



I-Peak 665

Professional Intel l i g e n t
Digital Bal a n c e c h a r g e r

Instruction Manual



Ref. Y-023



Warranty

We guarantee this product to be free of manufacturing or assembly defects for a period of one year from time of purchase. This does not affect your statutory rights. 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. You will be required to produce proof of purchase (invoice or receipt).

This warranty is not valid for any damage or subsequent damage arising as a result of a misuse, modification or for damage or consequential damage arising as a result of failure to observe the procedures outlined in this manual. Operation of this product is carried out entirely at the risk of the operator.

Please note that, whilst every effort is made to ensure the accuracy of instructions and material included with this product, mistakes can occur and neither YES nor it's distributors will be held liable for any loss or damage arising from the use of this product or for any loss or damage arising from omissions or inaccuracies in the associated instructions or materials included with this product.

We reserve the right to modify the design of this product, contents and manuals without prior notification.

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Warning and safety notes

These warnings and safety notes are particularly important. Please follow the instructions for maximum safety; otherwise the charger and the battery can be damaged or at worst it can cause a fire. Also read the chapter "Before you begin".

- Never leave the charger unsupervised when it is connected to a power supply. If any malfunction is observed immediately terminate the process and refer to the operation manual.
- Keep the unit away from dust, damp, rain, heat, direct sunshine and vibration. Do not drop it.
- The circuit of the unit is designed to be powered by an 11-18V power source .
- This unit and the battery to charge or discharge should be set up on a heat-resistant, noninflammable and nonconducting surface. Never place them on a car seat, carpet or similar surface.
- Never use this charger inside a car, van or any other motor vehicle.
- Keep all inflammable volatile materials well away from the chargers operating area.
- Never charge batteries fitted inside models, always remove them before charging.
- Make sure you know the specifications of the battery to be charged or discharged to ensure it meets the requirements of this charger. If the program is set up incorrectly the battery and charger may be damaged and cause a fire.

NiCd/NiMH	Voltage level: 1.2V/cell Allowable fast charge current: 1C-2C (depends on the performance of cell)
Li-ion	Discharge voltage cut off level: 0.85V/cell (NiCd), 1.0V/cell (NiMH) Voltage level: 3.6V/cell Max. charge voltage: 4.1V/cell Allowable fast charge current: 1C or less Min. discharge voltage cut off level: 2.5V/cell or higher
LiPo	Voltage level: 3.7V/cell Max. charge voltage: 4.2V/cell Allowable fast charge current: 1C or less Discharge voltage cut off level: 3.0V/cell or higher
LiFe	Voltage level: 3.3V/cell Max. charge voltage: 3.6V/cell Allowable fast charge current: 4C or less Discharge voltage cut off level: 2.0V/cell or higher
Pb	Voltage level: 2.0V/cell (Lead-acid) Max. charge voltage: 2.46V/cell Allowable fast charge current: 0.4C or less Discharge voltage cut off level: 1.75V/cell or higher

- To avoid short-circuits between the charge lead always connect the charge cable to the charger first, then connect the battery. Reverse the sequence when disconnecting.
- Do not connect more than one battery pack to this charger at any one time.
- Do not attempt to charge or discharge the following types of battery.
- A battery pack which consists of different types of cell (including different manufacturers)
- A battery that is already fully charged or just slightly discharged.
- Non-rechargeable batteries (Explosion hazard).
- Batteries that require a different charge technique from NiCd, NiMH, Li-Poly or Gel cells (Pb).
- A faulty or damaged battery.
- A battery fitted with an integral charge circuit or a protection circuit.
- Batteries installed in a device or which are electrically linked to other components.

- Batteries that are not expressly stated by the manufacturer to be suitable for the currents the charger delivers during the charge process.

Introduction

Thank you for purchasing the I-PEAK 665 Charger by YES. This product is a rapid charger with a high performance microprocessor and specialized operating software. Please read this entire operating manual completely and attentively before using this product, as it covers a wide range of information on operating and safety.

Specifications

Operating voltage range:	DC 11.0 - 18.0V AC to DC adaptor (DC11.0-18.0V/5A)
Circuit power:	Max. charge power 50W Max. discharge power 5W
Charge current range:	0.1 - 5.0A
Current drain for balancing Li-Po:	300mAh/cell
NiCd/NiMH battery cell count:	1-15 cells
Li-ion/Polymer cell count:	1-6 series
Gel cell battery voltage:	2V - 20V
Weight:	277g(Net Weight)
Dimensions:	133 x 87 x 33mm

Special features

Optimal operating software

I-PEAK 665 features the so-called AUTO function that set the feeding current during the process of charging or discharging. Especially for Lithium batteries, it can prevent the overcharging which may lead to an explosion due to the user's fault. It can disconnect the circuit automatically and alarm once detecting any malfunction. All the programs of this product were controlled through two way linkage and communication, to achieve the maximum safety and minimize the trouble. All the settings can be configured by users!

Internal independent Lithium battery balancer

I-PEAK 665 employs an individual-cell-voltage balancer. It isn't necessary to connect an external balancer for balance charging.

Balancing individual cells battery discharging

During the process of discharging, I-PEAK 665 can monitor and balance each cell of the battery individually. Error message will be indicated and the process will be ended automatically if the voltage of any single one cell is abnormal.

Adaptable to various type of Lithium battery

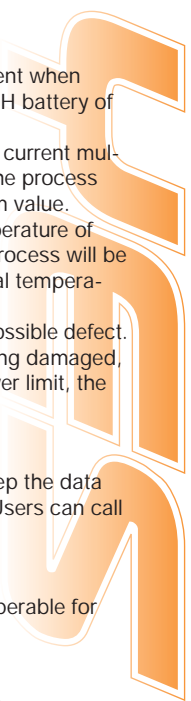
I-PEAK 665 is adaptable to various types of Lithium batteries, such as Li-ion, LiPo and the new LiFe series of batteries.

Fast and storage mode of Lithium battery

Purposes to charge Lithium battery varies, 'fast' charge reduce the duration of charging, whereas 'store' state can control the final voltage of your battery, so as to store for a long time and protect useful time of the battery.

Maximum safety

Delta-peak sensitivity: The automatic charge termination program based on the principle of the Delta-peak voltage detection. When the battery's voltage exceeds the threshold, the process will be terminated automatically.



Automatic charging current limit: You can set up the upper limit of the charging current when charging your NiCd or NiMH battery; it is useful for the NiMH battery of low impedance and capacity in the 'AUTO' charging mode.

Capacity limit: The charging capacity is always calculated as the charging current multiplied by time. If the charging capacity exceeds the limit, the process will be terminated automatically when you set the maximum value.

Temperature threshold: The battery's internal chemical reaction will cause the temperature of the battery to rise. If the temperature limit is reached, the process will be terminated. This function is available by connecting optional temperature probe, which is not included in our package.

Processing time limit: You can also limit the maximum process time to avoid any possible defect.

Input power monitoring: To protect the car battery used as DC input power from being damaged, its voltage keeps being monitored. If it drops below the lower limit, the process will be ended automatically.

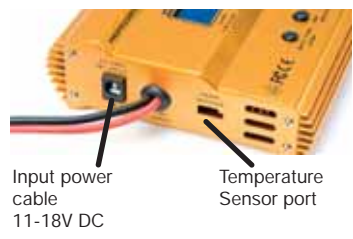
Data store/load

The maximum five batteries' data can be stored for users' convenience. You can keep the data pertaining to program setting of the battery of continuous charging or discharging. Users can call out these data at any time without any special program setting.

Cyclic charging/discharging

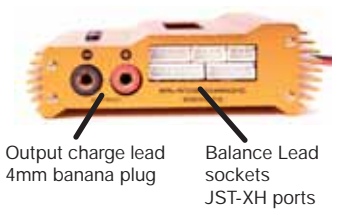
1 to 5 cyclic and continuous process of charge>discharge or discharge>charge is operable for battery refreshing and Balancing to stimulate the battery's activity.

Control s



Input power cable
11-18V DC

Temperature Sensor port



Output charge lead
4mm banana plug

Balance Lead sockets
JST-XH ports



LCD Screen
16 Characters, 2 Lines

- Scroll through the Main Menu
- Stop any charge processes
- Alter values
- See the status of individual cells in balance charge mode
- Resume or Start charge processes
- Confirm an action

Important!

Please take note of the proper connection method when charging LiPo batteries (page 8). Incorrect use will damage the charger.
Insulate the croc clips when using the mains supply! When they touch each other, they will cause a short circuit.

Before you begin

Before charging

Please bear in mind the following points before commencing charging:

- Did you select the appropriate program suitable for the type of battery you will be charging?
- Did you set up adequate current for charging or discharging?
- Have you checked the type of battery you are charging, i.e. Li-Po, NiMH, NiCd, Gel?
- Have you checked the battery voltage? Lithium battery packs can be wired in parallel and in series, i.e. a 2 cell pack can be 3.7V (in parallel) or 7.4V (in series).
- Have you checked that all connections are firm and safe? Make sure there are no intermittent contacts at any point in the circuit.

Batteries information and connection

During charge process, a specific quantity of electrical energy is fed into the battery. The charge quantity is calculated by multiplying charge current by charge time. The maximum permissible charge current varies depending on the battery type or its performance, and can be found in the information by the battery manufacturer. Only batteries that are expressly stated to be capable of quick-charge are allowed to be charged at rates higher than the standard charge current.

Connect the battery to the terminal of the charger: red is positive and black is negative. Due to the difference between resistance of cable and connector, the charger can not detect resistance of the battery pack, the essential requirement for the charger to work properly is that the charge lead should be of adequate conductor cross-section, and high quality connectors which are normally gold-plated should be fitted to both ends.

Always refer to the manual by the battery manufacturer pertaining to charging methods, recommended charging current and charging time. Especially, the Lithium battery should be charged according the charging instruction provided by the manufacturer strictly. Attention should be paid to the connection of Lithium battery especially.

Do not attempt to disassemble the battery pack arbitrarily. Please be advised that Lithium battery packs can be wired in parallel and in series. In the parallel connection, the battery's capacity is calculated by multiplying single battery's capacity by the number of cells with the same total voltage. The voltage's imbalance may cause fire or explosion. Lithium battery is recommended to charge in series.

Important information on discharging

The main purpose of discharging is to clean residual capacity of the battery, or to reduce the battery's voltage to a defined level. The same attention should be paid to the discharging process as charging.

The final discharge voltage should be set up correctly to avoid deep discharging. Lithium battery can not be discharged to lower than the minimum voltage, or it will cause a rapid loss of capacity or a total failure. Generally, Lithium battery doesn't need to be discharged. Please pay attention to the minimum voltage of Lithium battery to protect the battery.

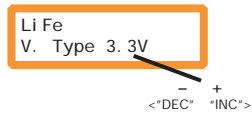
Some rechargeable batteries have a memory effect. If they are partly used and recharged before the whole charge is accomplished, they remember this and will only use that part of their capacity next time. This is a 'memory effect'. It is said that NiCd and NiMH batteries are suffering from memory effect. NiCd has more memory effect than NiMH.

Lithium batteries are recommended to be discharged partially rather than fully discharged. Frequent full discharging should be avoided if possible. Instead, charge the battery more often or use a battery of larger capacity. Full capacity cannot be used until it has been subjected to 10 or

more charge cycles. The cyclic process of charge and discharge will optimize the capacity of battery pack.

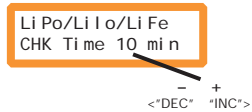
Users Set-up

LIXX V. Type



The screen shows the nominal voltage of Lithium batteries. There are three kinds of Lithium batteries: LiFe(3.3V), Lilo(3.6V) or LiPo(3.7V). This information is of critical importance! You have to check the battery carefully to make sure it is set up correctly. If it is different from correct value, explosion can occur during charge process.

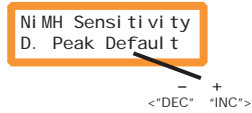
LIXX Check Time



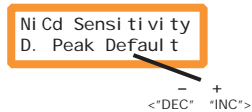
To avoid from erroneous setting by users, I-PEAK 665 detects the cell count of Lithium battery automatically at the beginning of charge or discharge process. But a battery that is deep-discharged can't be detected correctly. To avoid this error, the time term can be set to verify the cell count by the processor. Normally, 15 seconds are enough to detect the cell count correctly.

You need to extend the time term limit for the battery of large capacity. But the charge or discharge process may come to an end within the time term because of the time limit decided by the wrong count if you set too long time limit for the battery of small capacity. This may cause fatal error. You have to extend the time term if the processor detect the cell count incorrectly at the beginning of charge or discharge process. Otherwise, default value is recommended to use.

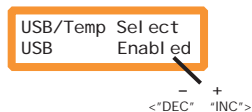
Del ta Peak Sensitivity



The "NiMH Sensitivity D. Peak" shows the trigger voltage for automatic charge termination of NiMH and NiCd battery. The valid value ranges from 5 to 20 mV per cell. Setting the trigger voltage higher brings a danger of overcharging; whereas setting it lower brings a possibility of premature termination. Please refer to the technical specification of the battery. (NiCd default:12mV, NiMH default:7mV)

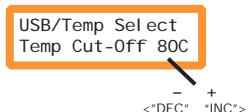


USB and temperature detection



There is a 3-pin port on the left of the charger used as USB interface or temperature sensor port. If the screen displays temperature, you can use the optional temperature probe to connect to the surface of the battery. If it is set as the USB port, you can connect the charger to your PC through the optional USB cable to monitor the charging process through optional software.

Temp Cut-Off



The maximum temperature of the battery can be set during the charge process. The process will be terminated automatically to protect battery once the temperature of battery reaches this value. This feature is accomplished through temperature probe (optional).

Waste Time

Waste time
CHG/DCHG 5 min

- +
<"DEC"> "INC">

The battery becomes warm after cycles of charge/discharge process. The program will insert a time delay after each charge/discharge process to allow the battery enough time to cool down before beginning next cycle of charge/discharge process. The valid value ranges from 1 to 60 minutes. When the charge process starts, the integrated safety timer starts to run simultaneously. If error detected or the termination circuit can not detect whether the battery is fully charged or not, this unit is programmed to prevent overcharging. Please refer to the below statement to calculate the timer you set.

Capacity Cut-Off

Capacity Cut-off
ON 500mAh

- +
<"DEC"> "INC">

The program provides maximum capacity protection function. If the Delta peak voltage can not be detected or the safety timer times out, the charge process will stop automatically, when the battery reaches the user-set maximum charge capacity.

Key Beep / Buzzer

Key Beep ON
Buzzer ON

- +
<"DEC"> "INC">

The beep to confirm users' operation sounds every time a button is pressed. The beep or melody sounds at various times during operation to confirm different mode change. These functions can be switched on or off.

Input Power

Input power low
Cut-off 10.0V

- +
<"DEC"> "INC">

This function monitors the voltage of the input battery used to power this charger. If the voltage is lower than user-set value, the program will end forcibly to protect the input battery.

Safe timer Calculation

Safety timer
ON 120 min

- +
<"DEC"> "INC">

When charging NiCd or NiMH batteries, divide the capacity by current, then divide the result by 11.9, set this number of minutes as the value for safety timer setting. If the charger stopped at this time threshold, about 140% of the capacity will have been fed into the battery.

For example:

Capacity	Current	Safety Time
2000mAh	2.0A	$(2000/2.0=1000)/11.9=84$ minutes
3300mAh	3.0A	$(3300/3.0=1100)/11.9=92$ minutes
1000mAh	1.2A	$(1000/1.2=833)/11.9=70$ minutes

User settings and menu's

As default this charger will be set to typical user settings when it is connected to a 12V battery for the first time. The screen displays the following information in sequence and the user can change the parameter on each screen.

If you need to alter the parameter value in the program, press Start/Enter key to make it blink then change the value with "INC" or "DEC" key. The value will be stored by pressing Start/Enter key

once.

By pressing the "Batt Type/Stop" button repeatedly the main menu will scroll through the different charge program options and the user settings option.

To select an option from the main menu press the "Start/Enter" button.

Please consult the end of this manual for a program chart with all the different options of the I-PEAK 665.

Lithium polymer charge programs

Important!

- The following program is only suitable for charging Lithium-polymer batteries with a nominal voltage of 3.7V/cell. Do not try to charge any other type of battery using this program.

Individual Cell Connection Diagram shows the correct way to connect your battery to the I-PEAK 665 charger while charging in the balance charge program mode only.

Warning

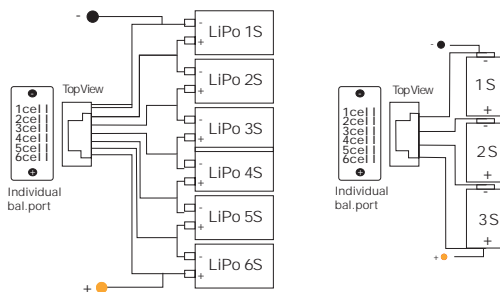
Failure to connect as shown in Individual Cell Connection Diagram will damage this charger.

This balance charging function is designed for JST-XH balance leads only. Do not try and fit any other type of lead directly into this charger's balance ports. (If you are not sure what type of lead you have then check with your local model shop before connecting to the balance ports on this charger.)



The main battery leads must be connected along with the balance lead connector before charging your battery.

Individual Cell Connection Diagram (pin-assignment of 8-pin)



WARNING: If using crock clips make sure they are unable to touch!

Lithium LiLo/LiPo/LiFe program

- The program is only suitable for charging/discharging Lithium-polymer batteries with a nominal voltage of 3.3/3.6/3.7V/cell.

Different batteries have different charge technique. There are two methods termed as constant voltage and constant current. The charge current varies according to battery capacity and specification. The final voltage is very important; it should precisely match the voltage of the battery: LiPo is 3.6V, LiLo is 4.1V and LiFe is 3.6V. The current and voltage of the battery should be correctly set.

1. Select this charge process by choosing LiPo CHARGE from the main menu by pressing the "Start/Enter" button. The display should look similar to this:

```
Li Po CHARGE
2. 0A      11. 1V(3S)
```

When you want to change the values of parameters, please press "Start/Enter" key to make it blink and then use DES or "INC" to change the value. Then press "Start/Enter" key again to store the value.

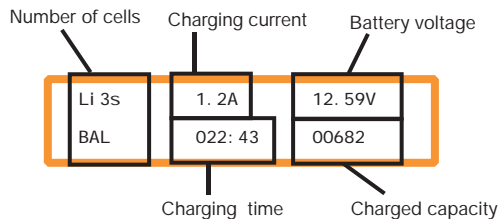
2. The left side of the first line shows the type of battery you choose. The value on the left of the second line of the charger is current user set, After setting the current and voltage, press "Start/Enter" key for more than 3 seconds to start the process (charge current: 0.1-5.0A, voltage: 1-5V).
3. This displays the number of cells you set up and the processor detects.

```
S: 3SER      R: 3SER
CONFIRM (ENTER)
```

Top Line: S = Number of cells selected by you in the previous screen.
R = Number of cells detected by the charger.

If both numbers are identical you can start charging by press "Start/Enter" button. If not, press "Batt type/Stop" button to go back to previous screen to carefully check the number of cells of the battery pack before going ahead.

4. This screen shows the real-time status during charge process. Press "Batt type/Stop" key once to stop the charge process.



Charging lithium battery in the balance mode

- This function is for balancing the voltage of Lithium-polymer battery cells while charging. In the balance mode, the battery needs to have a balance lead to connect to the individual port at the right side of the charger. And you need to connect the battery's output plug to the output of charger.

Charging in this mode is different from the normal modes, because the built-in processor monitors voltage of individual cell and control input current fed into each cell to normalize the voltage.

1. Select this charge process by choosing LiPo BALANCE from the main menu by pressing the "Start/Enter" button. The display should look similar to this:

Li Po	BALANCE
2. 0A	11. 1V(3S)

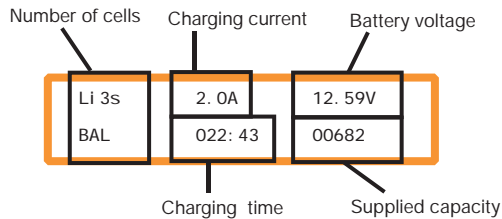
- The value on the left side of the second lines sets the charge current. The value on the right side of the second lines sets the battery pack's voltage. After setting current and voltage, press "Start/Enter" for more than 3 seconds to start the process.
- This displays the number of cells you set up and the processor detects.

S: 3SER	R: 3SER
CONFIRM (ENTER)	

Top Line: S = Number of cells selected by you in the previous screen.
 R = Number of cells detected by the charger.

If both numbers are identical you can start charging by press "Start/Enter" button. If not, press "Batt type/Stop" button to go back to previous screen to carefully check the number of cells of the battery pack before going ahead.

- This screen shows the real-time status during charge process. Press "Batt type/Stop" key once to stop the charge process.



Fast charging of Lithium battery

Charging current will normally be reduced during the final stage of the charging process. This specific CV process will increase the final charging current to end the charging process earlier. The total charged capacity during fast charging will be a little less than during normal charging, but charging time will be shortened accordingly.

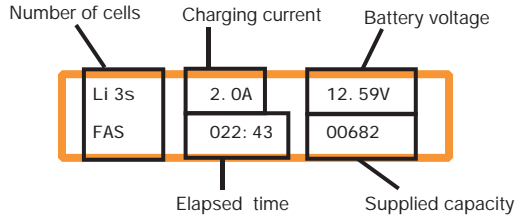
- Select this charge process by choosing LiPo FAST CHARGE from the main menu by pressing the "Start/Enter" button. The display should look similar to this:

Li Po	FAST CHG
2. 0A	11. 1V(3S)

You can set up the charging current and voltage of the battery pack. Press "Start/Enter" key to display voltage confirmation.

- Then press "Start/Enter" key again to confirm and begin to charge. This screen shows the real-

time status of "fast charging". Press "Batt type/Stop" key once to stop the charge process.



Storage control of Lithium battery

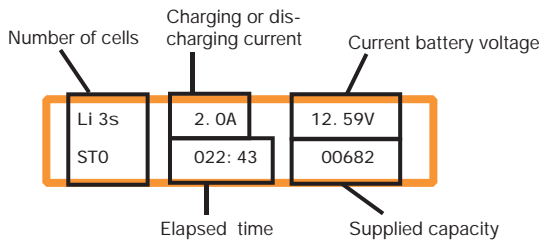
- This function is for charging/discharging batteries which are not used at once. This program is designed for charging or discharging of batteries of specific original state. They are classified by types: 3.75V Lilo, 3.85V LiPo and 3.3V LiFe.

The program will begin to discharge if the original state of the battery exceeds the voltage level of storage.

At this screen, you can set up the current and voltage of the battery pack. Charging and discharging will make the batteries come to the voltage level of "storage" state.

Li Po STORAGE
2. 0A 11. 1V(3S)

This screen shows the real-time status charging. Press "Batt type/Stop" key once to stop the charge process.

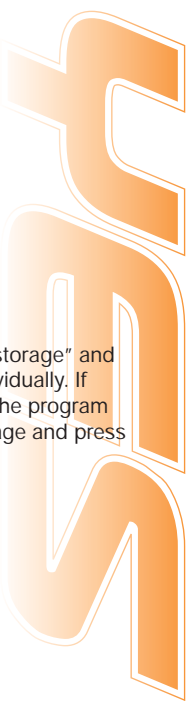
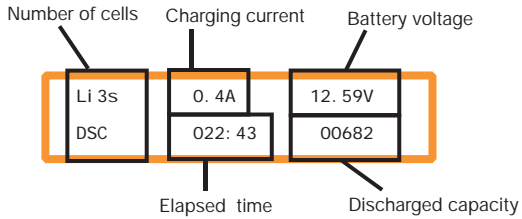


Discharging of Lithium battery

The value of discharge current on the left cannot exceed 1C, and the value on the right cannot be under the voltage recommended by the manufacturer to avoid deep discharging. Press "Start/Enter" for more than 3 seconds to start charging.

Li Po DI SCHARGE
1. 0A 11. 1V(3S)

This shows the real-time status of discharging, you can press "Batt type/Stop" key to stop discharging.



Voltage balancing and monitoring in the discharge process

The processor monitors voltage of each cell when the battery packs are during its “storage” and “discharging” process. To achieve this feature, plug each battery to the charger individually. If voltage of any cell is abnormal, I-PEAK 665 will show error message and terminate the program forcibly. So if there is battery damage or disconnection, you can see the error message and press “INC” to know which cell is damaged.

BATTERY	VOL	ERR
CELL	LOW	VOL

The processor detects voltage of one cell is too low.

4. 14	4. 16	4. 09
2. 18	0. 00	0. 00

The 4th cell was damaged. The value of voltage may be zero if disconnection occurs.

Pb lead-sulphuric acid battery program

- This program is only suitable for charging Pb lead-acid battery with nominal voltage from 2 to 20V.

Pb lead-acid battery is completely different from NiCd/NiMH battery. These batteries can only deliver current lower in comparison to their capacity. The same restriction applies to the charging process. Consequently, the optimum charge current can only be 1/10 of the capacity.

Pb battery cannot be used for fast-charging, please follow the instructions provided by the battery manufacturer. You can press “Start/Enter” key to make it blink and alter the value of parameters using “INC” or “DEC” key, press “Start/Enter” key to store the value.

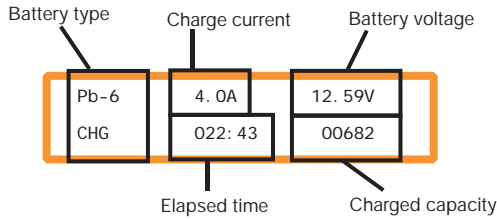
Charging of the Pb battery

Set up the charge current on the left and nominal voltage on the right. Range of current is 0.1-5.0A, the voltage should match the battery being charged. Press “Start/Enter” key for more than 3 seconds to start charging.

Pb CHARGE	
4. 0A	12. 0V(6P)

The screen displays the real-time discharging status. Press “Start/Enter” key to alter discharge

current. Press "Start/Enter" key again to store the parameter value you set. Press "Batt type/ Stop" key to end the program.

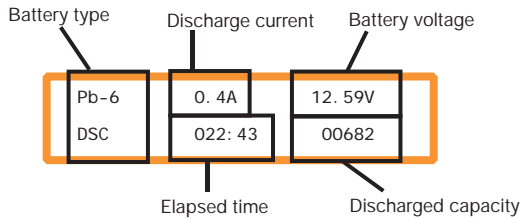


Discharging of the Pb battery

Set up the charge current on the left and nominal voltage on the right. Range of discharge current is 0.1-5.0A, the voltage should match the battery being charged. Press "Start/Enter" key for more than 3 seconds to start charging.

```
Pb DI SCHARGE
1.0A    12.0V(6P)
```

The screen displays the real-time discharging status. Press "Start/Enter" key to alter discharge current. Press "Start/Enter" key again to store the parameter value you set. Press "Batt type/ Stop" key to end the program.



NiCd/NiMH Battery Program

Charging of NiCd/NiMH battery

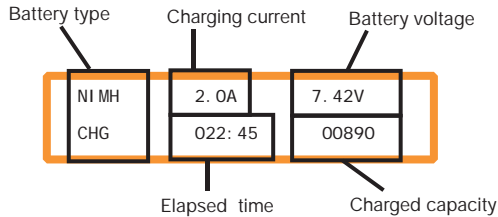
- This program is for charging and discharging of NiCd/NiMH batteries associated with R/C models applications.

You can press "Start/Enter" key to make it blink and then "INC" or "DEC" to change the parameter value. Press "Start/Enter" key to store the value.

```
NI MH CHARGE Aut
CUR LIMIT 5.0A
```

This program charges the battery using the current you set up. In the "auto" state, you should set up the upper limit of the charge current to avoid damage by excessive feeding current. Some batteries of low resistance and capacity can lead to higher current in the "auto" charging mode.

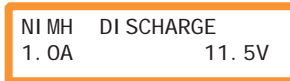
But in the manual mode, it will charge with the current you set. You can make it blink in the current field and press "INC" and "DEC" at the same time to switch mode.



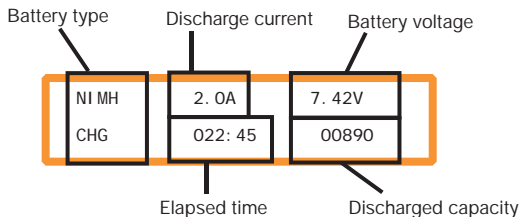
The screen shows the real-time status. Press "Batt type/Stop" key to end the program. The sound will emitted to indicates the end of program.

Discharge of NiCd/NiMH battery

Set charge current on the left and the final voltage on the right. Range of the charge current is 0.1-1.0A; range of final voltage is 0.1-25.0V. Press "Start/Enter" key for more than 3 seconds to start the program.

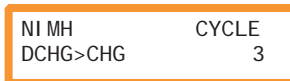


The screen indicates the discharging state. You can press "Start/Enter" key to alter discharge current. Press "Start/Enter" again to store the value. Press "Batt type/Stop" key to stop discharging. The emitted sound alerts the end of discharging.

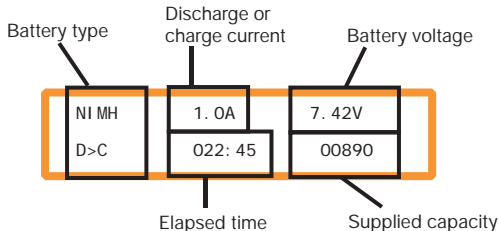


Charge/discharge and discharge/charge cycle of NiCd/NiMH battery

You can set up sequence on the left and the number of cycles on the right. You can balance, refresh and break-in the battery with this function. You can set a temporary cool-off procedure in the user's setting. Range of the cycle number is 1-5.



Press "Batt type/Stop" key to stop program, you can press "Start/Enter" key to alter charge current. The sound indicates the end of program.



When it approaches to the end, you can see the capacity of the battery being charged or discharged. You can press "INC" or "DEC" key to display result of each cycle.

DCHG	1	1314mAh
CHG	1	1430mAh

Data storage program

Store data

For your convenience, I-PEAK 665 has a data storage and load program. It can store five battery data representing the respective specifications of batteries. You can call back the data when charging or discharging without setting up the program again.

Select PROGRAM SELECT SAVE DATA from the main menu. Press "Start/Enter" key to make values blink, and use "INC" or "DEC" to set up the parameter.

Setting of the parameter in this screen will not affect the charge and discharge process. They just represent the specification of the battery. The following screens will automatically be displayed matched with the battery type you set up. The example is NiMH battery pack, including 12 cells, the capacity is 3000mAh.

Set up the charge current in the manual mode, or current limit in the auto mode. Press "INC" and "DEC" key simultaneously to make the current field blink to switch the charge mode.

Set up the discharge current and final voltage.

PROGRAM SELECT
SAVE DATA

Start
Enter

Data
number

SAVE [01] Ni MH
14.4V 3000mAh

Start
Enter

Voltage

Capacity

Ni MH CHARGE At*
CUR LIMIT 5.0A

<"DEC"> "INC">

Ni MH DISCHARGE*
1.0A 11.0V

<"DEC"> "INC">

Ni MH CYCLE
DCHG>CHG 3

Start
Enter > 3 sec

PROGRAM SELECT
LOAD DATA

Start
Enter

LOAD [01] Ni MH
14.4V 3000mAh

Start
Enter > 3 sec

Load . . .

Set up the charge/ discharge sequence and cycle number.
Saving the data



Load data program

This program is to load the data stored at the "save data" program. Press "Start/Enter" key to make the data field blink and press "INC" or "DEC" for more than 3 seconds to load the data.

Choose the data number you want to call back. The data you want to call back will be displayed.

Loading the data.

Various information in the program

You can inquire various information on the LCD screen during the charging and discharging process. Press "DEC" key, the charger will display users' setting. You can press "INC" key to monitor voltage of each cell while the battery is connected with each port of the charger.

End Vol tage
12.06V(3s)

The final voltage when the program ended.

Capaci ty Cut-Off
ON 5000mAh

Safety Ti mer
ON 200mi n

USB/Temp Sel ect
USB Enabl ed

3-pin connector is selected to be the USB port.

Ext. Temp 26C
is

The external temperature is displayed when the temperature probe used.

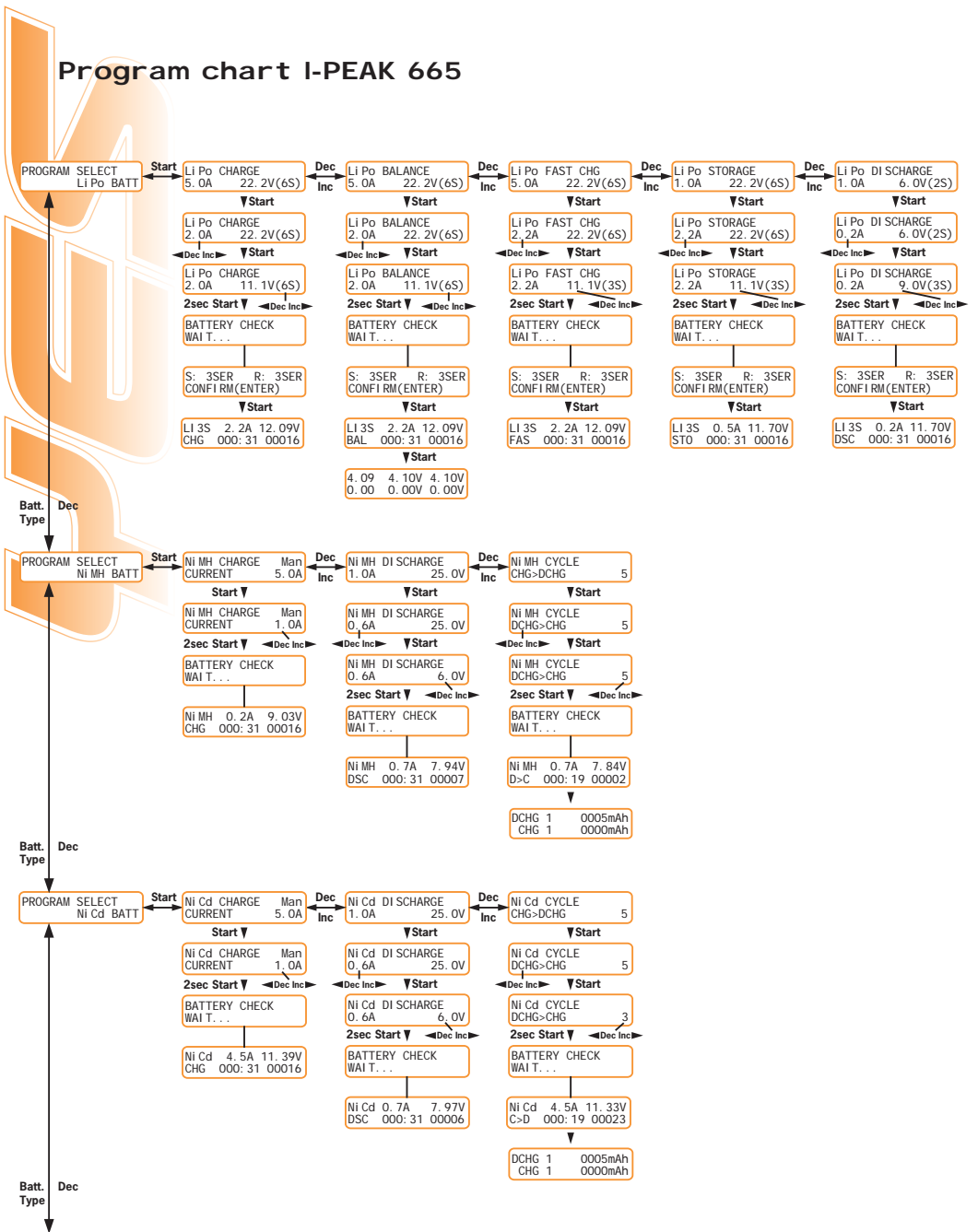
IN Power Vol tage
12.56V

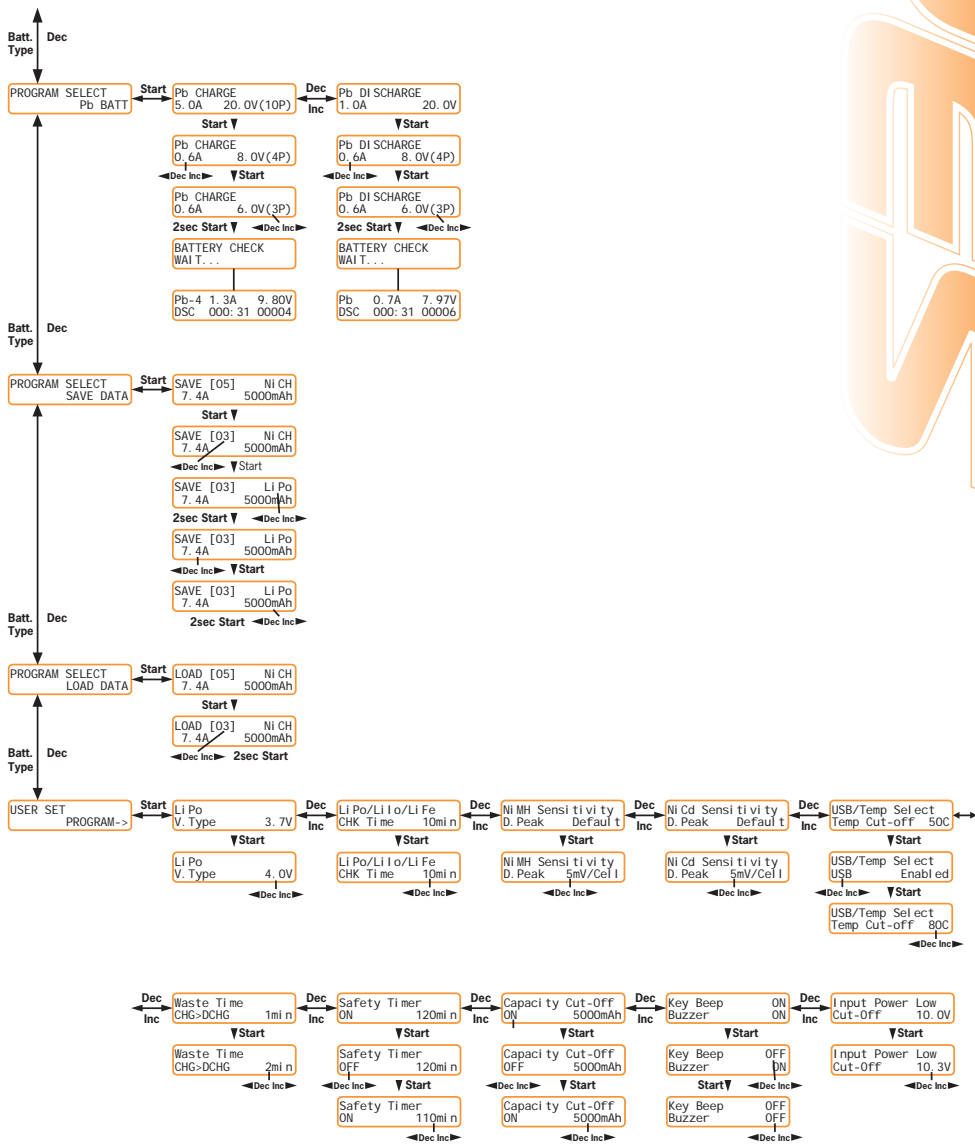
Present input voltage.

4.14 4.16 4.09
0.00 0.00 0.00

The battery is connected with each port through cable; you can check voltage of each cell in the battery pack. When the cable is connected with the ports on the right of the charger, the program will display voltage of up to 6 batteries. The battery pack needs an balancer connector connected with each cell.

Program chart I-PEAK 665





Error messages and warnings

This charger incorporates a variety of functions for protection, these monitor the system to verify processes and the state of the electronics.

In case of an error the screen will display the cause of error and emit an audible sound.

REVERSED
POLARITY

The output is connected to a battery with incorrect polarity.

CONNECTI ON BREAK

This will be displayed if the unit detects a break in the circuit between the battery and output or if the battery is voluntarily disconnected during the charge process.

SHORT ERR

There was a short circuit at OUTPUT.

I NPUT VOL ERR

Erroneous selection of voltage of Lithium pack, please check the voltage of the battery pack.

VOL SELECT ERR

The voltage of the battery pack has been selected incorrectly!

BREAKDOWN

The charger has malfunctioned for some reason. Seek professional advice.

BATTERY CHECK LOW
VOLTAGE

The processor detects that the battery has dropped below the minimum voltage during the charge process.

BATTERY CHECK
HI GH VOLTAGE

The voltage is higher than which is set. Please check the number of cells in the battery pack.

BATTERY VOLTAGE
CELL LOW VOL

Voltage of one cell in the battery pack is too low, please check the voltage of each cell.

BATTERY VOLTAGE
CELL HI GH VOL

Voltage of one cell in the battery pack is too high, please check the voltage of each cell.

BATTERY VOL ERR
CELL CONNECT

Wrong connection of the connector detected; please check the connector and cable.

TEMP OVER ERR

The internal temperature is too high, please cool down.

CONTROL FAI LURE

The processor cannot control the feeding current, please repair it.

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