iMAX B5

li-ion/Polymer
Balance Charger

Manual

Thank you for purchasing the imax B5.You get a rapid charger that is computerized with a high performance microprocessor and specialized operating software. It can maintain your battery at its best condition and also control them safely. Please read this entire operating manual completely and attentively as it contains a wide of information you need to keep this manual in a safe placeand be sure to pass it on to the new owner if you ever dispose of yours imax B5

Special features:

◆Voltage balancer for Li-polymer battery inside

B5 has an individual-cell-voltage balancer inside. So it does not need any balancer separately when charging Lipo battery for cell balancing.

◆Maximum safety

Delta-peak sensitivity: The automatic charge termination program works on the principle of the Delta-peak voltage detection.

Capacity limit: The charging capacity always calculated by multiple of the charging current and time.If the charging capacity exceeds the limit the process will be terminated automatically when you set the maximum value.

Processing time limit:you can also restrain the maximum process time to prevent from any possible defect.

Input power monitor: To protect the car battery using as input power from being damaged the voltage of it always monitored. lf it drops below the lower limit the process will be ended automatically.

◆High-power and high-performance circuit

B5 employs the circuit that has maximum output power of 50w. As a result it can charge up to 14 cells of Nicd/NiMH and 5 series of Li-poly batteries with maximum current of 5.0A

Input power cable (DC11-18V)

LCD screen (16chr.x2lines)

START/ENTER
To resume or start the operation

BATT TYPE/STOP
To select main program
To stop the operation

DEC/INC
To setect sub program
To alter the value

Charging lead connector (4mm banana female)

Warning and safety notes

Never leave the charge unsupervised when it is connected to its power supply.lf any malfunction is observed immediately terminate the process and refer to the operation manual.

Keep away the unit from dust,damp,rain,heat direct sunshine and vibration.Do not drop it.

The circuit of the unit is designed to be powered by 12V DC only.

This unit and the battery to charge should be set up on a head-resistant,non-inflammable and non-condu-ctive surface. Never place them on a car seat,carpet or similar situation.

keep all the inflammable volatile materials well away fom operating area.

Be sure to understand the information of the battery to be charged accuraltely. lf the program is set up incorrectly the battery to be charged. Reverse the sequence when disconnecting.

To avoid short-circuits between the charge lead. always connect the charge cable to the unit first. Reverse the sequence when disconnecting.

Do not connect more than one battery pack to the charge lead at any one time.

Do not attempt to charge or discharge the following types of battery.

--Battery pack which consists of different types of cell(including

different manufacturers)

--Battery 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 Pb.

--Faulty or damaged battery.

--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.

Please bear in mind of checking the following point before charge operation.

--Did you select the appropriate program which are suitable for the type of battery?

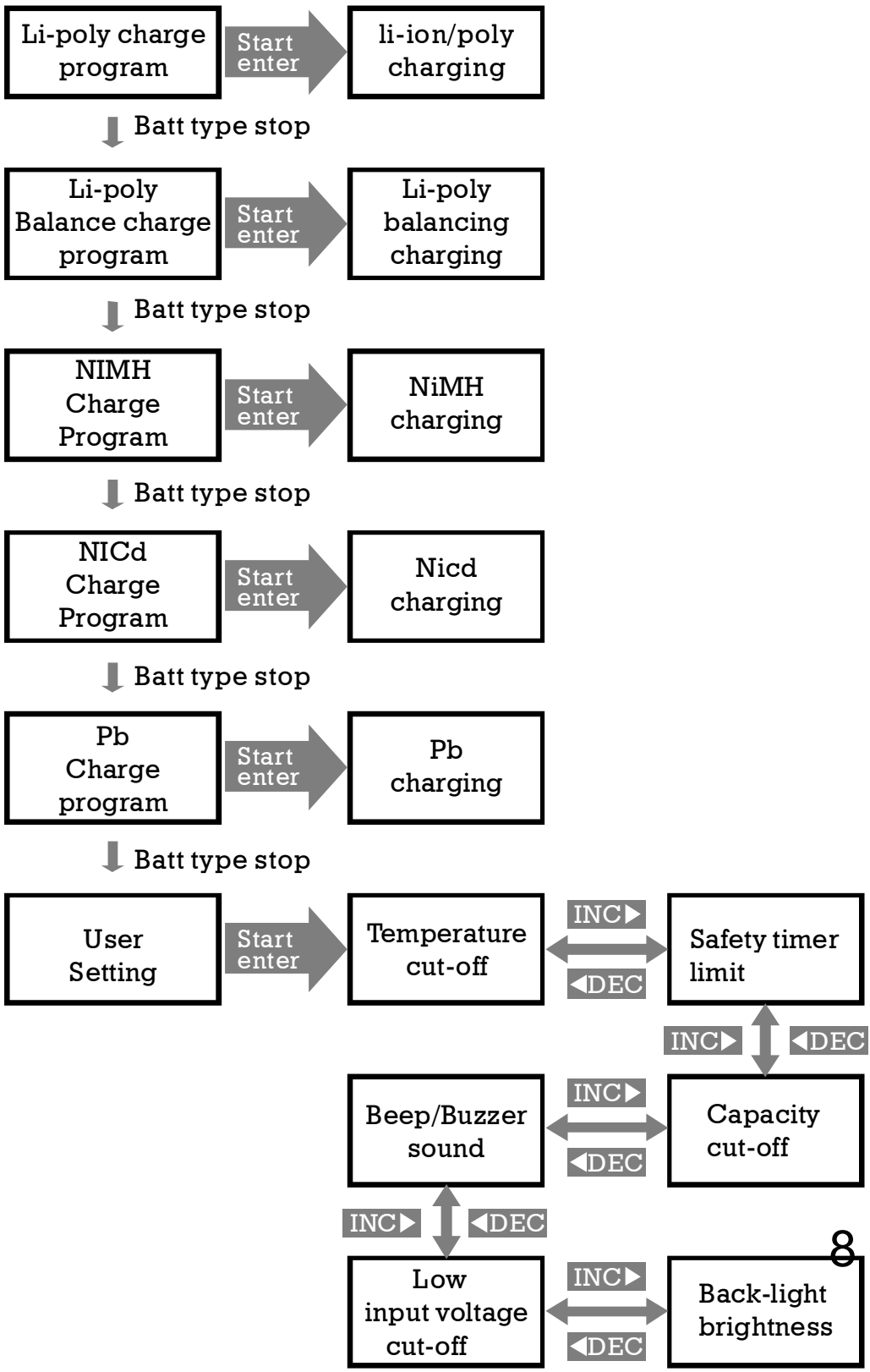
--Did you set up adequate current for charging or discharging?

--Lithium battery pack can be composed with parallel and series circuits mixed.You have to check the composition of the battery pack carefully before charging.

--Are all connections firm and safe,or is there an intermittent contact at any point in the circuit?

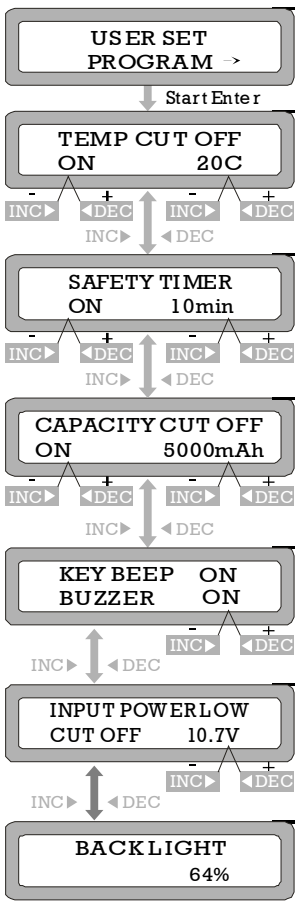
Those warnings and safety notes are particularly important! Please follow the instructions for a maximum safety;otherwise the charger and the battery can be damaged violently.And also it can cause a fire to injure a human body or to lose the property.

Program flow chart



Initial parameter set up

B5 will be operated with the default value of the essential 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 value of parameter on each screen. When you are willing to alter the parameter value in the program, press start enter key to make it blink then change the value with DEC or INC key. The value will be stored by pressing start enter key once.



This informs you of its designation

An optional feature using temperature probe contacting the surface of battery, the temperature cut-off can

When you start a charge process, the integral safety timer automatically starts running at the same time. This is

This program sets the maximum charge capacity that will be supplied to the battery during charge. If the

The beep sounds at every time pressing the buttons to confirm your action. The beep or melody sounded

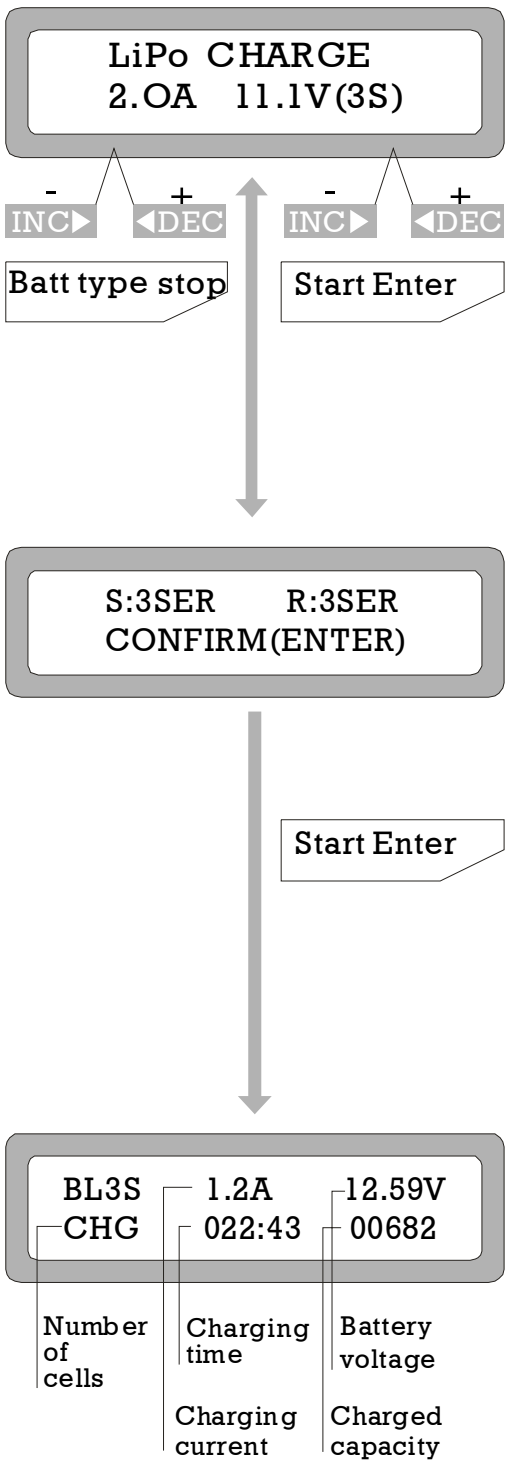
This program monitors the voltage of input battery. If the voltage drops

You can adjust the brightness of LCD

Lithium polymer battery program

These programs are only suitable for charging and discharging Lithium-polymer batteries with a nominal voltage of 3.7V/cell. These batteries need to adopt different charge technique is termed a constant voltage (CV) and constant current (CC) method. The charge current varies according to the battery capacity, and is usually C/2 rate (half capacity as a charge current). The final voltage of charge process is also very important;it should be 4.2V/cell for the nominal voltage of 3.7V/cell. If the final voltage exceeds by more than 1% during charge at any reason the battery will explode. **The charge current and nominal voltage as for cell count set on the charge program must always be correct for the battery to be charged.**

When you are willing to alter the parameter value in the program, press start/enter key to make it blink then change the value with **DEC** of **INC** key. The value will be stored by pressing start/enter key once.



The value on the left side of second line sets a charge current and the value on the right side of second line sets the voltage of the battery pack.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---5 series)

Charging li-ion/poly battery.

This shows the number of cells you set up and the processor detects. `R`shows the number of cells found by the charger and `S`is the number of cells selected by you at the previous screen. 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.Then carefully check the number of cells of the battery pack to charge again.

The screen shows the present situation during charge process. To stop charging press batt type stop key once.

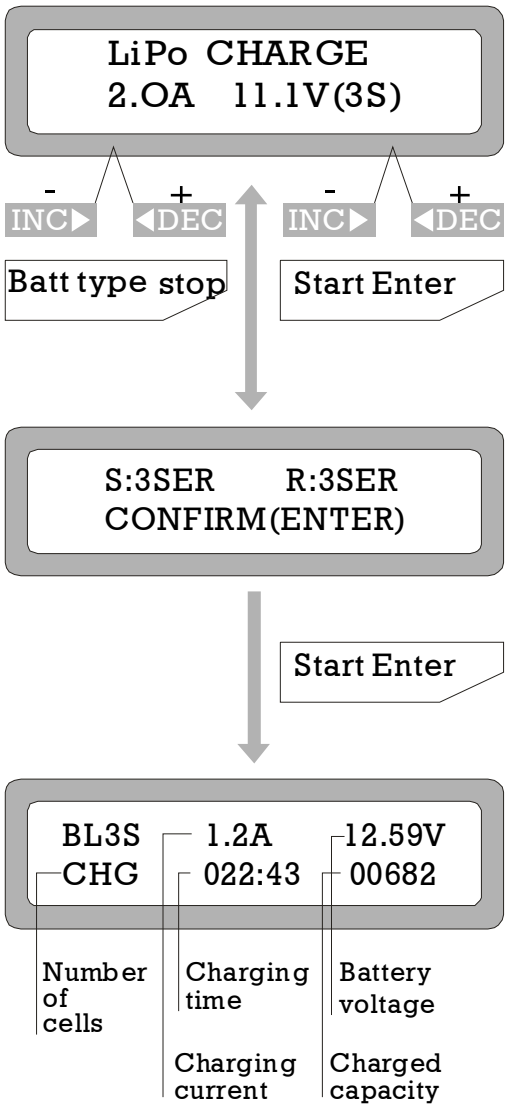
Charging Li-Poly battery at balancing mode

This is for balancing the voltages of Lithium batteries of the battery pack to be charged. To do this, the battery pack being charged should have the individual cell connector. And connect it to the individual port at the right side of charger. You do not need connect the battery output jack to the output of charger at this program.

In this mode, the charging process will be different from ordinary charging mode. The internal processor of the charge will monitor the voltages of each cell of the battery pack and control the charging current feeding to each cell to normalize the voltage.

Inquiry the voltage of individual cells

You can monitor the present voltage of individual cell by pressing DEC of INC button during the process.



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The screen shows the present situation during charge process. To stop charging press batt type stop key once.

NiMH/NiCd battery charging program

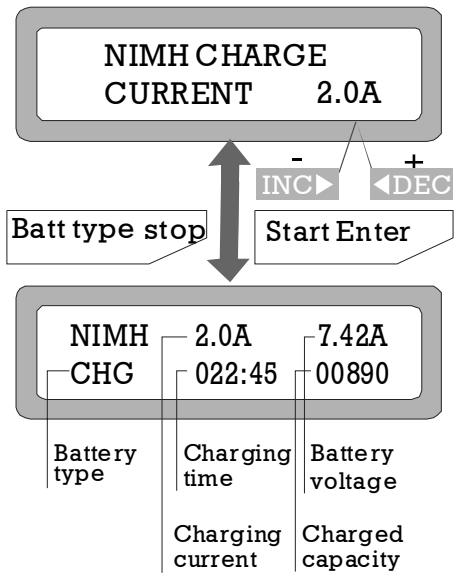
These programs are for charging NiMH (Nickel-Metal-Hydride) or NiCd (Nicdel-Cadmium) battery commonly used for R/C model applications.

To change the charging current, press start enter key to make it blink then change the value using DEC or INC key. The value will be stored by pressing start enter key once.

To start charging, press start enter button for more than 3

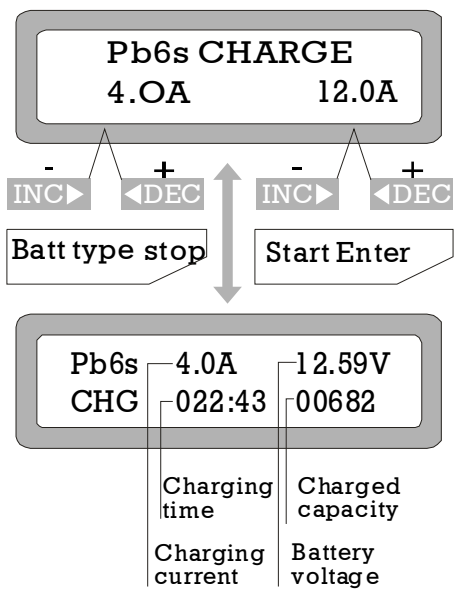
Pb (lead-sulphuric acid) battery charging program

This is programmed for charging Pb (lead-acid) battery with nominal voltage from 2 to 12V. Pb batteries are totally different from NiCd or NiMH batteries. They can only deliver relatively lower current compare to their capacity, and similar restrictions definitely apply to charge. So the optimal charge current will be 1/10 of the capacity. Pb batteries must not be charged rapidly. Always follow the instruction is supplied by the manufacturer of battery.



This program simply charges the battery using the current you set. The charge current ranges from

The screen displays the current state of charging. To stop the process, press batt type stop key once.
The audible sound indicates you the end of process



Set up the charge current on the left and the nominal voltage of the battery on the right. The charge current ranges from 0.1 to 5.0A. and the voltage should match with the battery being charged. Start the charge process by pressing start
The screen displays the state of charging process. To stop charging forcibly, press batt type stop key once. The audible sound indicates you the end of

Warning and error messages

B5 incorporates a various functions of protective and monitoring the system to verify functions and the state of its electronics. In any case of occurring error, the screen displays the cause of error that is self-explanatory with audible Sound.

Reversed polarity	The output is connected to a battery with incorrect polarity.
Connection break	This will be displayed in case of detecting an interruption of the connection between battery and output or voluntarily disconnection the charge lead during the operation of
SHOT ERR	There was a short-circuit at OUTPUT.

Specifications

Operating voltage range:	10.0~18.0 Volt
Circuit power:	max.50W
Charge current range:	0.1~5.0A
Current drain for balancing Li-po:	200mAh/cell
NiCd/NiMH battery cell count:	1~14cell
li-ion/Polymer cell count:	15 series
Pb battery voltage:	6V, 12V
Weight:	280g
Dimensions:	130*80*23mm

IN VOLTAGE ERR	The voltage of input power lowers the limit.
VOL SELECT ERR	The voltage of lithium battery pack was selected incorrectly. Verify the voltage of battery pack
BREAK DOWN	There happens malfunction at the unit byany reason.
BATTERY CHECK LOW VOLTAGE	The processor detects the voltage difference during charging.
BATTERY CHECK OVER VOL TAGE	The processor detects the voltage difference during charging.
BATTERY VOL ERR	The voltage of one of the cell in the Li-poly battery pack raised over the limit.

Warranty and service

We warrant this product for a period of one year (12 months) from the date of purchase. The guarantee applies only to such material or operational defects, which are present at the time of purchasing the product. During that period, we will repair or replace without service charge any product deemed defective due to those causes. You will be required to present proof of purchase (invoice or receipt). This warranty does not cover the damage due to wear, overloading, incompetent handling or using of incorrect accessories.

RoHs Certification