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INSTRUCTION MANUAL



HT206AC/DC DUO



Power programmable

400W
20A*2

AC/DC Input Professional
Balance Charger/Discharger
High Power



MADE IN CHINA

规格: 280*140mm

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www.ht-rc.com

SOFTWARE FIRMWARE UPGRADE

Please visit our website www.ht-rc.com, to stay up to date with the latest software and firmware for our product in your hand.

WARRANTY

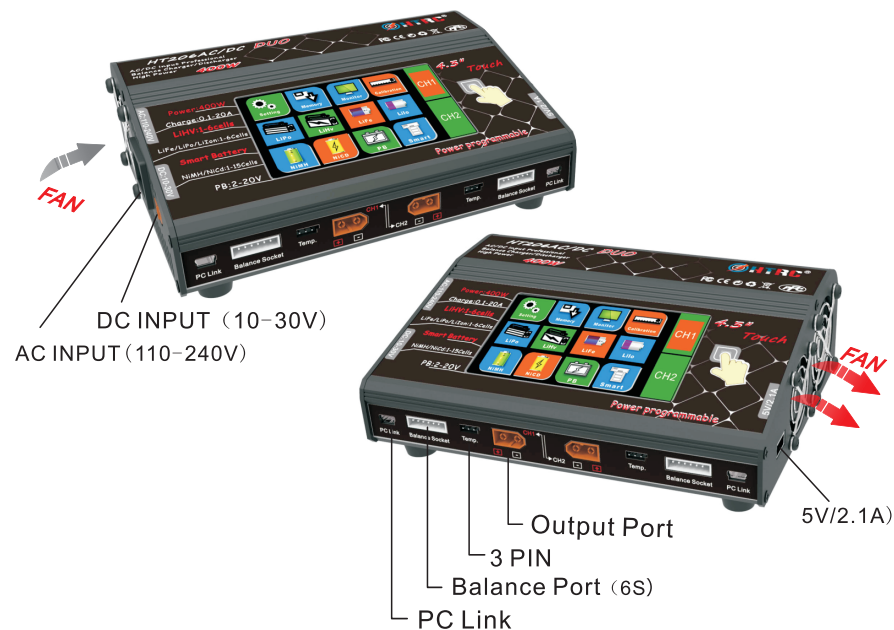
SHENZHEN HUITUO provide a period of one year product warranty from the date of purchase. The warranty only applies to material or operational defects, which are present at the time of purchase. During that period we will repair or replace free of service, charge for products deemed defective due to those causes. This warranty is not valid for any damage or subsequent damage arising as a result of misuse, modification or as a result of failure to observe the use guideline in this manual.

LIABILITY EXCLUSION

This charger is designed and approved exclusively for charge the types of battery stated in this manual. **SHENZHEN HUITUO** do not accept any liability if the charger is used for any purpose other than that stated. We are unable to ensure you follow the instructions come with the charger, and we have no control over the methods you employ for using, operating and maintaining this device. For this reason we are obliged to deny the liability for loss, damage or costs which are incurred due to the incompetent or incorrect use and operation of this product, or which are connected with such operation in any way. Unless otherwise prescribed by law, our obligation to pay compensation, regardless of the legal argument employed, is limited to the invoice value of those products which were immediately and directly involved in the event in which the damage occurred

Thank you for purchasing the **HTRC**® charger. Designed by pro-fessionals, this system is extremely versatile. For the safety and the best use of your system, please read this manual carefully.






For any difficulties with your system, we offer multiple resources to assist you, including this manual, online Freque Asked Questions webpage (www.ht-rc.com) your hobby dealer, or the **SHENZHEN HUITUO** Support and Service Center Cause unforeseen changes, the information contained in this manual is subject to change without notice.



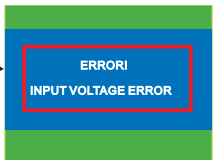
SPECIFICATION

ERROR INFORMATION

	HT206AC/DC DUO
AC INPUT	110-240V
DC INPUT	DC 10-30V
Display	TFT LCD
Batteries	LiPo,LiIon,LiFe,LiHV 1-6 cells
	NiCd,NiMH 1-15 cells
	Pb(Lead Acid) 2-20V
	Smart Battery I/II/III/IV
Charge Power	200W*2
Charge Current	0.1-20A*2
Discharge Power	25W*2
Discharge Current	0.1-5.0A*2
Balancing current	500mA/cell
USB Output	—
Sub Function	Digital Power, Balancer, IR Test
Firmware upgrade	External Mini USB device
Languages	English
Ext.Temp socket	Futaba 3P socket
Memory	8 memories
Dimensions	L195*W143*H70mm
Weight	1072g
Smart battery	5-27V,0.1-20A

Accessories	
 <p style="text-align: center;">Adapter Board 2SET</p>	
 <p style="text-align: center;">Extra Cable x2pcs</p>	
 <p style="text-align: center;">Smart Battery Cable x2pcs</p>	
 <p style="text-align: center;">Extra Cable x2pcs</p>	
 <p style="text-align: center;">AC Cord x1pc</p>	

ERROR INFORMATION



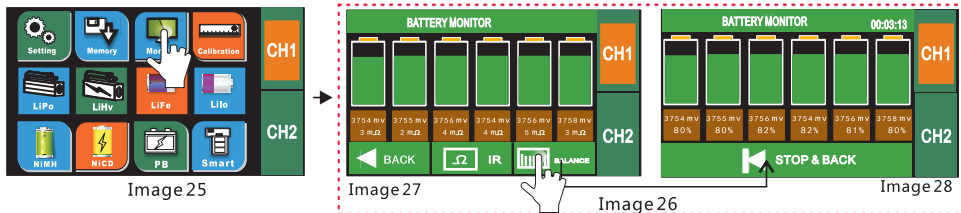
<NOTE>

The charger will send out an alert and pop-up window if the battery packs' setting is incorrect (Image 38).

Image 34

ERROR! INPUT VOLTAGE ERROR	Input voltage is higher than 30V, check the power supply, then restart the charger.
ERROR! INPUT VOLTAGE TOO LOW	Input voltage is lower than the value of LOW INPUT VOLTAGE CUT-OFF, check the power supply, then restart the charger.
ERROR! REVERSE POLARITY CHECK	Reverse polarity, check the connection between the charger and the battery, correct the connection, then restart the work.
ERROR! BATTERY CHECK DISCONNECT	Battery disconnect, check the connection between the charger and the battery, then restart the work.
ERROR! BATTERY CHECK OVER VOLTAGE	Total voltage of the battery is over the termination voltage control(TVC), check the battery and the TVC setting, then restart.
ERROR! BATTERY CHECK LOWER VOLTAGE	Total voltage of the battery is lower than the termination voltage control(TVC), check the battery and the TVC setting, then restart.
ERROR! BATTERY CHECK CELL COUNT ERROR	Cell count detected by the charge is different from the setting, check the battery cell count and reset the cell count of the work.
ERROR! BATTERY CHECK OVER CELL VOLT	Cell voltage of the battery pack is over the termination voltage control(TVC), check the battery and the TVC setting, then restart.
ERROR! BATTERY CHECK LOWER CELL VOLT	Cell voltage of the battery pack is lower the termination voltage control(TVC), check the battery and the TVC setting, then restart.
ERROR! BATTERY CHECK FULL BATTERY	Full battery, no need to charge.
ERROR! OVER Ext.TEMP CUTOFF	External temperature is higher than the setting value, cutoff.
ERROR! OVER CAPACITY CUTOFF	Capacity is over than the setting value, cutoff.
ERROR! SAFETY TIME OUT CUTOFF	Time is up to the setting value of Safety Timer, cutoff.

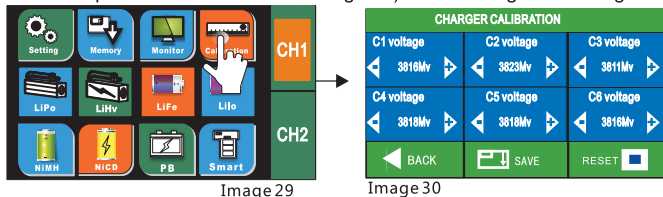
ONE: Enter into Menu, select Monitor (Image25) and into BATTERY MONITOR (Image26).



- 1) Meter LiXx(LiPo/LiIo/LiFe/LiHV)battery status.(Image27)
- 2) Meter LiXx(LiPo/LiIo/LiFe/LiHV)battery internal resistance.(Image27)
- 3) LiXx(LiPo/LiIo/LiFe/LiHV)battery balancer.(Image28)

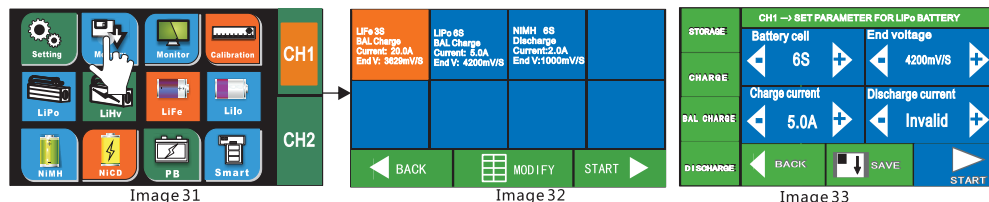
CH-1, CH-2 means CH-2 or CH-1 Swift image
 Note: 1. If CH-2 has been not used, CH-2 press image, return back to main menu, and use CH-2 operation
 2. If CH-2 has been used, CH-2 press image, enter into CH-2 operation directly
 3. Two Channel are independent, and you can use different mode to operate

TWO: Step1. Enter to Menu, select Calibration (Image29), into "CHARGER CALIBRATION"(Image30)
 Step2. select "RESET" (Image30) recover original setting (Image30)



Step1. Enter into Menu, select Memory (Image31).

Step2: Select correct icon as exact battery type image32, and select "Modify" icon, (Image33).



- ⚠ - This charger is ONLY suitable for charge rechargeable LiPo, LiIo, LiFe, LiHV, NiCd, NiMH, Smart and Pb batteries
Do not attempt to charge dry cells. Charge other types of batteries may cause fire or explosion.
- ⚠ - Set up the InputPower Limit/Low Input VOLT Cutoff correctly in the USER SETTING to the DC power supply.
- ⚠ - Pay attention to the charger during use. Do not leave the charger unattended.
- ⚠ - Never charge the dead or damaged batteries.
- ⚠ - Do not attempt to charge a battery pack containing different types of batteries.
- ⚠ - Do not use a too long or damaged cables.
- ⚠ - Do not use the charger close by a flammable object. Use only in well-ventilated areas.
- ⚠ - Only charge the rechargeable batteries that meet the product specifications of this charger.
- ⚠ - Do not allow water, moisture or foreign objects into the charger.
- ⚠ - Do not use in humid locations. Do not operate with wet hands.
- ⚠ - Do not attempt to disassemble the charger.
- ⚠ - Do not use the charger on fleecy materials, such as carpets, blankets, beds and cushions.
- ⚠ - Do not block the cooling fan and the air inlet.
- ⚠ - Strongly recommend balancing Lithium packs. An unbalanced pack may damage during discharging.
- ⚠ - General default charging current is 1C. Read the manual of the battery and setup the suitable current to charge the battery. Higher charge/discharge current will damage the battery, even cause a fire.

Battery Type	Cells	Voltage(V)	Charge Current(A)
LIHV	1	3.8	0.1-20.0A
	2	7.6	0.1-20.0A
	3	11.4	0.1-20.0A
	4	15.2	0.1-20.0A
	5	19.0	0.1-20.0A
	6	22.8	0.1-20.0A
Lipo	1	3.7	0.1-20.0A
	2	7.4	0.1-20.0A
	3	11.1	0.1-20.0A
	4	14.8	0.1-20.0A
	5	18.5	0.1-20.0A
	6	22.2	0.1-20.0A
LiIo	1	3.6	0.1-20.0A
	2	7.2	0.1-20.0A
	3	10.8	0.1-20.0A
	4	14.4	0.1-20.0A
	5	18	0.1-20.0A
	6	21.6	0.1-20.0A
LiFe	1	3.3	0.1-20.0A
	2	6.6	0.1-20.0A
	3	9.9	0.1-20.0A
	4	13.2	0.1-20.0A
	5	16.5	0.1-20.0A
	6	19.8	0.1-20.0A
NiMH /NiCd	1	1.2	0.1-20.0A
	2	2.4	0.1-20.0A
	3	3.6	0.1-20.0A
	4	4.8	0.1-20.0A
	5	6	0.1-20.0A
	6	7.2	0.1-20.0A
	7	8.4	0.1-20.0A
	8	9.6	0.1-20.0A

Battery Type	Cells	Voltage(V)	Charge Current(A)	
NiMH /NiCd	9	10.8	0.1-20.0A	
	10	12	0.1-20.0A	
	11	13.2	0.1-20.0A	
	12	14.4	0.1-20.0A	
	13	15.6	0.1-20.0A	
	14	16.8	0.1-20.0A	
	15	18	0.1-20.0A	
	Pb	1	2	0.1-20.0A
		2	4	0.1-20.0A
		3	6	0.1-20.0A
		4	8	0.1-20.0A
		5	10	0.1-20.0A
		6	12	0.1-20.0A
		7	14	0.1-20.0A
		8	16	0.1-20.0A
9		18	0.1-20.0A	
10		20	0.1-20.0A	
11		22.0	0.1-20.0A	
12		24.0	0.1-20.0A	
Lipo	Voltage Level: 3.7V/cell Max Charge Voltage: 4.2V/Cell Discharge Voltage Cut off Level: 3.0V/cell or Higher			
LiIo	Voltage Level: 3.6V/cell Max Charge Voltage: 4.1V/Cell Discharge Voltage Cut off Level: 3.0V/cell or Higher			
LiFe	Voltage Level: 3.3V/cell Max Charge Voltage: 3.8V/Cell Discharge Voltage Cut off Level: 2.0V/cell or Higher			
LiHV	Voltage Level: 3.8V/cell Max Charge Voltage: 4.35V/Cell Discharge Voltage Cut off Level: 3.2V/cell or Higher			
NiMH /NiCd	Voltage Level: 1.2V/cell Max Charge Voltage: 1.6V/Cell Discharge Voltage Cut off Level: 0.80V/cell or Higher			
Pb	Voltage Level: 2.0V/cell Max Charge Voltage: 2.45V/Cell Discharge Voltage Cut off Level: 1.50V/cell or Higher			

Step1. Enter to Menu, Select Setting (Image21), into set interface (Image22-24).



Image 21

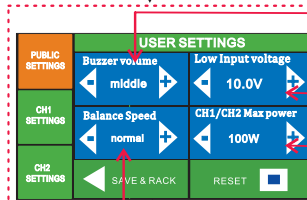


Image 22

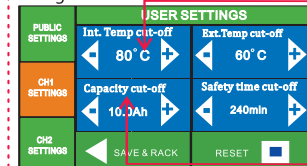
Set the volume of the buzzer. Keep Beep default: **Middle**. Low/Middle/High/Off optional

In this menu, you can set the cutoff input voltage of the power supply of the charger to protect your power supply. The charger will cutoff working when input voltage lower than the setting value. Range from 10.0-30.0V, Default: 10.0V

In this menu, you can set the charge power limit to meet your power supply. The charge will work under the setting value. Range from 100/300-200/200watt, Default: 200/200 watt

Balance control of LiPo/Lilo/LiFe/LiHV, you can set the balance control to meet your demand. Normal /Fast/slow optional. Default: Normal
*Fast: Balance speed fastest, less accurate. * slow: Balance speed lowest, more accurate.
* Normal: balance speed and accurateness between Fast and slow

Image 23



In this menu, you can set the cutoff Internal temperature to protect your battery. The charger will cutoff working when the Internal temperature is higher than the setting value range from 30-85°C, Default: 80°C

In this menu, you can set the cutoff capacity to protect your battery. The charger will cutoff working when the capacity is more than the setting value. range from off- 65.0Ah, Default: 10.0 Ah

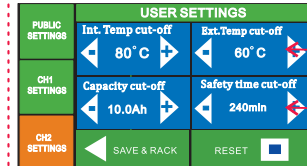


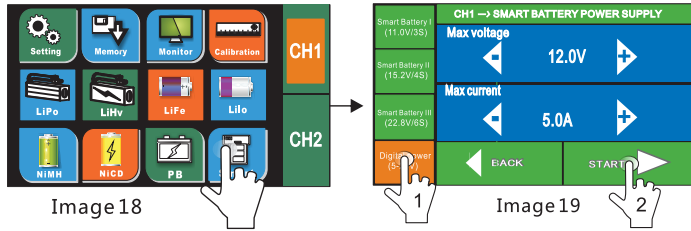
Image 24

In this menu, you can set the cutoff external temperature to protect your battery. The charger will cutoff working when the external temperature is higher than the setting value (an external temperature sensor is needed), range from 30-85°C, Default: 60°C

In this menu, you can set a safety time to protect your charger and battery. The charger will cutoff working when the safety time is up to the setting value. On/Off optional, range from 1 - 600 minutes, Default: 240 minutes

Example 3: Choose a set of SMART battery charging, please follow the below steps:

Step 1. Enter to Menu. Select Battery Type (Image18).
Such as: SMART, Enter into "SMART BATTERY POWER SUPPLY" (Image19).



MODE1: SMART I
MODE2: SMART II
MODE3: SMART III
MODE4: User set
Next step will be example at "MODE 4"

Step 2. Select START (Image19) to charging (Image20).

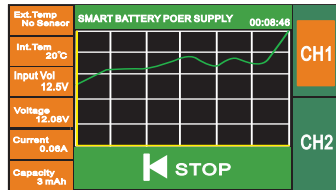
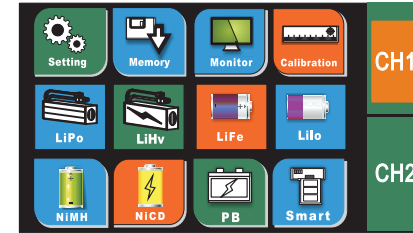


Image20

NOTE: Image20 show the graphic photo for the current and voltage for the smart charge.

CH-1 CH-2 means CH-2 or CH-1 Swift image
Note: 1. If CH-2 has been not used, **CH-2** press image, return back to main menu, and use CH-2 operation
2. If CH-2 has been used, **CH-2** press image, enter into CH-2 operation directly
3. Two Channel are independent, and you can use different mode to operate



Main Menu



4.3 Inch Touch screen



security settings



Battery Management, Checking Battery Capacity, Voltage, Balancer



Memory: Save Eight operation data



Calibrate Charger

NOTE: Please read carefully before doing anything !!

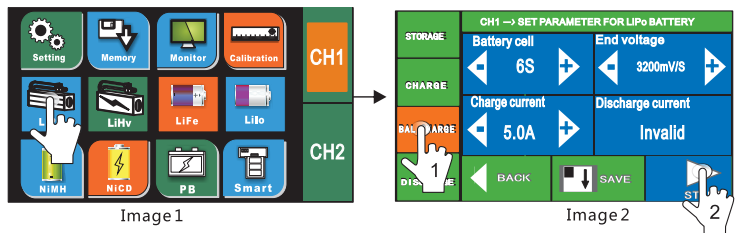
CH-1 CH-2 means CH-2 or CH-1 Swift image
Note: 1. If CH-2 has been not used, **CH-2** press image, return back to main menu, and use CH-2 operation
2. If CH-2 has been used, **CH-2** press image, enter into CH-2 operation directly
3. Two Channel are independent, and you can use different mode to operate

Example 1: Choose a set of LiPo battery charging, please follow the below steps:

Step 1. Enter to Menu, Select Battery Type (Image 1).

Such as: LiPo, Enter into "SELECT WORK MODE" (Image 2).

Step 2. Select "BAL CHARGE" MODE, And set the related parameters (Image 2)

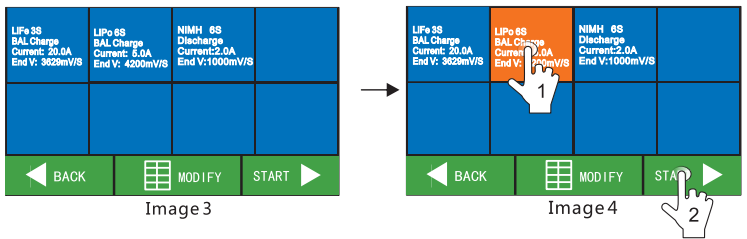


MODE1: STORAGE
 MODE2: CHARGE
 MODE3: BAL CHARGE
 MODE4: DISCHARGE

Next step will be example at "MODE 3"

Step 3: If you often use the same battery, please touch Save icon (Image 2) to enter into Save interface. Touch Unused icon to save the data and it will be easy for you to charge next time. (Image 3-4)

Note: 8 groups data can be saved



Step 4. Select previous data to START (Image 16) to balance charging (Image 17), Or touch BACK icon into previous step (Image 16), and touch START to balance charge (Image 17)

WORKING INTERFACE

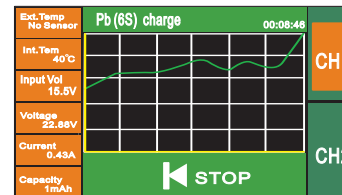


Image 17

NOTE: 1. Image 17 show the graphic photo for Pb charge current and voltage
 2. Image 17 show all setting data for Pb charging

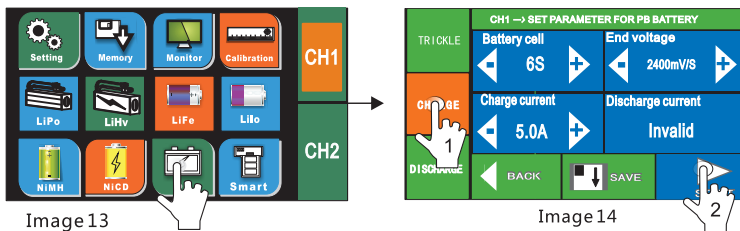
CH-1 CH-2 means CH-2 or CH-1 Swift image
 Note: 1. If CH-2 has been not used, CH-2 press image, return back to main menu, and use CH-2 operation
 2. If CH-2 has been used, CH-2 press image, enter into CH-2 operation directly
 3. Two Channel are independent, and you can use different mode to operate

Example 4: Choose a set of PB battery charging, please follow the below steps:

Step 1. Enter to Menu. Select Battery Type (Image 13).

Such as: PB, Enter into "SET PARAMETER FOR PB BATTERY" (Image 14).

Step 2. Select "CHARGE" MODE, And set the related parameters (Image 14)

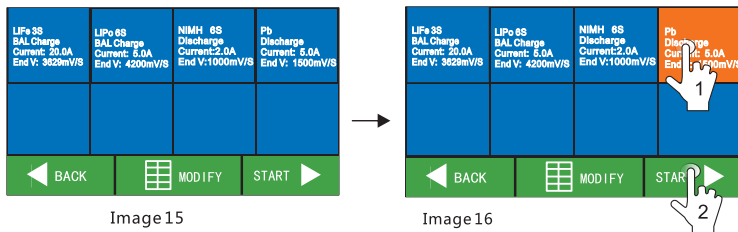


MODE1: TRICKLE
MODE2: CHARGE
MODE3: DISCHARGE

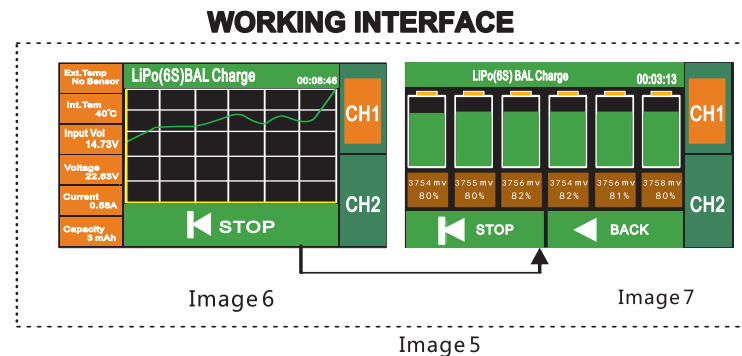
Next step will be example at "MODE 2"

Step 3: If you often use the same battery, please touch Save icon (Image 14) to enter into Save interface. Touch Unused icon to save the data and it will be easy for you to -charge next time. (Image 15-16)

Note: 8 groups data can be saved



Step 4. Select previous data to START (Image 4) to balance charging (Image 5), Or touch BACK icon into previous step (Image 2), and touch START to balance charge (Image 5)



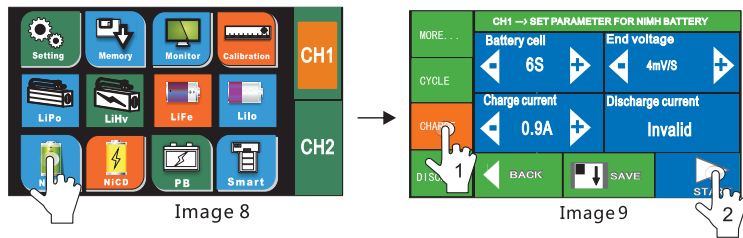
- NOTE:
1. Image 6 show the graphic photo for lipo charge current and voltage
 2. Image 7 show each cell voltage and percent during lipo charging
 3. Image 6 show all setting data for lipo charging

CH-1 CH-2 means CH-2 or CH-1 Swift image

- Note:
1. If CH-2 has been not used, CH-2 press image, return back to main menu, and use CH-2 operation
 2. If CH-2 has been used, CH-2 press image, enter into CH-2 operation directly
 3. Two Channel are independent, and you can use different mode to operate

Example 2: Choose a set of NiMH battery charging, please follow the below steps:

- Step 1. Enter to Menu, Select Battery Type (Image 8).
Such as: NiMH, Enter into "SET PARAMETER FOR NiMH BATTERY" (Image 9).
- Step 2. Select "CHARGE" MODE, And set the related parameters (Image 9)

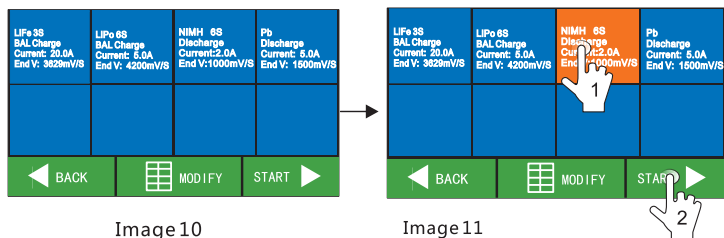


MODE1: CYCLE
MODE2: CHARGE
MODE3: DISCHARGE

Next step will be example at "MODE 2"

Step 3: If you often use the same battery, please touch Save icon (Image 9) to enter into Save interface. Touch Unused icon to save the data and it will be easy for you to charge next time. (Image 10-11)

Note: 8 groups data can be saved



Step 4. Select previous data to START (Image 11) to Discharge (Image 12), Or touch BACK icon into previous step (Image 9), and touch START to charge (Image 12)

WORKING INTERFACE

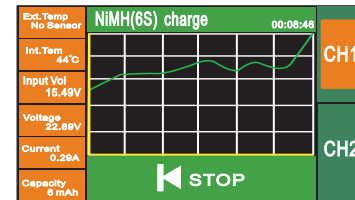


Image 12

NOTE: 1. Image 12 show the graphic photo for NiMH charge current and voltage
2. Image 12 show all setting data for NiMH charging

CH-1 CH-2 means CH-2 or CH-1 Swift image
Note: 1. If CH-2 has been not used, CH-2 press image, return back to main menu, and use CH-2 operation
2. If CH-2 has been used, CH-2 press image, enter into CH-2 operation directly
3. Two Channel are independent, and you can use different mode to operate