AP403 manual

Specification:

Input voltage range： DC 11.0~18.0V (input power>42W)
Charge current： 0.1~3.0A
Charge power： max.35W
Balance current： <300mA
Balance tolerance： <10mV
Lithium battery type：LiPo/LiIon/LiFe
Lithium battery cell count： 1~4 Cells
NiCd/NiMH battery cell count： 1~10Cells
Pb battery voltage： 2~12V（1~6Cells)
Weight： 175g
Dimension(L×W×D)： 116×75×25mm

Safety notes

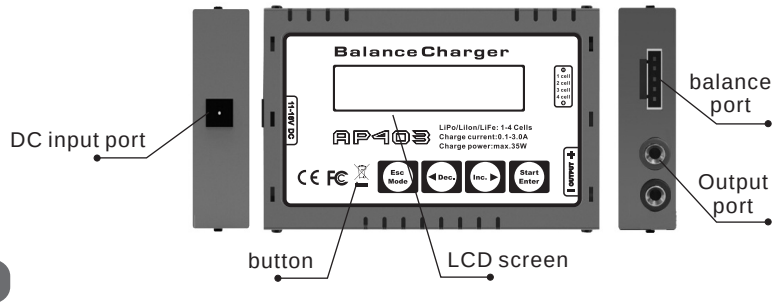
Please follow below safety notes otherwise the charger and the battery can be damaged violently.

- Do not keep it in an environment below 5℃ or above 50℃
- Keep away the charger from dust,damp,rain,heat direct sunshine and vibration. do not drop it.
- This charger should be used in a heat-resistant,non-flammable and non-conductive surface.never place them on a car seat,carpet or similar.
- Do not attempt the voltage&current higher than the requirement by manufactures.
- Double check if the battery count and type match your charger setting.
- The standard accessories can only support one battery pack.never do a disassembly or alteration to the charger.
- Do not attempt to charge/discharge the non-recharged battery or damaged battery.
- Keep the charger far away from children.Never leave the charger unsupervised when it is connected to its power supply.

The charger does support the following battery types:

Item \ Types	LiPo	LiIo	LiFe	NiMH	NiCD	Pb
Standard voltage (V/cell)	3.70	3.60	3.30	1.20	1.20	2.00
max.Charge voltage cut off level (V/cell)	4.20	4.10	3.60	1.60	1.60	2.45
Allowable fast current	≤1C	≤ 1C	≤ 4C	≤2C	≤2C	≤0.4C

Exterior



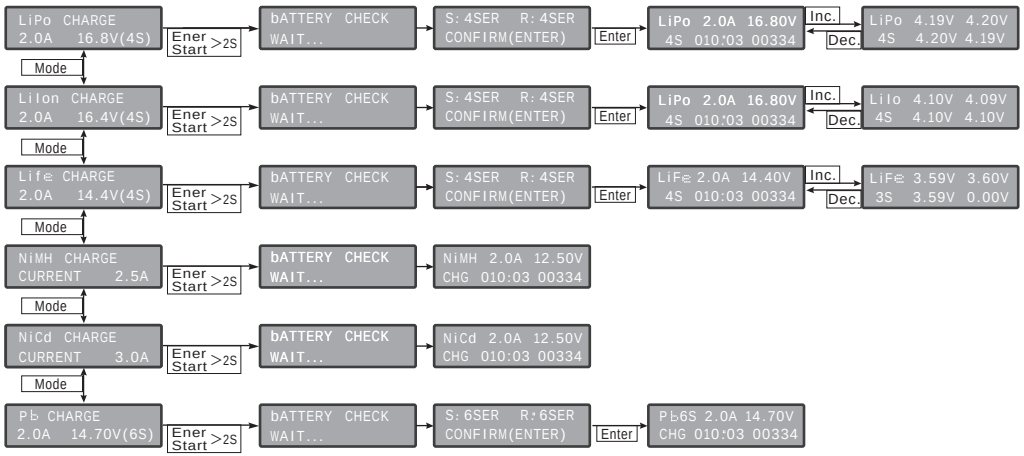
Key features:

Mode / Esc: mode selection/stop/back button.Press this key to select in the main menu or back to the main menu.And to stop during the process.

Dec. / Inc.: Reduce and increase button,you can browse other concerning informations by this button during the charge/discharge process.When you are setting parameters, press Dec.for reduce,and Inc.key for increase.

Start / Enter: select/enter button,to start work by press it more than 2 seconds.

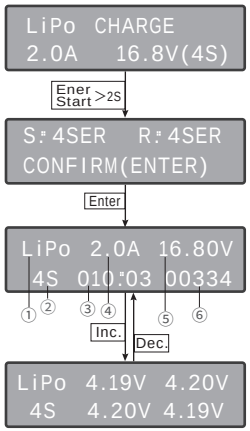
Menu configuration



LiPo/LiIon/LiFe program

When user connect the lithium battery to the balance socket,it will use the balance charge mode automatically.if do not connect to the balance socket,then it will use the LiPo/LiIon/LiFe charge mode.You can change the LiPo/LiIon/LiFe charge mode into balance charge mode,but can not change the balance charge mode into LiPo/LiIon/LiFe charge mode.

When balance charging,the built-in balancer can monitor the individual cell voltage of the battery pack and then balance the voltage.we suggest you to use balance charge mode when charging 2～4 series lithium battery.

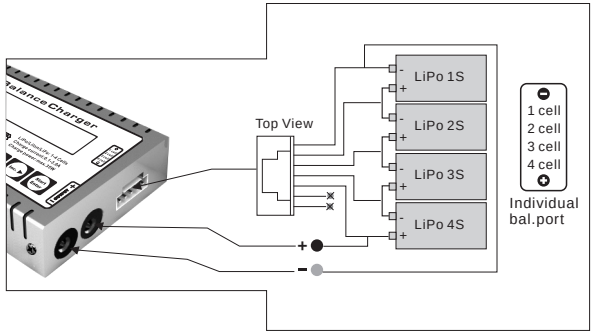


Press Enter key into the parameter set mode.
When you are willing to alter the parameter value in the program, press Enter key to make it blink,then change the value with INC/DEC key. The value will be stored by pressing Enter key once. then press Enter key for more than 2 seconds to start the process。

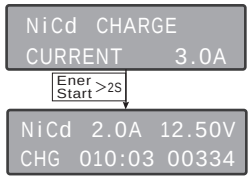
This shows the number of cells you set up and the processor detects."R" shows the number of cells found by charger and "S" is the number of cells selected by you at the previous menu.If both number are identical you can start charging by press Start/Enter button. if not, press Mode/Esc button to go back to previous menu, then carefully check the number of cells of the battery pack to charge again.

This shows the present situation during charge process.to stop charging press Mode/Esc key once.
①battery type ②cells count ③elapsed time ④charge current
⑤voltage of battery pack ⑥capacity of charged

Balance socket connection diagram



NIMH、NICD battery program

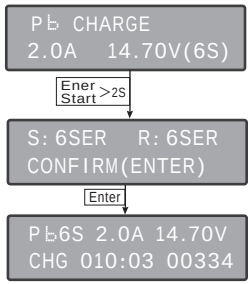


When you are willing to alter the parameter value in the program,press Enter key to make it blink, then change the value with INC/DEC key.the value will be stored by pressing Enter key once.then press Enter key for more than 2 seconds to start the proc

This shows the present situation during charge process.to stop charging press Mode/Esc key once.

Pb battery program

This is programmed for charging Pb battery with nominal voltage from 2 to 20V,Pb battery can not be charged rapidly.they can only deliver relatively lower current compare to their capacity.the optimal charge current will be 1/10 of the capacity. Please always follow the instruction supplied by the manufacturer of battery.



When you are willing to alter the parameter value in the program, press Enter key to make it blink, then change the value with INC/DEC key.the value will be stored by pressing Enter key once.then press Enter key for more than 2 seconds to start the process。

This shows the number of cells you set up and the processor detects."R" shows the number of cells found by charger and "S" is the number of cells selected by you at the previous menu.If both number are identical you can start charging by press Start/Enter button.if not, press Mode/Esc button to go back to previous menu,then carefully check the number of cells of the battery pack to charge again.
Current range:0.1-1.0A, please ensure the voltage you set match the battery

This shows the present situation during charge process.to stop charging press Mode/Esc key once.

Warning and error messages

REVERSE 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 disconnecting the charge lead during the operation of charge or discharge on output
SHORT ERROR	There was a short-circuit at output.please check the charging leads.
IN VOLTAGE ERR	The voltage of input power drops out of the limit
BATTERY CHECK LOW VOLTAGE	The processor detects the voltage is lower than you set at Lithium program. Please check the cell count of the battery pack
BATTERY CHECK CELL LOW VOL	The voltage of one of the cell in the lithium battery pack is too low. Please check the voltage of the cell one by one
BATTERY CHECK HIGH VOLTAGE	The processor detects the voltage is higher than you set at Lithium program. Please check the cell count of the battery pack
BATTERY CHECK CELL HIGH VOL	The voltage of one of the cell in the lithium battery pack is too high. Please check the voltage of the cell one by one
BATTERY CHECK BATT CONNECT ERR	In the process of charging, battery connection break off
BATTERY CHECK CELL CONNECT ERR	In balance charge mode,balance port connection break off

Warranty

Thank you for purchasing the AP403 charger.please read this entire operating manual completely and attentively as it contains a wide variety of specific programming and safety information.

We guarantee this product to be free of defects in materials and workmanship at moment of purchase.this guarantee doesn't cover any component or piece demolished into use,modifications or deteriorations following from the application of adhesives or other products not mentioned in the instructions.in no case our compensation will exceed the purchase value of the product.we reserve the right to change or modify this guarantee without previous notice.as we have no control on the final assembly,no responsibility will be assured or assumed for an damage resulting from the bad use of the product.by using this product the user assumes the total responsibility.