

# Invader 350 Instruction

Invader 350 specific for your needs!

# New Chager Invader 350 Released

[www.maxam.dk](http://www.maxam.dk)



## Touch Screen Operation

4.3 inch touch screen make the operation more convenient



## 4.3 inch display screen

4.3 inch TFT display screen, WQV-GA(480\*270),65 thousand resolution



## iM-OS

A whole new OS system for Invader 350 professional charger with high efficiency



## USB Port

Output 5V 2.1V USB port specially design for iPhone and smartphone charging.



Multiple languages customization



A whole new product definition method



## 32 bit processor

High precision dual-core 32-bit ARM processor for smoother operation



## All in one

Entirely new design adapter board more beautiful, simpler and safer.

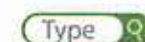
# iM-OS System

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## Type

Invader 350 support more than 6 type batteries LiPo / Lilon / LiFe / NiMh / NiCd / Pb



## Current

Input / Output Current Charging 0.1-15A Discharging 0.1-6A



## Cells

LiXX 1-6S NiXX 1-16S Pb 1-10S



## Mode

Fast Charging Balance charging Charging Discharging Circulating charge/discharge



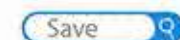
## Load

Loading Common Use Battery Setting



## Save

Save Common Use Battery Setting



## Uset

Advanced application Settings



## Start

Charging/Discharging



# iM-OS System

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## LiPo

LiPo Battery, Single Nominal Voltage: 3.7V, Charge cut-off voltage 4.2V, Discharge cut-off voltage 3.0V



## Lilon

Lilon Battery, Single Nominal Voltage: 3.6V, Charge cut-off voltage 4.1V, Discharge cut-off voltage 2.5V



## LiFe

LiFe Battery, Single Nominal Voltage: 3.3V, Charge cut-off voltage 3.6V, Discharge cut-off voltage 2.0V



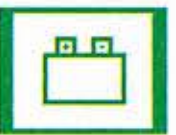
## NiMH

NiMH Battery, Single Nominal Voltage: 1.2V, Charge cut-off voltage 1.5V, Discharge cut-off voltage 1.0V



## NiCd

NiCd Battery, Single Nominal Voltage: 1.2V, Charge cut-off voltage 1.5V, Discharge cut-off voltage 0.85V



## Pb

Pb Battery, Single Nominal Voltage: 2.0V, Charge cut-off voltage 2.5V, Discharge cut-off voltage 1.72V



## Balance

LiPo balance charge use CC-CV charging way. The charger will balance the battery voltage when charging, this only for LiPo battery. Please connecting the balance port when charging and discharging. Support 2-6 cells.



## Charge

Use CC-CV charging way. On the basis of Users setting current the charger will charge the battery to the cut-off voltage. Warning: The voltage can not balance even connecting the balance port when using LiPo battery.



## FastCharge

FastCharge. Almost same as the Charge Mode. The only difference is the current only 1/5 and the other setting only 1/10 of the setting current when finished charging. Warning: The voltage can not balance even connecting the balance port when using LiPo battery.



## Storage

Charging and discharging the battery voltage to a certain numerical for easy storage. This function only for LiPo battery which need connecting the balance port. Support 2-6S.



## DisCharge

Use CC-CV charging way. On the basis of Users setting current the charger will discharge the battery to the cut-off voltage. Warning: Please connecting to the Balance port when use LiPo battery.



## Checker

Measuring Mode. The charger only collect battery primary port and balance port voltage, but can not charge and discharge.



## Manual Charge

This function only for NiMH battery which same as The Charge mode.



## Cycle

This function only for NiMH battery. On the basis of Users setting current for NiMH battery cycle charging and discharging. The Cycle times is 1-6.

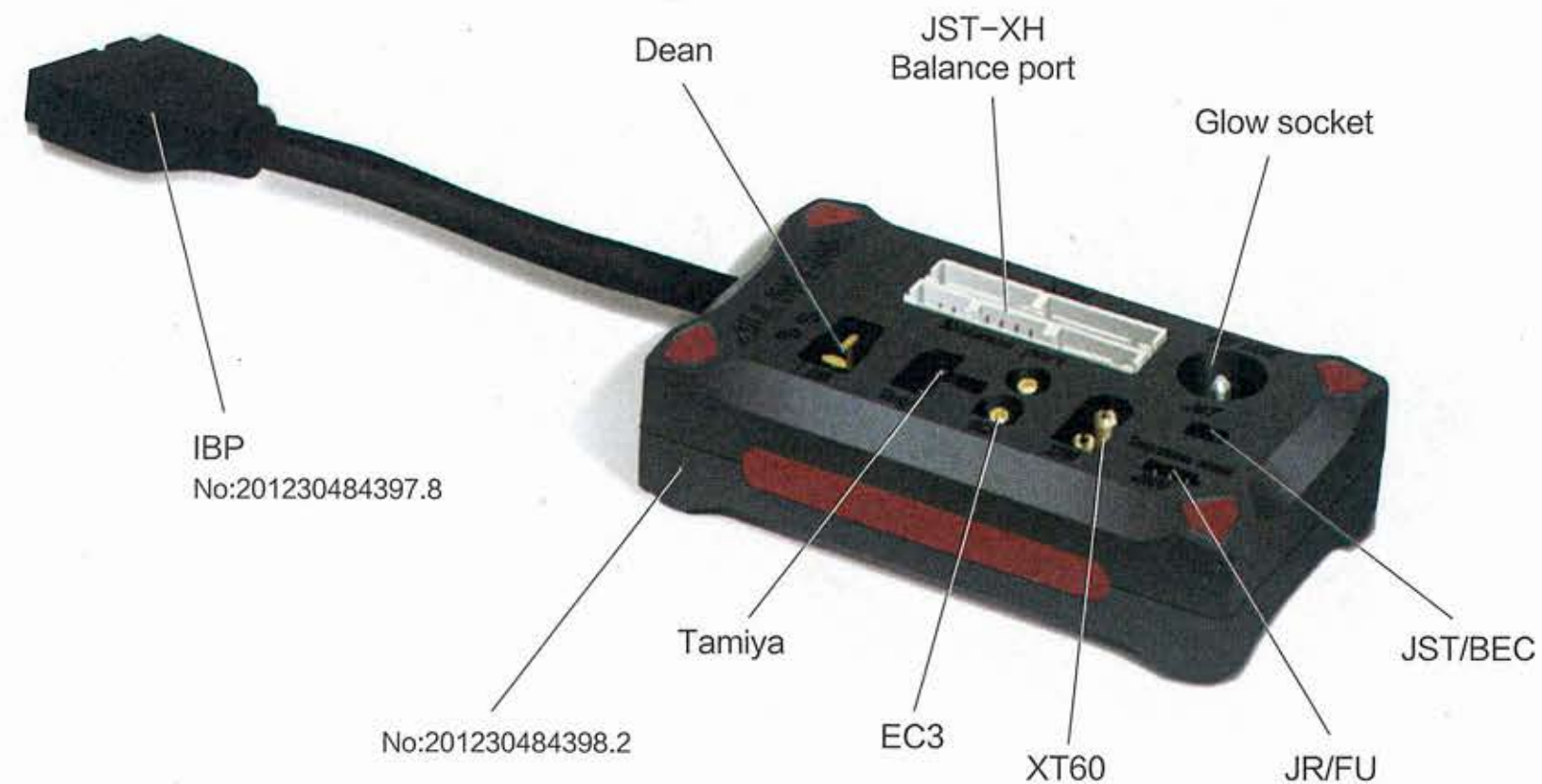
# Invader 350 Fundamental Function

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## All in one.

The socket name match with the plug, please make sure the right port before using All in one.



## IBP

Avoiding the switch wires making the balance cable and high current cable into one. It ran perfectly on the very first try.

High heat proof material inserting port. With perfect better insulation, flame retardant and stability.

Due to the engineer testing the measurement data again and again make the IBP easier to use. IBP plug connecting with the socket tightly and easily. Grooved design to prevent the misplug reduces time and effort. The anti-slip design increase friction force and make it more beautiful.

IBP collection charge, balance, Signal transfer and temperature sense functions.

# Preparing Connecting Using

Invader 350 is a professional RC model battery charger, please view the manual before using. If you are a fresh man please read this entire operating manual completely before using.

**【 Warning: 】** The warning of charger operation and disclaimer, Please read and abide by the following terms before operation.

1. This is a sophisticated hobby product. The person who operates the charger should be professionals who master, professional knowledge about chargers.
2. Make sure the battery variety you using meets charger requirement. Any kinds of damaged, aged and surface, damaged batteries are prohibited. Besides, choose the suitable charging program or the charger and the battery will get damaged.
3. Considering of uneven physical property and various batteries never leave the working charger unsupervised, keep it away from inflammable materials and make sure the fire-fighting equipment matched.
4. If the battery has suspicious reactions during charging or discharging, such as overheating, exhausting, leaking or inflating, immediately disconnect the battery and store it in a safe location, away from people and inflammable materials.
5. maXam will not be responsible for any personal injuries and fire disaster caused by incorrect operation.

**I have read this agreement carefully and give up all legal.**

## Extras Including

Invader 350 included with 1pcs adapter board, 1pcs connect cable and 1 pcs manual.



Invader 350



All in one



Connect cable

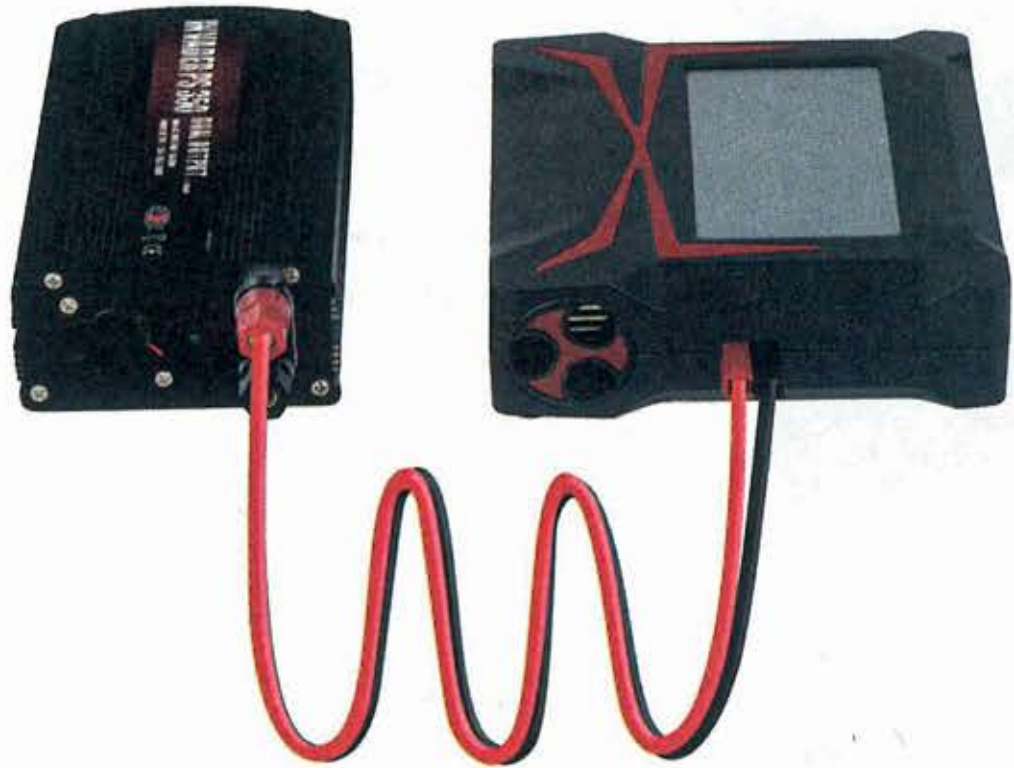


Manual

## Connecting Invader 350

Please follow the below steps connecting:

**1: Please connecting the cable to the adapter port and the Invader 350 DC IN port, and then plug the adapter power cord into the socket.**



**2: Connecting the adapter board into the Invader 350 IBP port.**



**【NOTE】** USB support 5V 2.1A charging voltage, and also use for iPad / iPod / iPhone / HTC and other intelligent electronic equipment. Both the USB and All in one get charged simultaneously.



3: Please make sure the port connect with battery ( Other ports are same as it ) .



#### 4: Starting Invader 350

startup Invader 350 to enter the main interface ( Image 1 ).

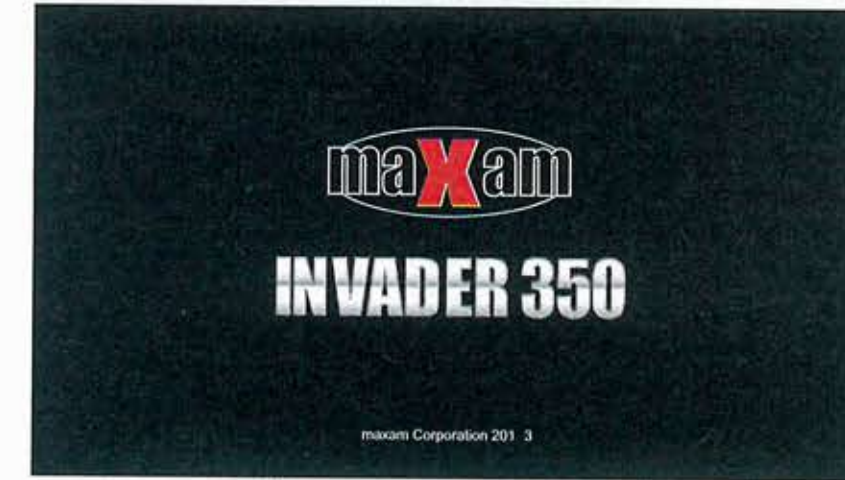


Image 1

Showing “Warning and Disclaimer” 2 seconds and will know the copyright and security information ( Image 2 ). It will be enter into the contacting interface if you can not agree with the disclaimer, and then you could contact the distributor return the charger ( Image 3 )

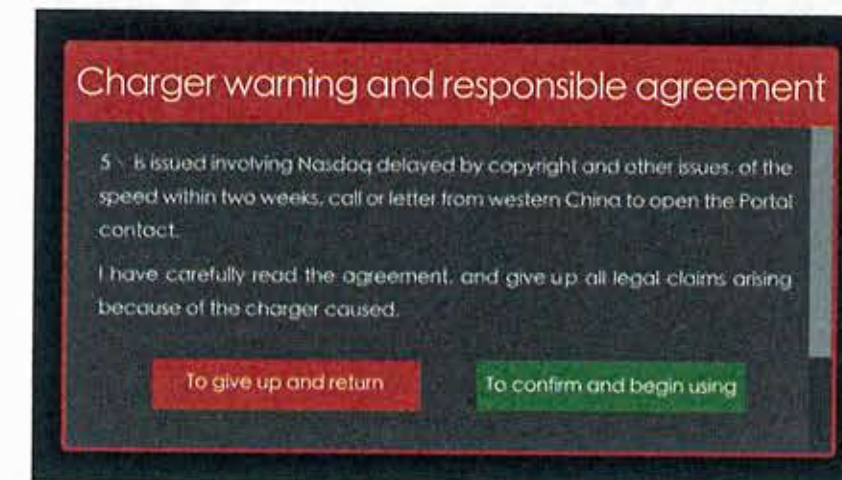


Image 2



Image 3

**【 NOTE 】** Please read Disclaimer before doing anything.

**6: Enter into main interface after accepting( Image 4 ). Start to charge and discharge according to the different battery.**

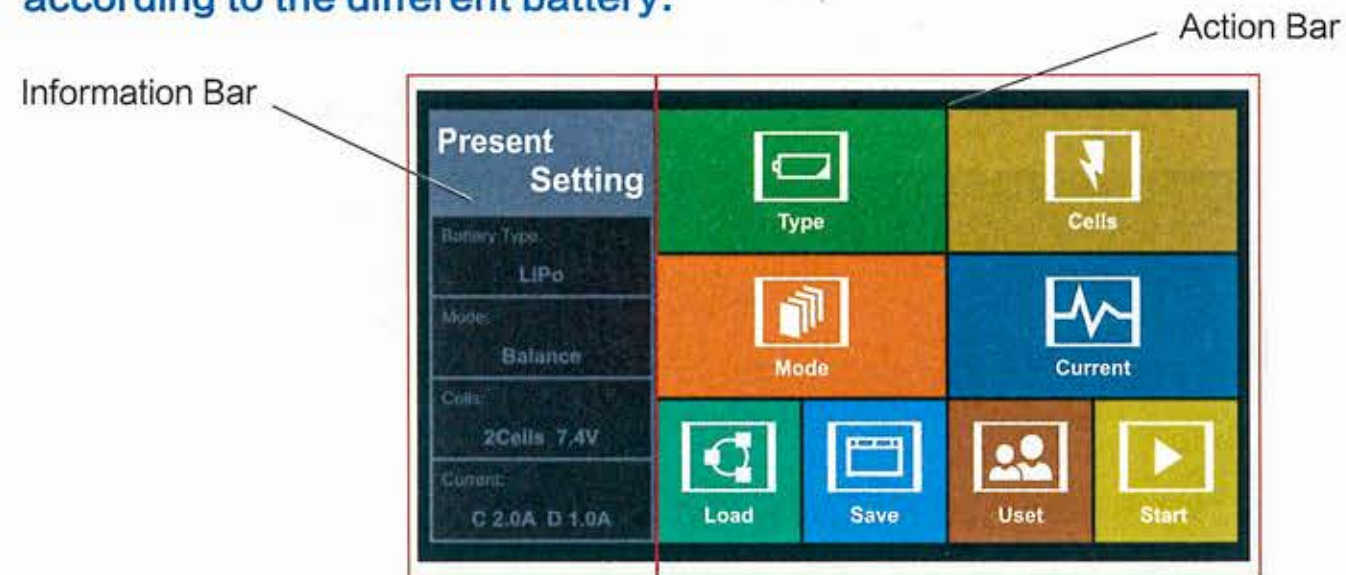


Image 4

**【 NOTE 】** Information bar can not get touched.

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

**Step 1:** Touch Type( Image 5 ) Enter into the “Type interface” , and then Touch :LiPo ( Image 6 ) will Enter into main interface go on the next step.



Image 5

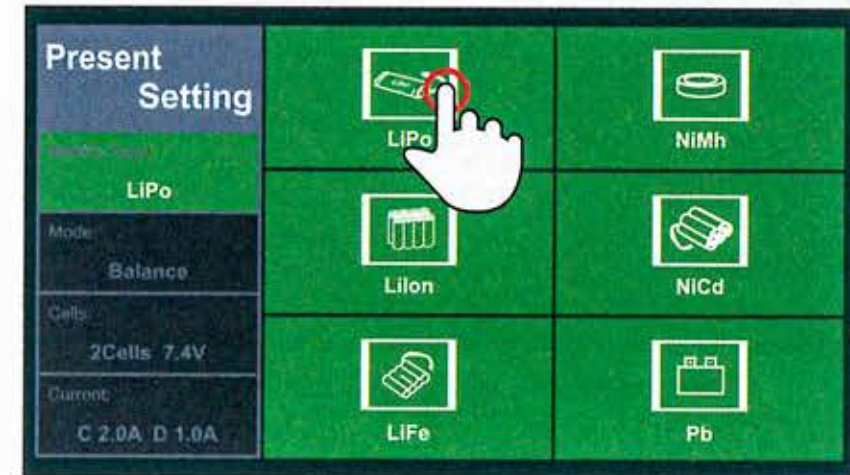


Image 6

**Step 2:** Touch 'Mode' icon ( Image 7 ) to enter into Mode interface. Please choose battery charge mode ( Image 8 ) and go back to main interface to continue setting.

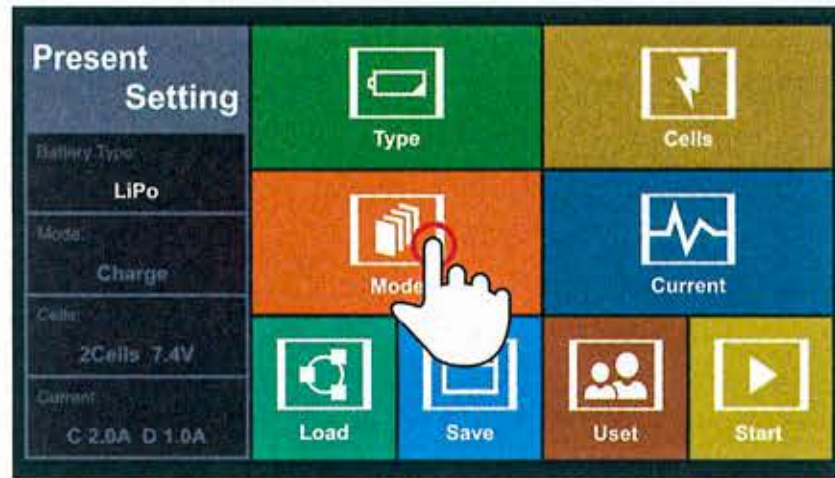


Image 7

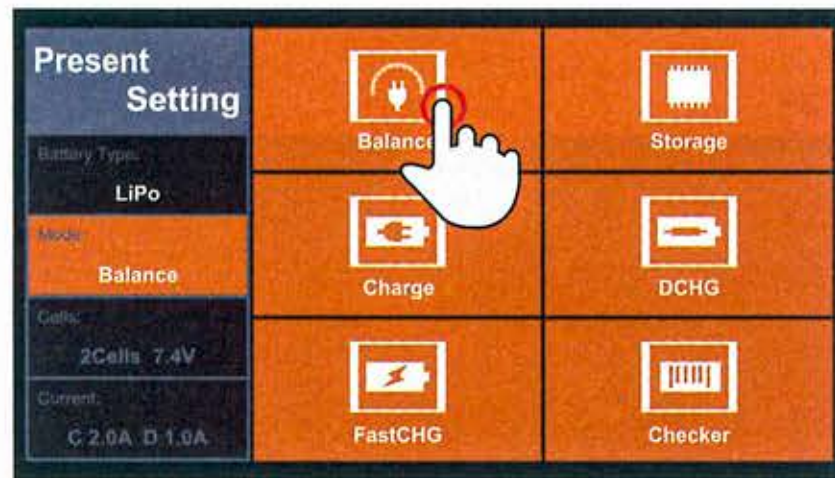


Image 8

**【 Note 】** There are six charge/discharge modes in Mode interface( Image 8 ), see iM.OS System function for further details. please set charge/discharge mode according to your requirement. Picture no.7 is showing Balance charge mode.

**Step 3:** Touch Cells icon ( Image 9 ) to enter into Cells interface. Please set battery packs by sliding ( Image 10 ). Touch OK to go back to main interface and continue setting.

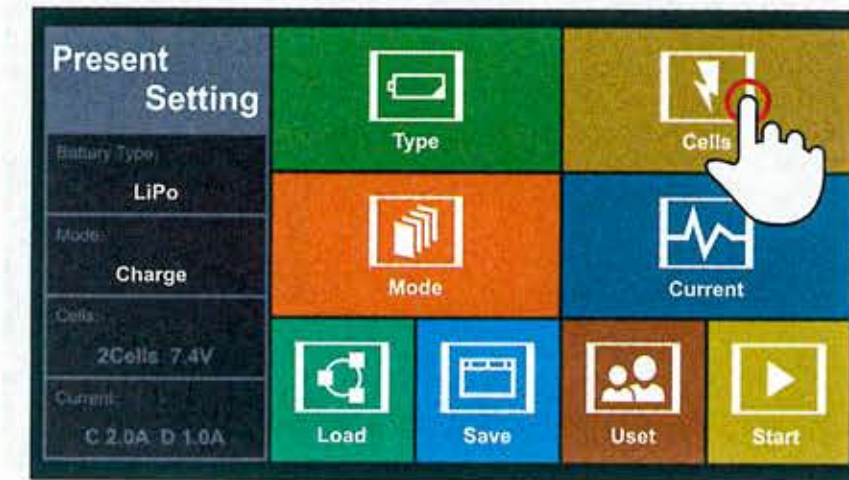


Image 9

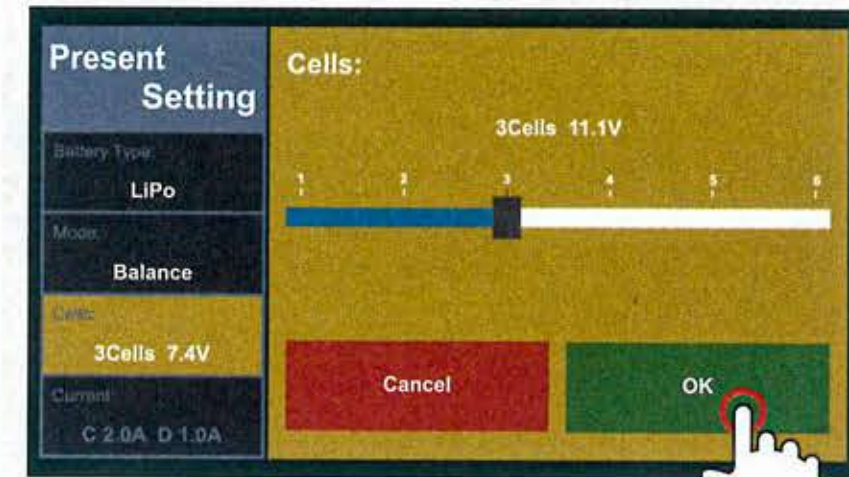


Image 10

**【 Note 】** Please set according to suitable battery packs.

**Step 4:** Touch Current icon ( Image 11 ) to enter into Current interface. Please set charge current by sliding ( Image 12 ). Touch OK to go back to main interface and continue setting.

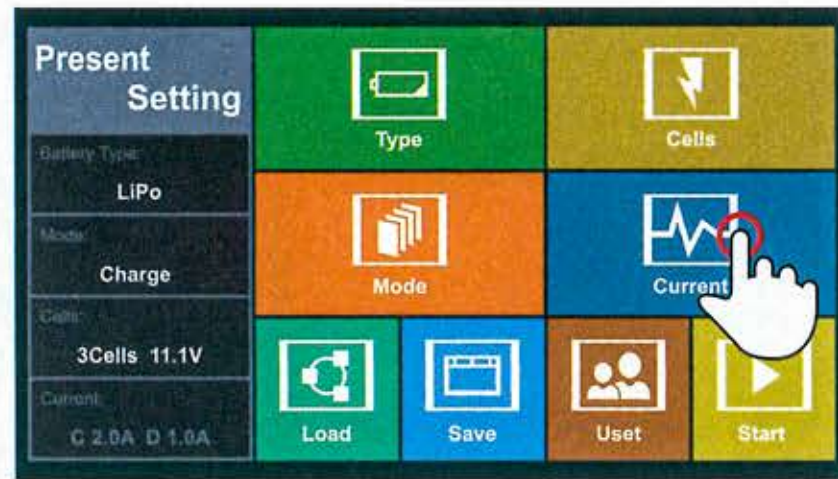


Image 11

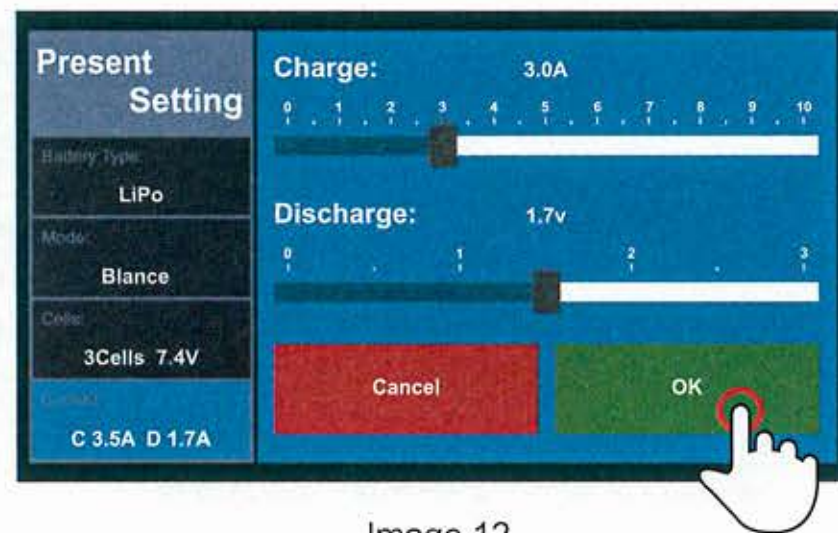


Image 12

**[ NOTE ]** Set charge current in charge mode and discharge current in discharge mode.

**Step 5:** If you often use the same battery, please touch Save icon ( Image 13 ) to enter into Save interface. Touch Unused icon to save the data and it will be easy for you to charge next time. ( Image 14 )

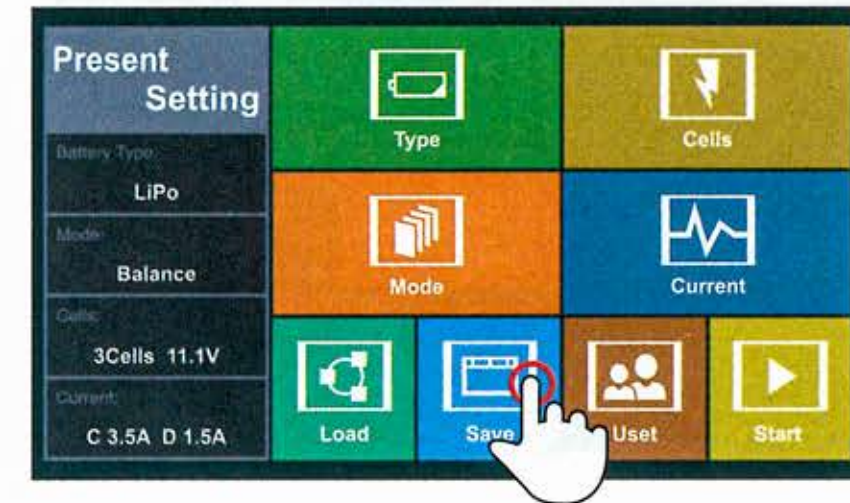


Image 13

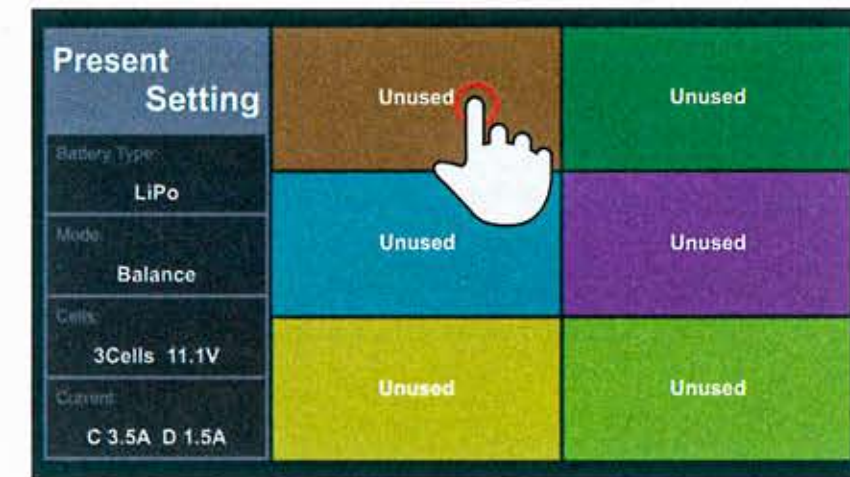


Image 14

**[ NOTE ]** You could use this function after you have set Type/Mode/Cells and Current correctly.

**Step 6:** You could load your previous data according to Invader 350' s load function. Touch Load icon ( Image 15 ) to enter into Load interface. Choose the data you want to load ( Image 16 ).

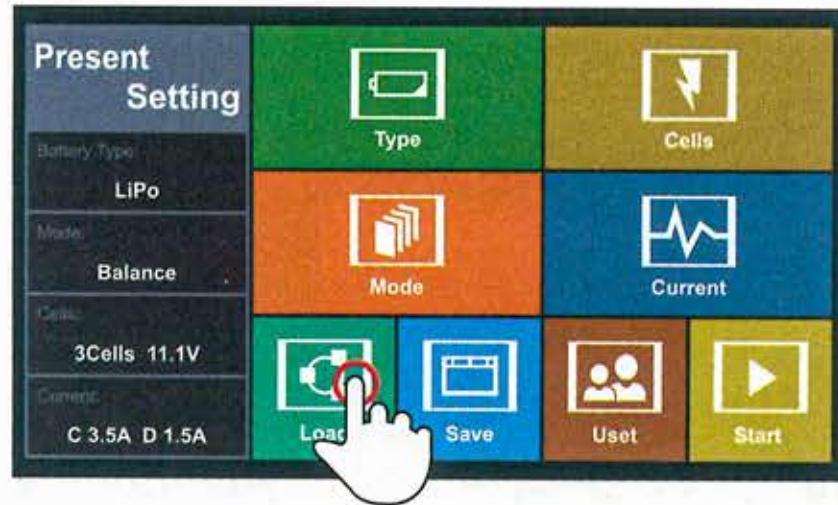


Image 15

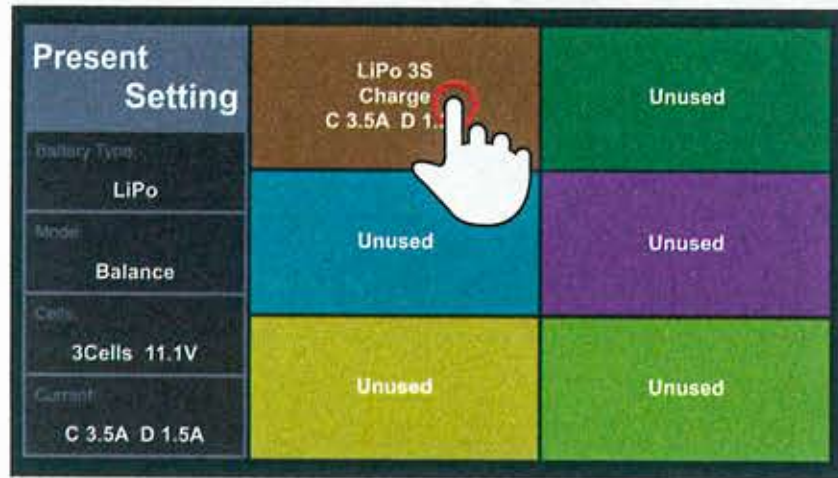


Image 16

**Step 7:** Touch Start icon ( Image 17 ) to enter into Start interface. The system will check battery status automatically. If everything is OK, the charger will begin to charge.( Image 18 )



Image 17

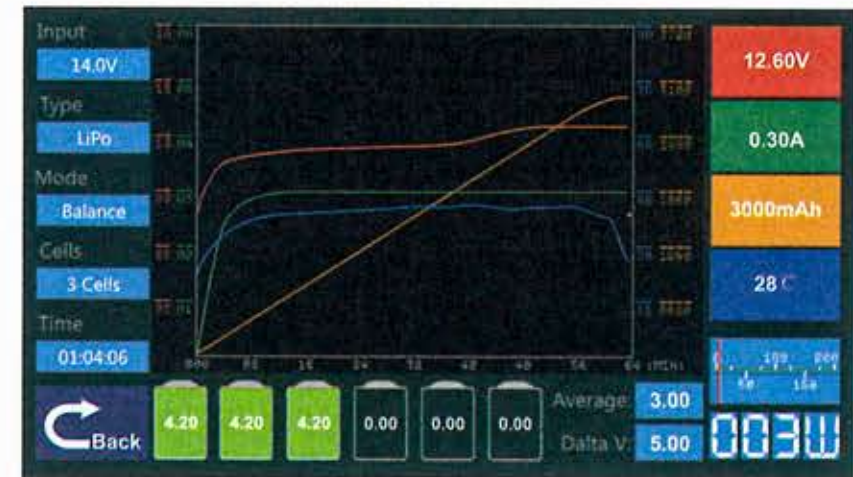


Image 18

**【NOTE】** The charger will pop-up window when the battery is fully charged. Touch OK to finish charging process ( Image 19 ).



Image 19

**【NOTE】** The charger will send out an alert and pop-up window if the battery packs' setting is incorrect (Image 20).



Image 20

**Example 2: If you want to charge a pack of NiMh battery, please execute the operation as follows:**

**Step 1:** touch Type icon ( Image 21 ) to enter into Type interface. Touch NiMh icon to go back to main interface and continue setting ( Image 22 ).



Image 21



Image 22

**Step 2:** Touch Mode icon ( Image 23 ) to enter into Mode interface. Touch Charge icon ( Image 24 ) to go back to main interface and continue setting.

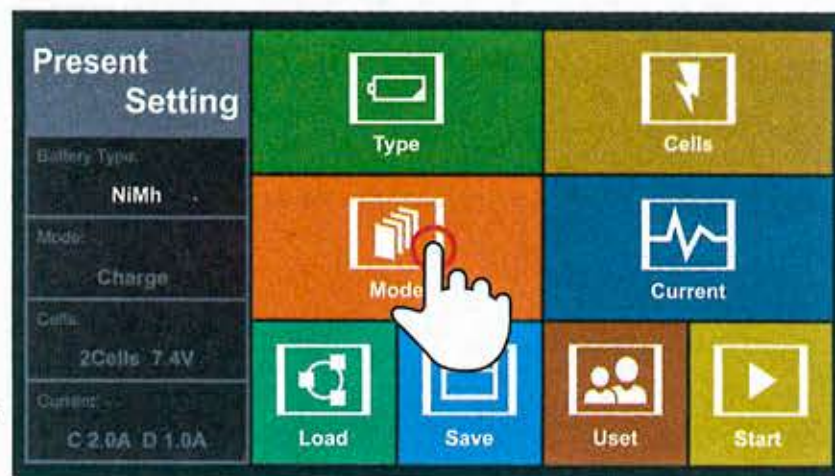


Image 23

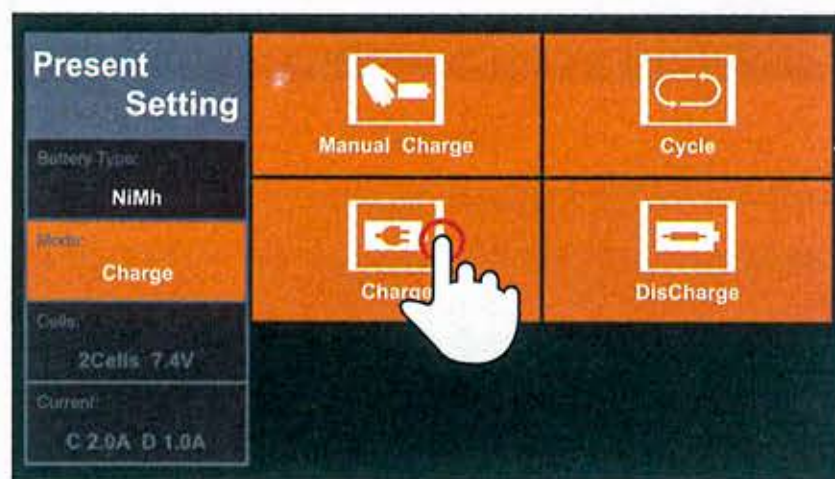


Image 24

**[ NOTE ]** There are four charge/discharge modes in Mode interface( Image 24 ), see iM.OS System function for further details. please set charge/discharge mode according to your requirement. Picture no.23 is showing charge mode.

**Step 3:** touch Cells icon to enter into Cells interface. Please set NiMh battery packs by sliding ( Image 25). Touch OK to go back to main interface and continue setting ( Image 26).



Image 25

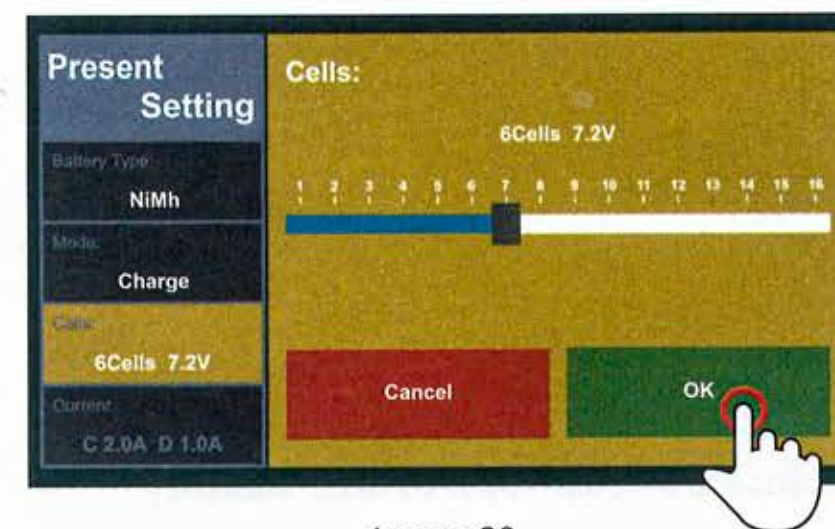


Image 26

**[ NOTE ]** The battery cannot be charged if each pack of the battery voltage is less than 0.7V, please use the less battery packs to activate charging process. If you need lower voltage during discharging process, please use the less battery packs to discharge.

**Step 4:** touch Current icon ( Image 27 ) to enter into Current interface. Please set charge current by sliding ( Image 28 ). Touch OK to go back to main interface and continue setting.

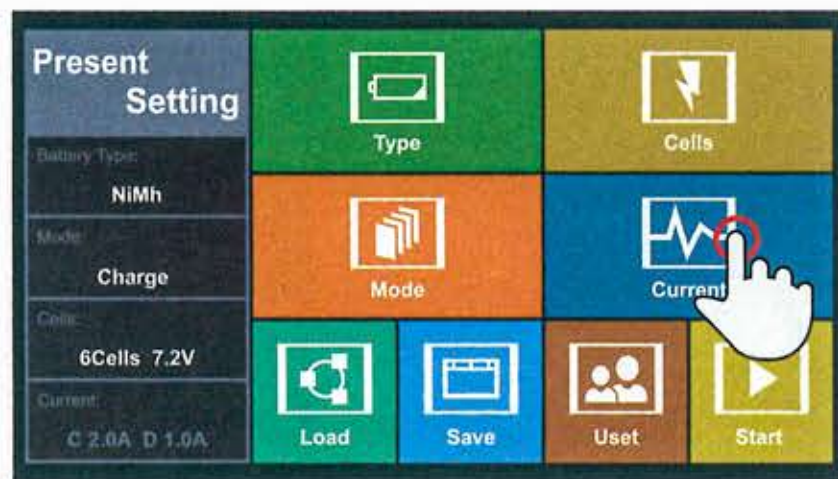


Image 27

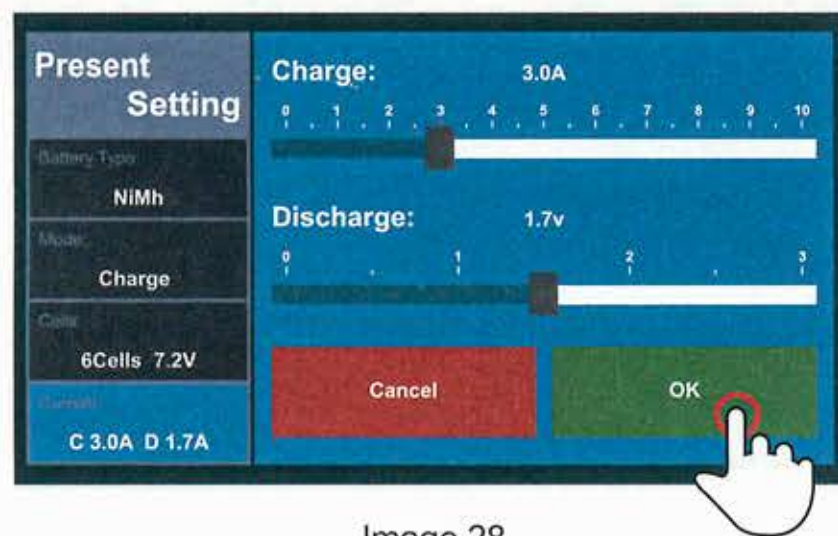


Image 28

**[ NOTE ]** Please set charge current in charge mode and discharge current in discharge mode. As for Save and Load functions, please see Step5 and 6 in Example1 for further details.

**Step 5:** touch Start icon ( Image 29 ) to enter into Start interface. The charger will check battery status automatically. If everything is OK, the charger will begin to charge ( Image 30 ).

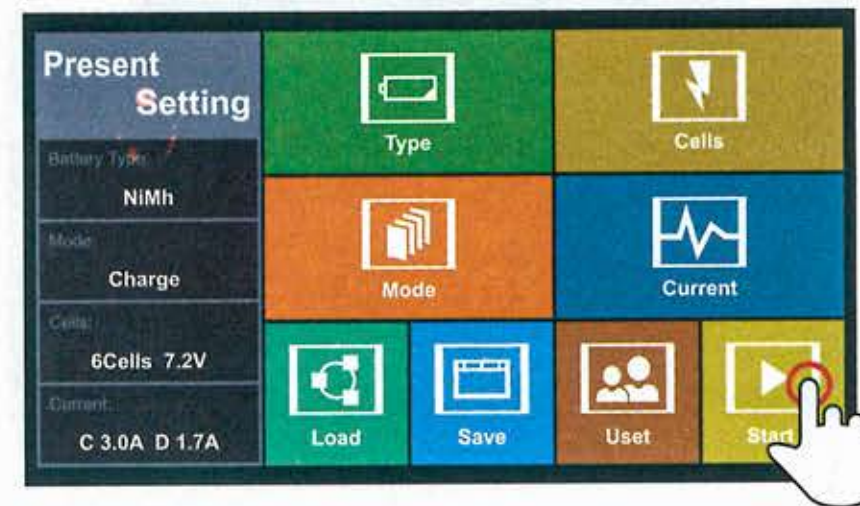


Image 29

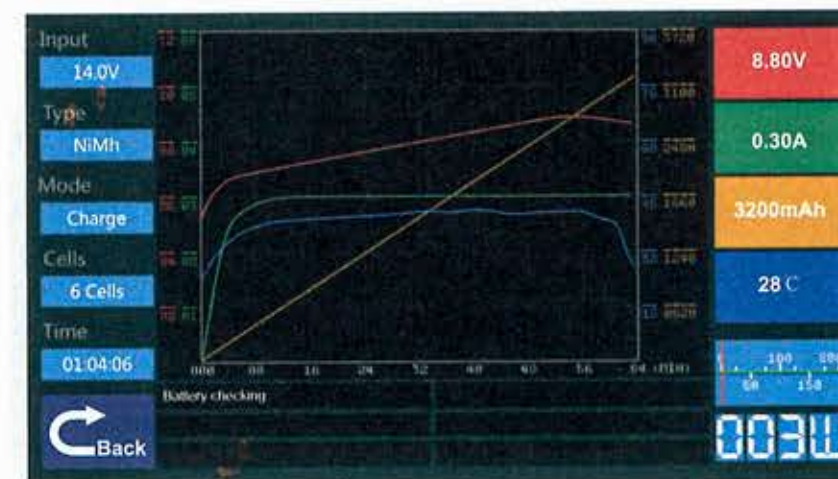


Image 30



**【 NOTE 】** The charger will pop-up window when the battery is fully charged. Touch OK to finish charging process ( Image 30 ).



Image 30

**【 NOTE 】** The charger will send out an alert and pop-up window if the battery packs' setting is not correct. ( Image 31 ) All Lipo battery packs setting are the same operation.



Image 31

**Example 3:** If you want to charge a pack of Pb battery, please execute the operation as follows,

**Step 1:** touch Type icon ( Image 32 ) to enter into Type interface. Touch Pb icon ( Image 33 ) to go back to main interface and continue setting.

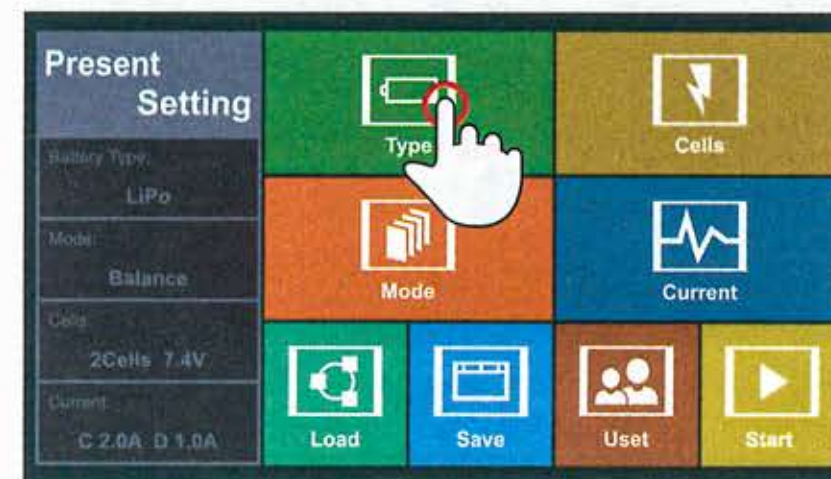


Image 32

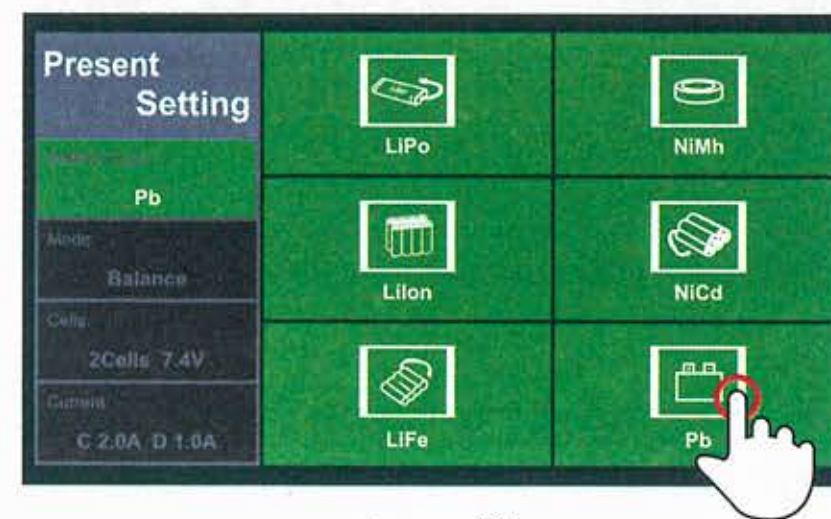


Image 33

**Step 2:** Touch Mode icon ( Image 34 ) to enter into Mode interface. Touch Charge icon ( Image 35 ) to go back to main interface and continue setting.



Image 34

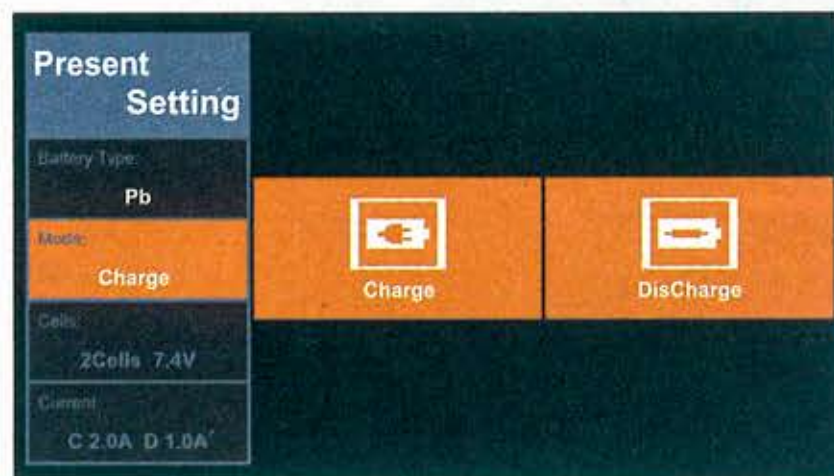


Image 35

**[ NOTE ]** There are some options in Mode interface ( Image 35 ). Please set according to your requirement. Picture no.31 is showing charge process.

**Step 3:** touch Cells icon ( Image 36 ) to enter into Cells interface. Please set Pb battery packs by sliding ( Image 37 ). Touch OK to go back to main interface and continue setting.

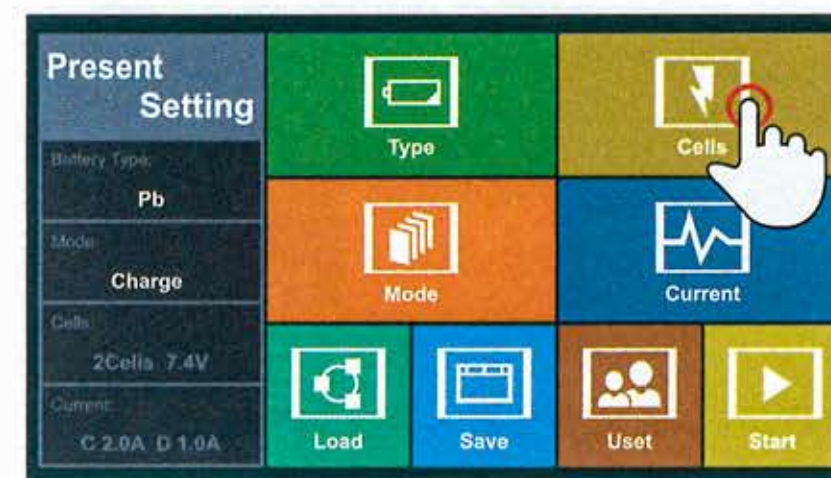


Image 36

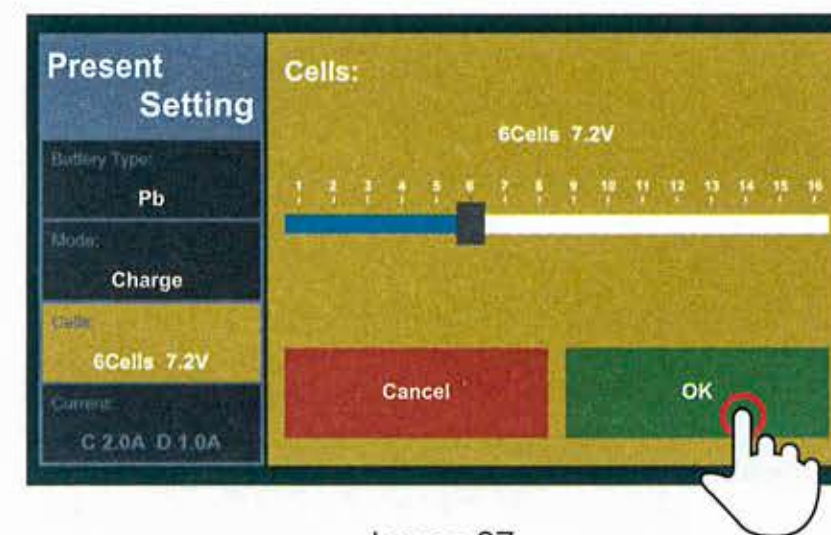


Image 37

**[ NOTE ]** Please set according to suitable battery packs.

**Step 4:** touch Current icon ( Image 38 ) to enter into Current interface. Please set charge current by sliding ( Image 39 ). Touch OK to go back to main interface and continue setting.

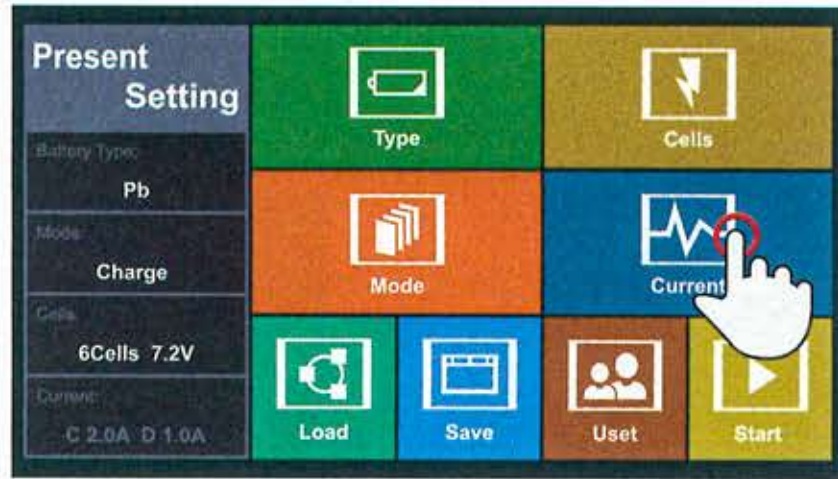


Image 38

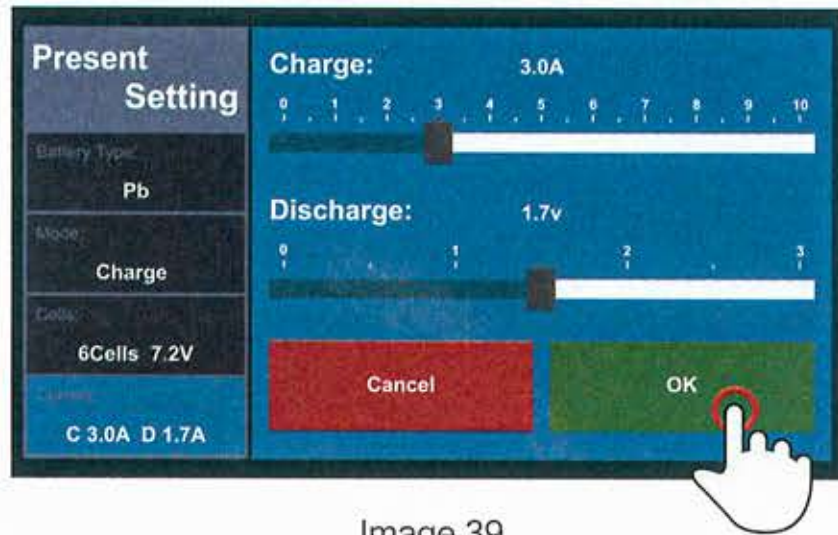


Image 39

**[ NOTE ]** Set charge current in charge mode and discharge current in discharge mode. As for Save and Load functions, please see Step 5 and 6 in Example1 for further details.

**Step 5:** touch Start icon ( Image 40 ) to enter into Start interface. The charger will check battery status automatically. If everything is OK, the charger will begin to charge. ( Image 41 )



Image 40

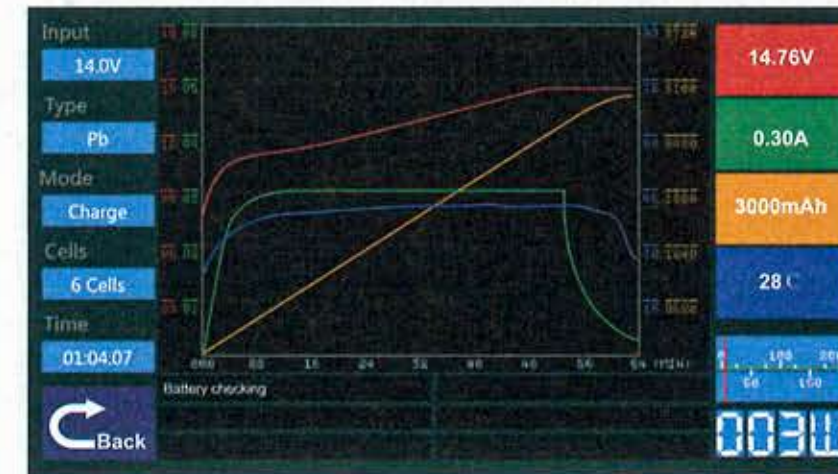


Image 41

**[ NOTE ]** The charger will pop-up window when the battery is fully charged. Touch OK to finish charging process ( Image 42 ).



Image 42

**[ NOTE ]** The charger will send out an alert and pop-up window if the battery packs' setting is incorrect. ( Image 43 ) All Lipo battery packs setting are the same operation.

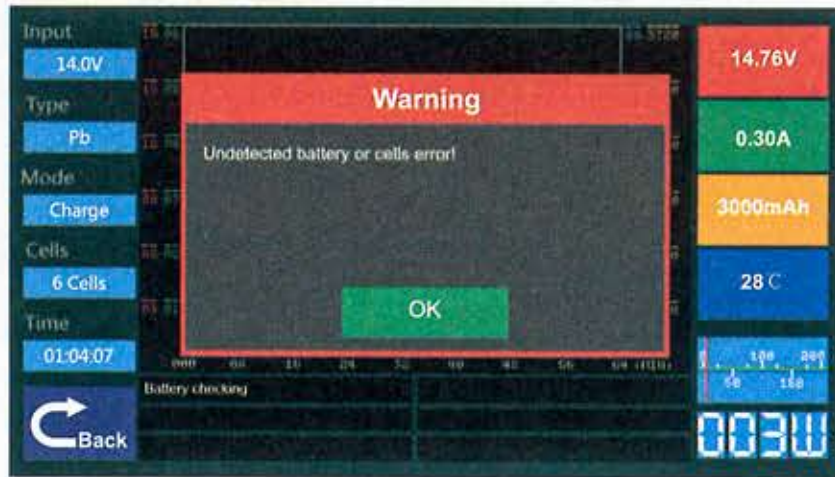


Image 43

## Invader 350 Experiments

## iM · OS SYSTEM ADVANCED APPLICATION

iM · OS SYSTEM is brand-new software of charger which was independently researched and developed by maXam. It is the first operation system in the world especially to support touch screen charger, and it's going to be industry standard for touch screen charger series.

Here we will fully display the Advanced application Settings for you. Please touch Usert (Image 44) to enter into advanced application setting interface. (Image 45)

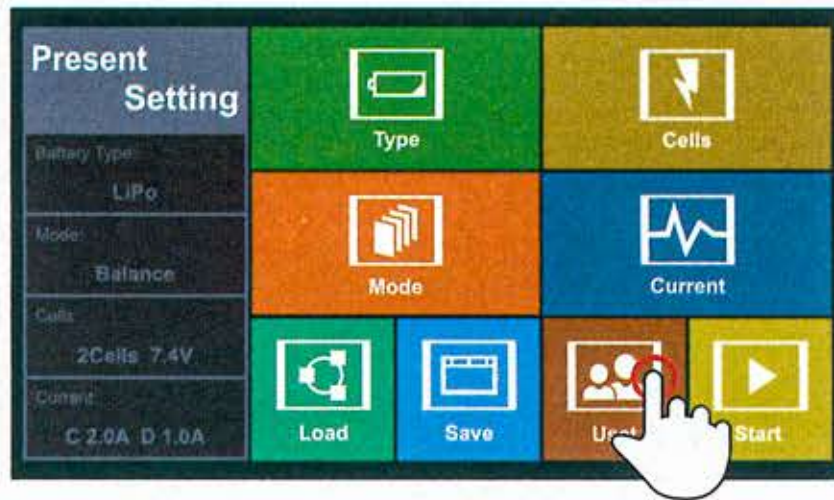


Image 44



Image 45

Touch "Cut off Low Input" (Image 45), the information bar on the left will skip into the setting menu (Image 46), touch "OK" after setting is done, it will turn back to the interface (Image 47), then you can go on with the setting of other features.

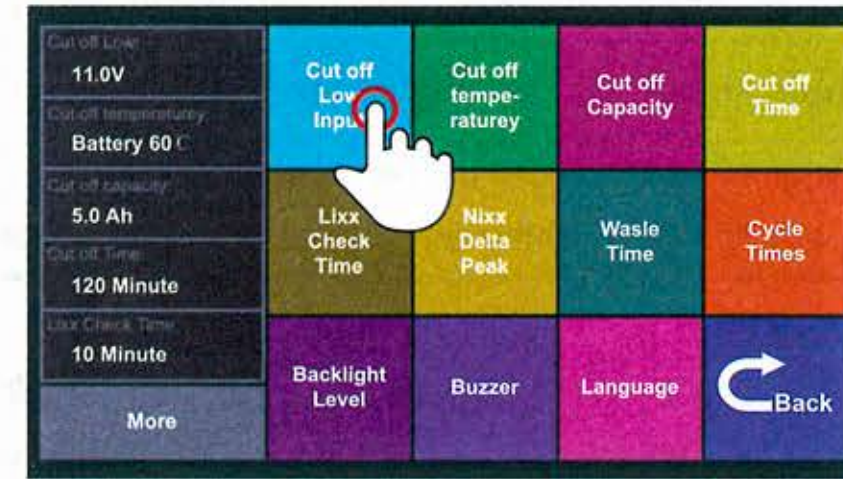


Image 46

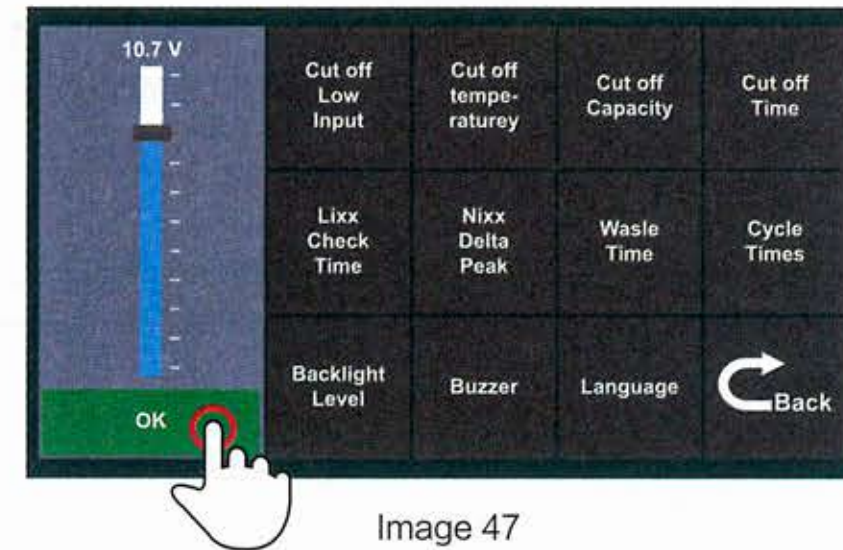


Image 47

Please find detailed list of features on next page.



### Cut off Low Input

Rang of setting: 10–11V. Lowest cut off input voltage, charger will stop charging/ discharging when input voltage is lower than setting value.



### Cut off Temperature

Rang of setting: 40–80° C. Cut off Temperature, charger will stop charging/ discharging when temp of batteries is lower than setting value.



### Cut off Capacity

Rang of setting: 0.1Ah–10Ah. Safety capacity. Charger will Stop charging/dis- charging when capacity of batteries is higher than setting value.



### Cut off Time

Rang of setting: 10–200mins. Safety time, charger will stop charging/discharg- ing, when charging/discharging time is less that setting value.



### LixxCheckTime

Rang of setting: 5–60mins. Time for checking cells count of LiPo battery pack.



### NixxDeltaPeak

Rang of setting: 5–200mV. NiHm/NiCd Delta peak.



### Waste Time

Spacing interval between 2 Cycles. Rang of setting: 1–60mins.



### Cycle Time

Rang of setting: 1–6 times.



### Backlight Level

Rang of setting: 1–10, Brightness level.



### Buzzer

Rang of setting: All sounds open, only touch tone closed, All sounds closed.



### Language

Language option. Now provisionally only support English interface.



### Back

Turn back to main interface

**[ IMPORTANT NOTICE ]** Invader 350 charger have 3 parameters to control rotate speed of fan.

1. when temperature of working charger reach 40°C, fan speed will be one level up as temp rise by each 2°C
2. when charging power reach 100W, fan speed will be one level up as charging power rise by each 5W.
3. Fan speed will be one level up as discharging power rise by each 2W.

**NOTE:** Fan Speed of Invader 350 charger will begin to change in any of above situation.

## IMPORTANT REMIND

Please follow the instruction to operate your Invader 350 charger, to insure safety of you and charger, and use it easily. Please keep manual within easy reach, to be easy reference for you and other user.

**【NOTE】** Procedures, which if not properly followed, can result in potential nullification of any vendor warranties or liabilities.

## SAFETY PRECAUTIONS AND WARNINGS

**【Warning】** Procedures, which if not properly followed, create the probability of property damage, collateral damage, and serious injury OR create a high probability of superficial injury. MaXam will not be held directly responsible for those damage if they were caused by improper using of user.

**Proper Operation** Please put Invader 350 charger on flat operating platform. DO NOT insert any object into air-vent.

**Water and Humid Place** Please keep charger far away from any place wet or moist, such as bathroom, hand Sink. Keep charger in desiccative place to avoid damage caused by rainy weather.

**Charger** PLEASE make sure you are holding plug, not pull cord when disconnect power supply. To avoid mechanical damage.

NEVER use Invader 350 charger under following operating environment: the environment full of floating dust, smoke from burning or cooking in air. the place have ultrasonic humidifier (for unfiltered tap water) working on. In rare cases, these smoke or particles in air may float into Invader 350 charger from air-vent. This may lead inner surface of screen appear mist.

### Do not Maintain Yourself

Invader 350 charger not include any spare part for user to make the maintenance , never dismantle the product by yourselves. Please contact with maXam authorized distributor for maintenance.

Please note if you dismantle the product by yourselves, this may cause damage of original device. Such kind of damage is not responsible part of our guarantee.



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