ENGLISH

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EV-PEAK ELECTRONIC TECHNOLOGY

CQ3

400W/ 100X4

INSTRUCTION MANUAL

1.Performance Parameter

Input voltage	[DC]	11.0~18.0V
	[AC]	110V or 220V
Charge current	[A]	0.1~10.0A
Discharge current	[A]	0.1~5.0A
Charge power	[W]	100W×4
Discharge power	[W]	10W×4
Balance current	[mA]	400mA
Balance tolerance	[V]	±0.01V
Charging Capability	NiCd/NiMH	1~15cells
	Li-Po, Li-Ion,Li-Fe	1-6cells
Pb battery voltage	[V]	2~24V
Weight	[g]	1750g
Dimensions	[mm]	220×240×68mm

2.Key Features

"MODE/ESC": mode selection/stop/back button, Press this key to the mainmenu and to stop during the process.

"◄DEC/INC►":reduce and increase button, you can reduce and increase parameters value, and browse other concerning informations by using this button during charge or discharge process.

"ENTER/START":select/enter button,to start working by press it more than 2 seconds.

3.Warning and safety Notes

WARNING: Read the ENTIRE instruction manual to become familiar with the features of the product before operating. Failure to operate the product correctly can result in damage to the product, personal property and cause serious injury.

WARNING: Failure to exercise caution while using this product and comply with the following warnings could result in product malfunction, electrical issues, excessive heat, Fire and ultimately injury and property damage.

CAUTION: Not for children under 14 years. This is not a toy.

Charging Warnings

- Never leave the power supply, charger and battery unattended during use.
- Never charge batteries overnight.
- Never attempt to charge dead, damaged or wet battery packs.
- Never attempt to charge a battery pack containing different types of batteries.
- Never charge batteries in extremely hot or cold places or place in direct sunlight.
- Never charge a battery if the cable has been pinched or shorted.
- Never connect the charger if the power cable has been pinched or shorted.
- Never connect the charger to an automobile 12V battery while the vehicle is running.
- Never attempt to dismantle the charger or use a damaged charger.
- Never attach your charger to both an AC and a DC power source at the same time.
- Never connect the input jack (DC input) to AC power.
- Always use only rechargeable batteries designed for use with this type of charger.
- Always inspect the battery before charging.
- Always keep the battery away from any material that could be affected by heat.
- Always monitor the charging area and have a fie extinguisher available at all times.
- Always end the charging process if the battery becomes hot to the touch or starts to change form (swell) during the charge process.
- Always connect the charge cable to the charger fist, then connect the battery to avoid short circuit between the charge leads. Reverse the sequence when disconnecting.
- Always connect the positive red leads (+) and negative black leads (–) correctly.
- Always disconnect the battery after charging, and let the charger cool between charges.
- Always charge in a well-ventilated area.
- Always terminate all processes and contact EV-PEAK if the product malfunctions.

WARNING: Never leave charger unattended, exceed maximum charge rate, charge with non-approved batteries or charge batteries in the wrong mode. Failure to comply may result in excessive heat, fire and serious injury.

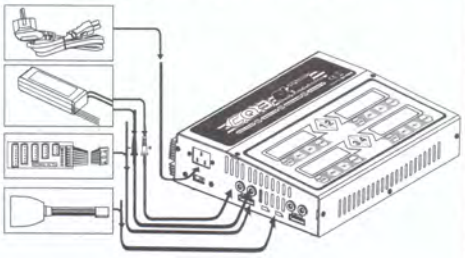
CAUTION: Always ensure the battery you are charging meets the specifications of this charger and the charger settings are correct. Not doing so can result in excessive heat and other related product malfunctions, which can lead to user injury or property damage. Please contact EV-PEAK or an authorized retailer with compatibility questions.

4.Exterior

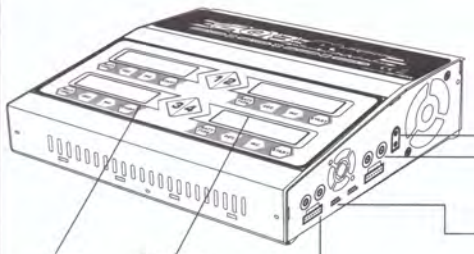
Connection diagram in the balance charging /storage/discharge mode

WARNING: Read the ENTIRE instruction manual to become familiar with the features of the product before operating.

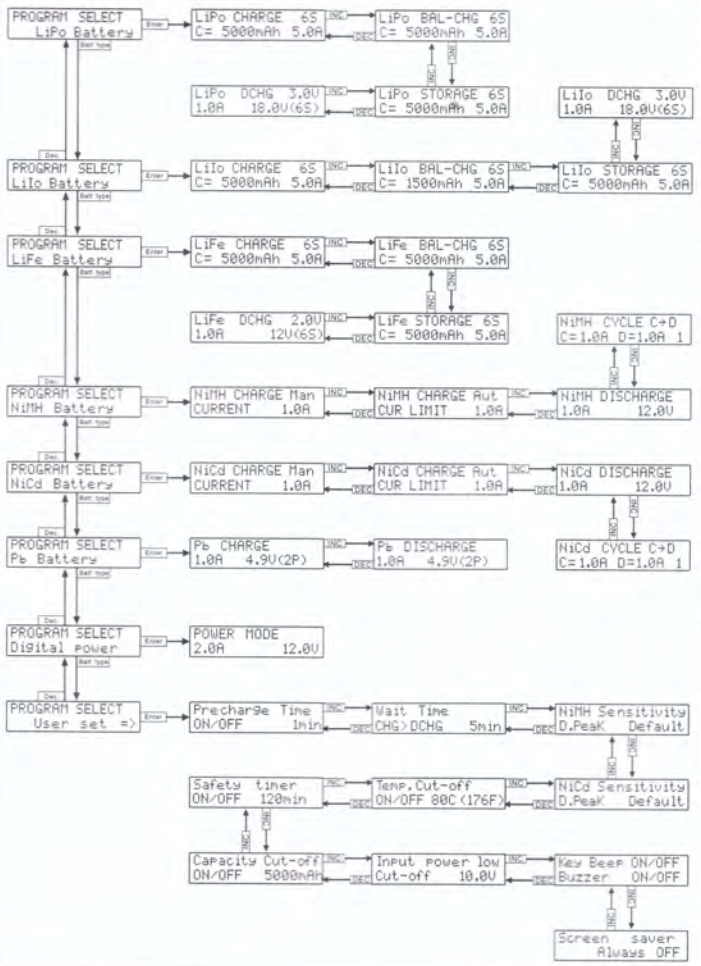
WARNING: Never leave charger unattended, exceed maximum charge rate, charge with non-approved batteries or charge batteries in thewrong mode. Failure to comply may result in excessive heat, fire and serious injury.



CAUTION: Always ensure the battery you are charging meets the specifications of this charger and that the charger setting sare correct. Not doing so can result in excessive heat and other related product malfunctions, which can lead to user injury or property damage.



5.Programming Guide



6.Battery charging

The charger has default settings which are compatible with the most popular batteries.

If you wish to change the default settings please go to p.07of these instructions.

6.1 Lithium batteries (LiPo, LiFe and Li-Ion)

From the program select screen, use the STOP or - keys to select LiPo battery type and then press the START key.

By pressing the + and - keys, you can select the different function modes:

LiPo CHARGE: Normal charge, balancing if balance connector connected (not mandatory but recommended)

LiPo BAL-CHG: Balance charge, use of balancing connector mandatory

LiPo STORAGE: Storage charge or discharge (to 50% of capacity)

LiPo DCHG: Discharge of the battery

Warning! For increased safety, we recommend that you always connect the battery balancingconnector to the charger when charging LiPo or LiFe batteries.

Modifying the settings

Press the START key so that the charge/discharge current or battery voltage (cell count) setting blinks.Use the + and - keys to adjust the cell count (1S to 6S), confim with ENTER and use the + and - key to adjust the max. capacity. After confimation with ENTER set the charge or discharge current.

Launching the charge or discharge

Once you are ready to start the charge or discharge, press and hold the START key. The check screen is displayed.

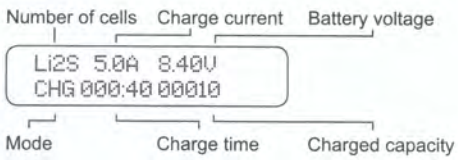
R: indicates the cell count detected by the charger

S: indicated the cell count selected by the user.

Warning! If the R and S values are different do not start the charge!

Press the STOP key to go back and check the settings and the battery.

If the values are similar, press the START key to begin the procedure. The charge screen will be displayed.



CHG = normal charge mode BAL = balance charge mode

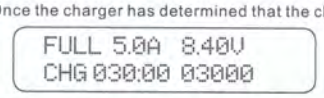
FAS = fast charge mode STO = storage charge mode

DSC = discharge mode

While the charger is charging or discharging the battery, by pressing the START key and using the +and - keys you can modify the actual charge and discharge current. Then, press the START key again.You can use the + and - keys to change the information displayed on the screen. Please refer to p.12for information about the various screens available.

stops and the"FULL" or "END" message is displayed.

Once the charger has determined that the charge or discharge is complete, the charger



Note: you can stop the current process at any time by pressing the STOP key.

6.2 NiCd/NiMH batteries

From the program select screen, use the STOP or - key to select NiCd or NiMH battery type and then press the START key.

By pressing the + and - keys, you can select the different function modes:

NiMH CHARGE : Man Normal charge

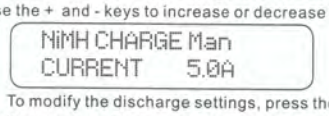
NiMH CHARGE: Aut Normal charge, auto charge current up to the user limit

NiMH DISCHARGE: Discharge the battery

NiMH CYCLE: Cycle the battery

Modifying the settings

To modify the charge settings, press the START key so that the charge current blinks. Use the + and - keys to increase or decrease the charge current.

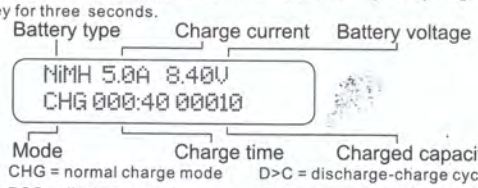


To modify the discharge settings, press the START key so that the discharge current or discharge end voltage starts to blink. Use the + and - keys to increase or decrease the discharge current or the discharge end voltage (0.1V – 25.0V).

The cycle mode uses the current charge and discharge settings.

Launching the charge or discharge

Once you are ready to start the charge, discharge or cycling, press and hold the START key for three seconds.



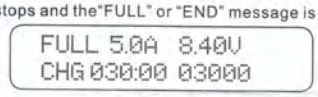
CHG = normal charge mode D>C = discharge-charge cycle

DSC = discharge mode C>D = charge-discharge cycle

While the charger is charging or discharging the battery, by pressing the START key and using the +and - keys you can modify the actual charge and discharge current. Then, press the START key again.

You can use the + and - keys to change the information displayed on the screen. Please refer to p.06 for information about the various screens available.

Once the charger has determined that the charge or discharge is complete, the charger stops and the"FULL" or "END" message is displayed.



Note: you can stop the current process at any time by pressing the STOP key.

6.3 Lead batteries

From the program select screen, use the STOP or - key to select Acid Lead (Pb) battery type and then press the START key.

By pressing the + and - keys, you can select the different function modes:

Pb CHARGE Normal charge Pb DISCHARGE Discharge the battery

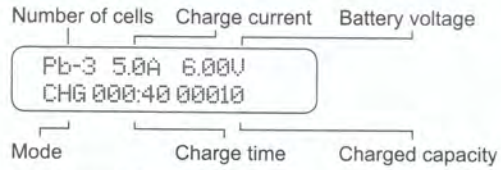
Modifying the settings

If you need to modify the charge or discharge settings, press the START key so that the charge/discharge current or battery voltage (cell count) setting blinks.

Use the + and - keys to increase or decrease the charge or discharge current or the cell count (2Vto 20V – 1P to 10P).

Launching the charge or discharge

Once you are ready to start the charge or discharge, press and hold the START key for three seconds.

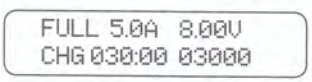


CHG = normal charge mode DSC = discharge mode

While the charger is charging or discharging the battery, by pressing the START key and using the +and - keys you can modify the actual charge and discharge current. Then, press the START key again.

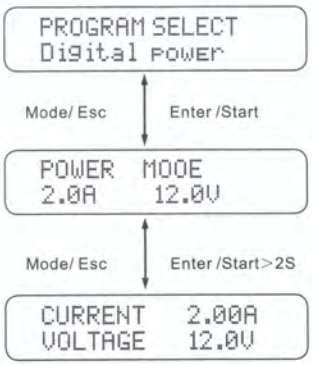
You can use the + and - keys to change the information displayed on the screen. Please refer to p.12 for information about the various screens available.

Once the charger has determined that the charge or discharge is complete, the charger stops and the "FULL" or "END" message is displayed.



Note: you can stop the current process at any time by pressing the STOP key.

6.4 Digital Power



In this mode, charger can provide a output power of DC 3.0V-24.0V for the other electronic equipment.

7.Extra information display

While the charger is charging or discharging a battery, you can use the - and + keys to display extra information.

NiMH Sensitivity D.Peak Default	Indicates delta-peak sensitivity for NiMH
NiCd Sensitivity D.Peak Default	Indicates delta-peak sensitivity for NiCd
End Voltage 8.4(2S)	Indicates Lithium battery end voltage
4.10 4.10 0.00 0.00 0.00 0.00	Individual cell voltage display for lithium batteries (only if balancing connector is used)
Capacity Cut-Off ON 5000mAh	Indicates capacity safety feature setting
Safety Timer ON 120min	Indicates timer safety feature setting
Ext. Temp 40C	Indicates the temperature measured by the probe
IN Power Voltage 16.49V	Indicates actual power supply voltage

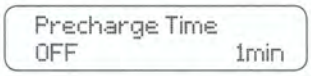
Modifying the charger's default settings

The charger's default settings can be modifid. Only modify these settings if you understand their purpose. To modify the settings, use the STOP or - keys to select the program screen and then press the START key.

From here on you have to use the - and + keys and the START key to select and modify the settings.

Precharge Time

When charging over-discharged batteries, the charger makes a slow charge before starting the fastcharge. This setting adjusts the duration of the slow charge. Slow charging over-discharged batteries is recommended to avoid further damage to the batteries.

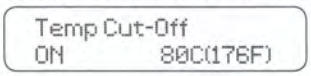


NiMH/NiCd delta-peak sensitivity

This setting adjusts the automatic delta-peak charge cut-off sensitivity. Use a higher value if the charge tends to stop prematurely and a lower value if your battery is too hot at the end of the charge. Default value is 7mV/cell for NiMh and 12mV/cell for NiCd.

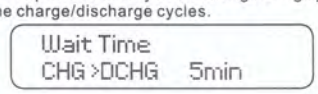
Temperature monitoring

The connector on the left panel can be used to connect an optional temperature probe for battery temperature monitoring. You can adjust the battery charge cut-off temperature.



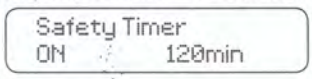
Cycle delay

To prevent battery overheating during cycling, the charger can make a pause between the charge/discharge cycles.



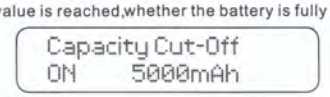
Safety timer

This function adds an extra layer of security during the charge. The charge will be interrupted once the set time is reached, whether the battery is fully charged or not.



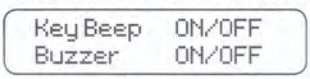
Capacity cut-off

This is another safety feature that checks the amount of energy (in mAh) that is supplied to the battery during charge. The charge will be interrupted once the preset value is reached,whether the battery is fully charged or not.



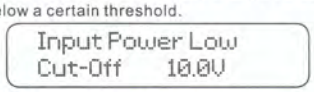
Audio signals

You can enable and disable the audio signals, which are emitted by the charger.



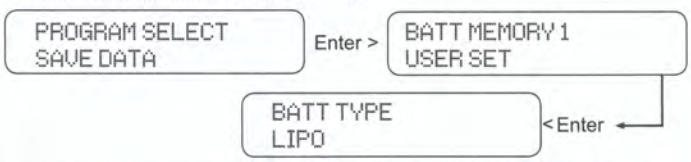
Power supply control

This function will stop any charging procedure if the power supply voltage drops below a certain threshold.

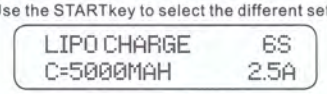


Charge settings memory

The charger is equipped with a memory that can store settings for ten different batteries.To modify the memorized settings, use the STOP or - keys to select the save data screen and then press the START key.



Use the - or + keys to select the memory slot you wish to modify, then press START. Use the STARTkey to select the different settings and the - or + keys to modify them.

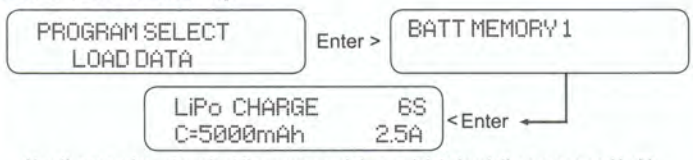


Once you have made the changes, press and hold the START key for three seconds. The screen will now display the various charge and discharge settings for the selected battery type. Please refer to the previous setup instructions for more information.

Once you have made all the changes, press and hold the START key for three seconds to save the changes to the actual memory slot.

Loading the stored settings

To load memorized settings, use the STOP or - keys to select the load data screen and then press the START key.



Use the - or + keys to select the memory slot you wish to load, then press and hold START for three seconds. After three seconds the charge screen is displayed automatically.

8.Error Messages

The charger can display error messages when certain types of problems are detected. In any case when an error occurs, check the connections, power supply, battery and settings.

This indicates that there is a polarity reversal. Check the battery and connections.

REVERSE POLARITY

This indicates that the connection between the charger and battery was interrupted while the battery was charging or discharging. Check the battery and connections.

CONNECTION BREAK

This indicates that there is an electrical short-circuit on the charger output. Check the battery and connections.

SHORT ERR

This indicates that there is a problem with the power supply. Check the power supply.

INPUT VOL ERR

This indicates a charger failure. Stop using the charger and seek assistance.

BREAK DOWN

This indicates that the battery voltage is too low. Check the battery and settings.

BATTERY CHECK
LOW VOLTAGE

This indicates that the battery voltage is too high. Check the battery and settings.

BATTERY CHECK
HIGH VOLTAGE

This indicates that one or more cells of the battery have a too low voltage.Check battery and connections.

BATTERY VOLTAGE
CELL LOW VOL

This indicates that one or more cells of the battery have a too high voltage. Check battery andconnections.

BATTERY VOLTAGE
CELL HIGH VOL

This indicates a problem with the balancing connector. Check the battery and connections.

BATTERY VOL ERR
CELL CONNECT

This indicates that the charger is overheating. Let the charger cool down or improve the cooling.

TEMP OVER ERR

This indicates a charger failure. Stop using the charger and seek assistance.

CONTROL FAILURE

9.Warranty

Thank you for purchasing this balance charger, EV-PEAK will do our best to provide you with a comprehensive after-sale service and protect your rights and interests.

EV-PEAK guarantees this product to be free from manufacturing and workmanship defects for a period of one year from the date of purchase. The warranty does not cover incorrect installation, components worn by use, or any other problem resulting from incorrect use or handling of the product. No liability will be accepted for any damage resulting from the use of this product. By the act of connecting and operating this product, the user accepts all resulting liability.

Below is considered incorrect use:

- Failure to follow instructions.
- Improper use of the product(abusive use, out of spec. etc.).
- Failure to adapt settings for proper function(improper connections,wrong gearing,installation, setup, etc.).
- Overload, overheating(desoldering, melting, etc.).
- Running in inadequate conditions(damage or rust from rain, humidity, etc.).
- Improper maintenance(presence of dirt, etc.)
- Disassembly, modification by the user(modifying, original connectors, wires, components, etc.).
- Mechanical damage due to external causes.

COMPLIANCE INFORMATION FOR THE EUROPEAN UNION

Declaration of Conformity

CE

Product(s): Battery balance charger
Item Number(s): **CQ3**

The object of declaration described above is in conformity with the requirements of the specifications listed below, following the provisions of the European EMC Directive 2004/108/EC

EN 55014-1:2006
EN55014-2:1997+A1:2001
EN61000-3-2:2006
EN61000-3-3:2008

Instructions for disposal of WEEE by users in the European Union

This product must not be disposed of with other waste. Instead, it is the user's responsibility to dispose of their waste equipment by handing it over to a designated collections point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.

B0601-SCQ31-01