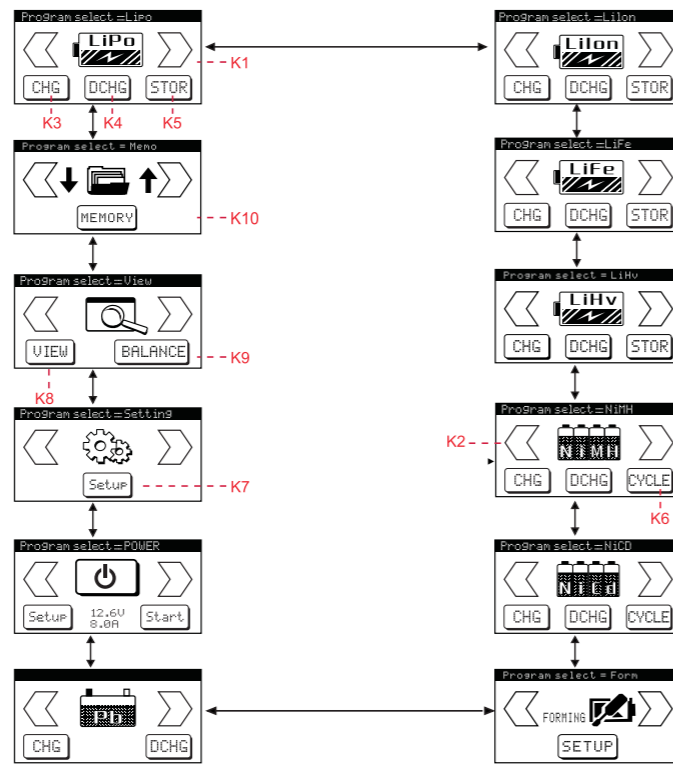


**CAUTION:** Always power on the charger before connecting a battery to the charger, or damage to the charger and the battery can result.

- 1, Connect charger to power source
- 2, Connect balance adapter to charger
- 3, Connect battery to balance adapter
- 4, Connect charger and battery with main charging cable
- 5, Make program selection in the charger for battery charging
- 6, Start to charge battery

### Main Screen

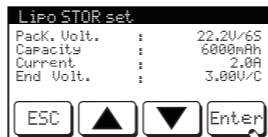
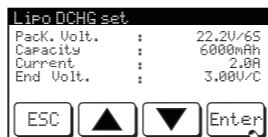
After power on the charger, you can see the main menu, press the arrow key to check the LiPo/LiIon/LiFe/LiHV /NiMH/NiCd/Pb/Digital Power/Setup/Data View functions.



- K1: Select the battery type or program
- K2: Select the battery type or program
- K3: Enter into the charging setup menu
- K4: Enter into the discharging setup menu
- K5: Enter into the storage setup menu
- K6: Enter into the cycle mode
- K7: Enter into the advanced setup menu
- K8: Enter into the data view mode
- K9: Enter into the balancer mode
- K10: Enter into memory mode

### Lithium batteries program

The charger can accept four types of Lithium batteries:LiPo/LiIo/ LiFe/LiHV; you have to check the battery carefully and set it up correctly, or it will cause a explode!



Notice: charger will set the charge current according a rate of 1C automatically when you set the capacity of the battery pack. If you charge a high-rate battery pack, you can set the value of the "Current" a little higher!

there are 2 modes for Lithium battery charging: Balance mode, NO balance mode

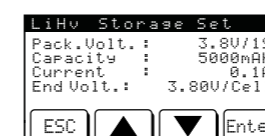
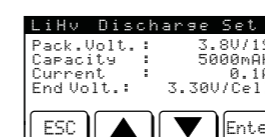
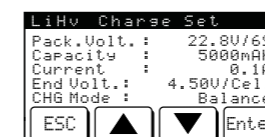
Start to charge/discharge: after setup the mode menu correctly, press touch key for more than 2 seconds to start the process.

"Discharge mode" theoretically, Lithium battery do not need to discharge, especially deep-discharge. To avoid the overcharge of the individual battery, you should connect the balance plug of the battery to the charger, you can set the discharge cut-off voltage from 3.0V to 4.0V

"Storage mode" this is for charging or discharging Lithium battery not to be used for the time being. In order to reduce the wastage, you can select this mode to remain the power to 40% to store. The final voltage are different from the type of the battery. LiIo:3.75V, LiPo, LiHV:3.85V, LiFe:3.3V. This is an intelligence program. If the voltage of battery at its initial stage is over the voltage level to storage, the program will start to discharge, and if it is lower, the program will start to charge automatically. In order to ensure each battery meets the demand, you should connect the battery pack to the balance port of the charger

### LiHV battery Program

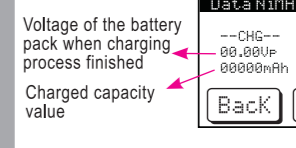
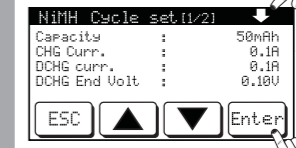
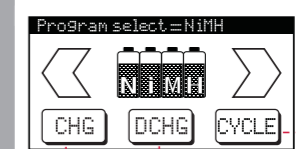
CAUTION: make sure the battery which you want to be used is the High Voltage LiPo battery, otherwise it will cause overcharge and may result in excessive heat, fire and serious injury!



LiHV operation is same as LIPO program, only END VOLTAGE VALUE different.

CAUTION: follow the battery factory indication to set the right end voltage, otherwise it may cause excessive heat, fire and serious injury!

### NiMH/NiCd battery program



Tips: If the voltage of charging battery is lower than 2.5V, ΔV may can not be perceived, this will cause a danger of discharge. You can connect a temperature sensor or use the charger current above 1C to avoid it.

"CHARGE" mode the default mode is "Man". In "Man" mode, it will charge the battery with the charge current you set at the display. But in "Auto" mode, you need to set the upper limit of charge current to avoid from higher feeding current that may damage the battery. Because some batteries of low impedance and small capacity can lead to the higher charge current by the processor at automatic charge mode.

the trigger voltage for automatic charge termination of NiMH and NiCd battery (ΔV), the effective value ranges from 5 to 20mV per cell. If ΔV is set higher, there is a danger of overcharging the battery; if it is set lower, there is a possibility of premature termination, please refer technical specification of the battery. (NiCd: 12mV, NiMH: 7mV)

"DISCHARGE" mode the discharge current ranges from 0.1A to 45.0A and the final voltage ranges from 0.1 to 24.0V, the operating method is similar as Lithium battery. The final voltage of NiMH battery is 1.0V/cell, and the NiCd is 0.85V/cell, please refer the recommend by the battery manufacturer.

"CYCLE" mode the charger can perform 1-5 cycles of DCHG > CHG or CHG > DCHG continually. You can select it for the new NiMH battery or the long time laid NiMH battery, please set up carefully, or it will damage the battery! To set the parameter please follow the "Cycle set" menu.

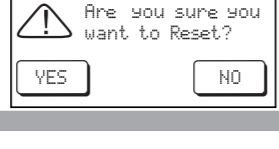
When NiMH or NiCd battery is on the cyclic process of charge/discharge, it may become warm. The program insert a time delay function to allow the battery has enough time to cool down during the two cycle process, the value ranges from 1 to 60 minutes, if you are not sure, you can set it to time above 10 minutes.

"Back": Go back to the charge menu  
Here you can view the curve voltage for charging or discharging

Check the previous cycle  
Check the next cycle

### Initial parameter set up

Tips: please set up correctly in the "user set" menu before into the job for the first time you use it



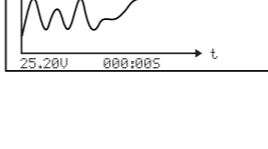
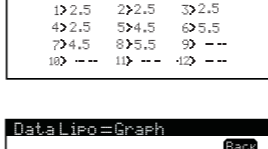
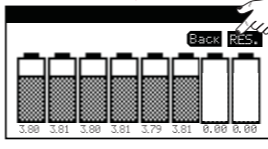
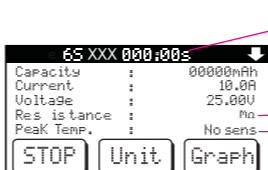
This charger can recognise the cell count of Lithium battery automatically, for the battery voltage lower than the lowest safety voltage, charger will not start the charge process. But this charge has a precharge function to restore the battery, you can set the restore time (normally off) in the menu, then precharge program will start-up. The more capacity of the battery is, the more time it will need.

Attention: In the normal charge mode, you need to turn off the precharge process. DO NOT use this function unless you know the battery status very well. If the battery voltage increase very few, please stop the precharge process immediately, or it will cause a danger!!!

S1: Dec./Up S2: Inc./Down S3: Select/Enter  
Press here to check the other setting items

You can set the user name or something informations here, then your setting will be showed once the charger power on

You can reset all the setting to factory reset here!  
Pls DO NOT use this function unless you are sure that you need the factory reset.



Record the elapsed time of charging/discharging

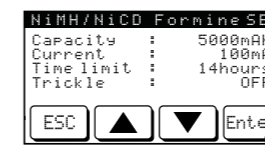
Internal resistance of the battery pack  
Peak temperature which measured by the temperature sensor

"Back": Go back to the charge menu

Here you can view the curve voltage for charging or discharging

### Forming battery Program

Forming charge is a special function to reactive the NiMH/NiCd batteries which are long time not used.

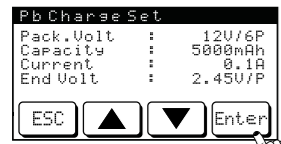
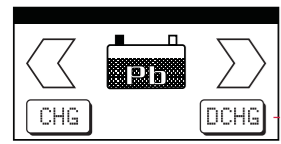


Check the previous cycle  
Check the next cycle

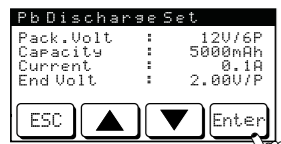


## Pb battery program

This is programmed for charging Pb battery with nominal voltage from 2 to 24V, Pb battery can not be charged rapidly, they can only deliver relatively lower current compare to their capacity, the optimal charge current will be 1/10 of the capacity, please always follow the instruction supplied by the manufacturer of battery.



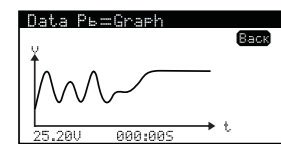
This Mode is for charging Pb battery. As you can see on the screen, you can set up the charge current on the setting interface, you can set the voltage / capacity / current of the battery here, the charge current ranges from 0.1-45.0A and the voltage should be matched with the battery being charged. Start the charge process by pressing "Enter" key for more than 2 seconds.



set the cell count, discharge current and battery capacity in this menu. The discharge current ranges from 0.1-45.0A and the voltage should be matched with battery being discharged. Start the discharge process by pressing "Enter" key for more than 2 seconds.

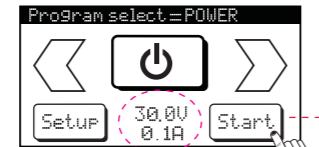


The screen shows the state of charging/discharging process. To stop the process, please press "ESC" key once.



## Digital power program

In this mode, charger can provide a output power of DC5.0V-50.4 V for the other electronic equipment



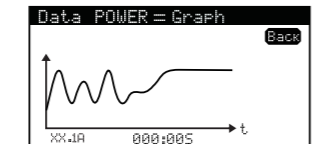
A0: In the digital power menu, charger will show the parameters which user set in the last time; if you do not need to modify the settings, please press the START button directly for more than two seconds.



Set Max. current of output  
Set Max. power of output



The real-time output current  
The real-time output power

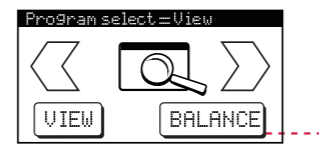


Press "Graph" key to view the current curve

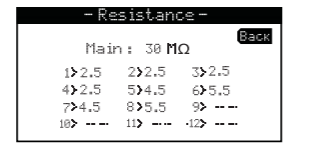
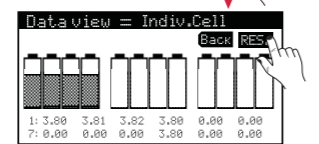
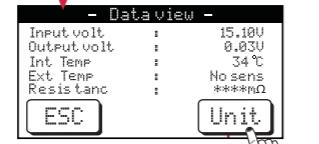
To stop the program, Press "Back" to go to the previous interface and press "Stop" key

## Data view

With this program, you can check the total voltage, unit voltage and internal resistance of the battery pack, and check the inner temperature/external temperature of the charger also



Tips: When press "view", charger will enter into the resistance measurement process for one time only, please make sure you've connected the battery to the output jacket port of the charger.



To stop the program, Press "Back" to go to the previous interface and press "Stop" key

You can use the balance function for the unbalanced battery pack

Press "balance" to choose battery types. Then, press "Start" button to start balancing



Please be sure to carefully check the battery type and setting, otherwise it may damage the battery.

## Memory battery Program

1. Press the Left and Right Arrows on the LCD touch screen to scroll through the main menu screens until you reach the battery program you would like to save. Program Select=LiPo/LiFe/LiIon/LiHV/NiMH/NiCd/Pb  
2. Press the action at the bottom of the LCD touch screen to enter that menu  
3. Press the parameter to highlight that parameter  
4. Press the Up and Down Arrows to edit the parameter  
5. Press Enter to save the parameter  
6. If there is more than one screen of parameters, press the top right corner of the LCD touch screen to scroll through the parameter screens.  
7. Once the parameters are at the desired settings, press ESC to return to the main menu screens  
8. Press the left and right arrows on the LCD touch screen to scroll through the main menu screens until you reach Program Select=Memory.



9. Press Memory  
10. Choose an empty memory profile and press it



11. Press SAVE, the charging parameters you just entered will be saved in that memory profile.  
12. To use a memory profile, press it, then press LOAD  
13. To delete a memory profile, press it, then hold DEL  
14. Press top right of the LCD Touch Screen to scroll through all 20 memory profiles.

## Charging Warnings

WARNING: Failure to exercise caution while using this product and comply with the following warnings could result in product malfunction, electrical issues, excessive heat, FIRE, and ultimately injury and property damage.

- Never leave the power supply, charger and battery unattended during use.
  - Never attempt to charge dead, damaged or wet battery packs.
  - Never attempt to charge a battery pack containing different types of batteries.
  - Never allow children under 14 years of age to charge battery packs.
  - Never charge a battery in extremely hot or cold places or place in direct sunlight.
  - Never charge a battery if the cable has been pinched or shorted.
  - Never connect the charger if the power cable has been pinched or shorted.
  - Never connect the charger to an automobile 12V battery while the vehicle is running.
  - Never attempt to dismantle the charger or use a damaged charger.
  - Never connect the input jack (DC input) to AC power.
  - Always use only rechargeable batteries designed for use with this type of charger.
  - Always inspect the battery before charging.
  - Always keep the battery away from any material that could be affected by heat.
  - Always monitor the charging area and have a fire extinguisher available at all times.
  - Always end the charging process if the battery becomes hot to the touch or starts to change form (swell) during the charge process.
  - Always connect the charge cable to the charger first, then connect the battery to avoid short circuit between the charger leads. Reverse the sequence when disconnecting.
  - Always connect the positive red leads (+) and negative black leads (-) correctly.
  - Always disconnect the battery after charging, and let the charger cool between charges.
  - Always charge in a well-ventilated area.
  - Always terminate all processes and contact local dealer if the product malfunctions.
- WARNING: Never leave charger unattended, exceed maximum charge rate, charge with non-approved batteries or charge batteries in the wrong mode. Failure to comply may result in excessive heat, fire and serious injury.
- CAUTION: Always ensure the battery you are charging meets and specifications of this charger and that the charger settings are correct. Not doing so can result in excessive heat and other related product malfunctions, which can lead to user injury to property damage.

## Warning and error messages

The A9 is protected against faults and operator errors by the Multi-Protection-System. Faults/Errors are displayed on the LCD screen and they interrupt the active process to protect the unit and the battery.



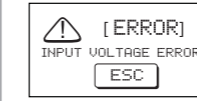
The output is connected to a battery with incorrect polarity



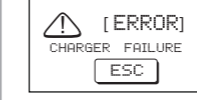
Not connected or connection interruption



Output short circuits



Input voltage error, below or over the limit of 11-18V



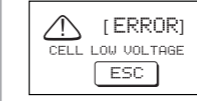
Charger fault



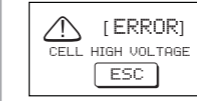
Total voltage too low



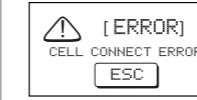
Total voltage too high



Unit cell voltage too low



Unit cell voltage too high



Balance port connection error



Charge overheating



Power exceed the limit in the digital power mode



Current exceed the setting in the digital power mode



Exceed the maximum safe time limit



Exceed the maximum capacity limit



External temperature too high

## After-sale service and guarantee

Thank you for purchasing this balance charger. We will do our best to provide you with a comprehensive after-sale service and protect your rights and interests.

We warrant this product for a period of one year from the date of purchase, if it has a quality problem itself, all guarantee will be free; In case customers can not provide an effective certificate of purchase, we will refer to the date of machine's internal. If it is over one year since the purchase date, an appropriate cost will be charged, users need to bear the transportation cost back and forth. User disassembly, alteration, or damage caused by improper use, they should bear the maintenance and transport costs.

### COMPLIANCE INFORMATION FOR THE EUROPEAN UNION

Declaration of Conformity



Product(s):  
Item Number(s):



The object of declaration described above is in conformity with the requirements of the specifications listed below, following the provisions of the European EMC Directive 2004/108/EC

EN 55014-1:2006  
EN 55014-2:1997+A1:2001  
EN 61000-3-2:2006  
EN 61000-3-3:2008

### Instructions for disposal of WEEE by users in the European Union



This product must not be disposed of with other waste. Instead, it is the user's responsibility to dispose of their waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.

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