PROFESSIONAL BALANCE CHARGER

Smart Charger H4

Channel Bridge

Channel Bridge

Two independent channels can be transformed to single powerful Channel

Free Battery Combination

Li-Po	Li-Fe	Li-ION	Ni-CD	Ni-MH	Pb
1-6 cell	1-6 cell	1-6 cell	1-15 cell	1-15 cell	2-24 V

Instruction Manual

Specifications

Congratulations on your purchase of the Hitec H4 Multi-Charger. You are now the owner of a compact multi chemistry battery charger with battery management and integral Lithium battery balancing features.
The Hitec H4 Multi-Charger features four totally independent and identical 120 watt charging circuits for a total power of 480 watts. As a result, it can simultaneously charge or discharge up to 4 separate battery packs.
The Hitec H4 Multi-Charger can be attached to a 12 volt car battery with the included connector.
You can connect it to a 11 ~ 18 V DC power supply with an amperage rating of 35~40 amps (480~500W).

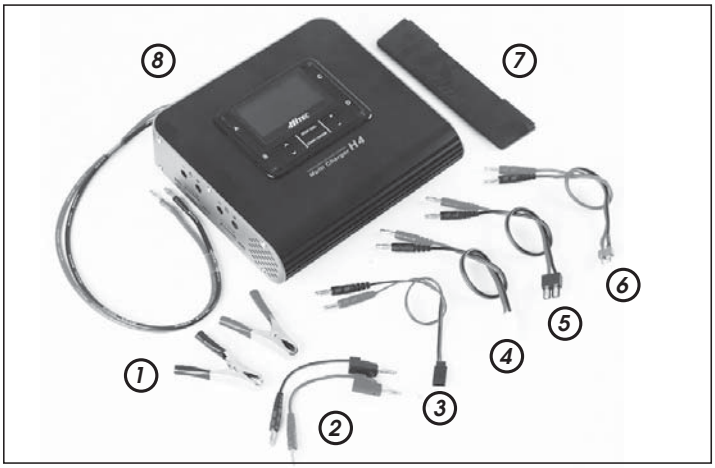
THIS CHARGER WAS DESIGNED AND APPROVED EXCLUSIVELY FOR USE WITH THE TYPES OF BATTERIES STATED IN THIS INSTRUCTION MANUAL. HITEC RCD USA ACCEPTS NO LIABILITY OF ANY KIND IF THE CHARGER IS USED FOR ANY PURPOSE OTHER THAN THAT STATED.
SINCE WE ARE UNABLE TO ASSURE THAT THE USER WILL PROPERLY FOLLOW THE SUPPLIED INSTRUCTIONS AND HAVE NO CONTROL OVER ONE'S PROPER USE OR MAINTENANCE OF THE DEVICE, WE ARE OBLIGATED TO DENY ANY AND ALL CLAIMS OF LIABILITY FOR LOSS, DAMAGE OR INJURY WHICH ARE INCURRED DUE TO IMPROPER USE AND OPERATION OF THIS PRODUCT.
UNLESS OTHERWISE PRESCRIBED BY LAW, THE LIMIT OF OUR LIABILITY SHALL NOT EXCEED THE INVOICE VALUE OF THE CHARGER.

Please read this Hitec H4 instruction manual carefully before use.

Specifications

Input Voltage	11-18V (Requires a 480-500 watt (30-40 Amp) Power Supply for Operation.)
Usable Battery Types	LiPo/ LiFe/ LiIon: 1 ~ 6 cell NiCd/ NiMH: 1 ~ 15 Cell (1.2V ~ 18V) Pb: 1 ~ 12 Cell (2V ~ 24V)
Charge Current Amps (Max)	0.1 ~ 8A (Max 120W) Per Channel or 16A (Max 240W) Using Hitec Bridge Connect
Discharge Current Amps (Max)	0.1 ~ 2.0A (Max 10W) Per Channel or 4.0A (Max 20W) Using Hitec Bridge Connect
Charge Detection (Default)	NiCd, NiMH : Delta Peak Detect Delta Peak Voltage : 5mV ~ 20mV/Cell, LiPo (4.20V/Cell), LiFe (3.70V/Cell), LiIon(4.10V/Cell), Pb (2.45V/Cell)
Discharge Detection (Default)	NiCd, NiMH : 0.9V/Cell LiPo (3.0V/ Cell), LiFe (3.0V/ Cell), LiIon (3.0V/ Cell), Pb (1.8V/ Cell)
Lithium Type Batteries	Balance connector can be used with each charge port (LiPo/LiIon/LiFe)
LCD Display	128 X 64 Pixel Backlight LCD
Dimension/Weight	205 x 163 x 52mm / 1200g
Safety Functions	- Power Supply Reverse Polarity Protection - Output Power Short Circuit Detection - Power Supply Voltage too High or Low Detection - Auto Detect Number of Configured Cells - End Charge / Discharge Notification
Operation Functions	Lithium Chemistry (LiPo/LiIon/LiFe) Type Batteries : Charge/Discharge with Balancing Function, Charge/Discharge without Balancing Function

Contents

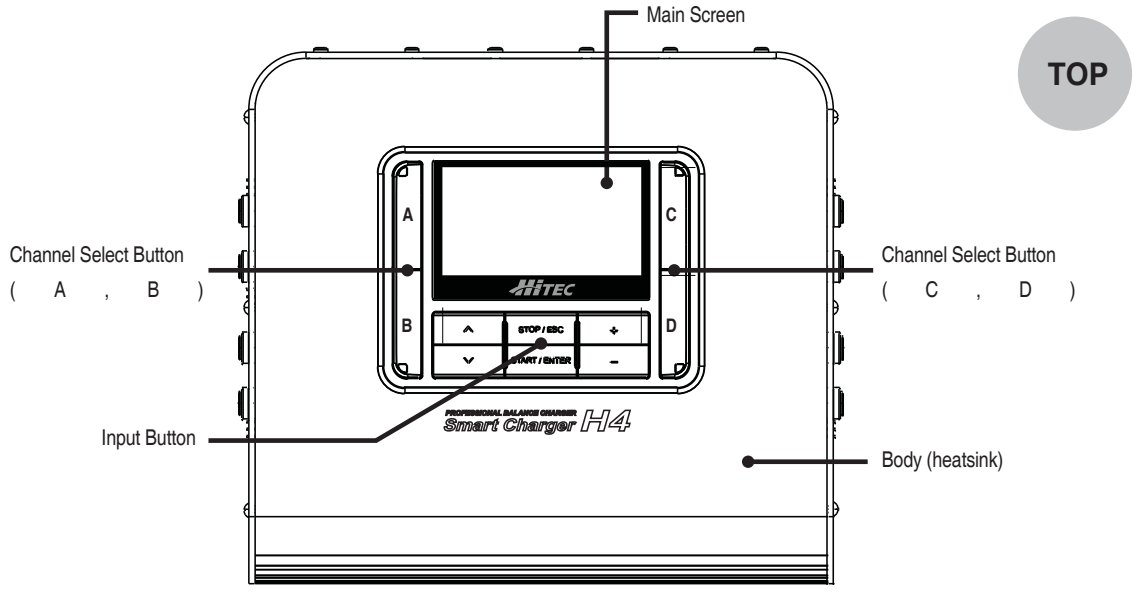


1. Alligator Clip
2. Channel Bridge Cable
3. Rx Battery Connector
4. Tamiya Type Connector
5. Traxxas Type Connector
6. 2 Pin Deans Type Connector
7. H4 Support Bar
8. H4 Charger

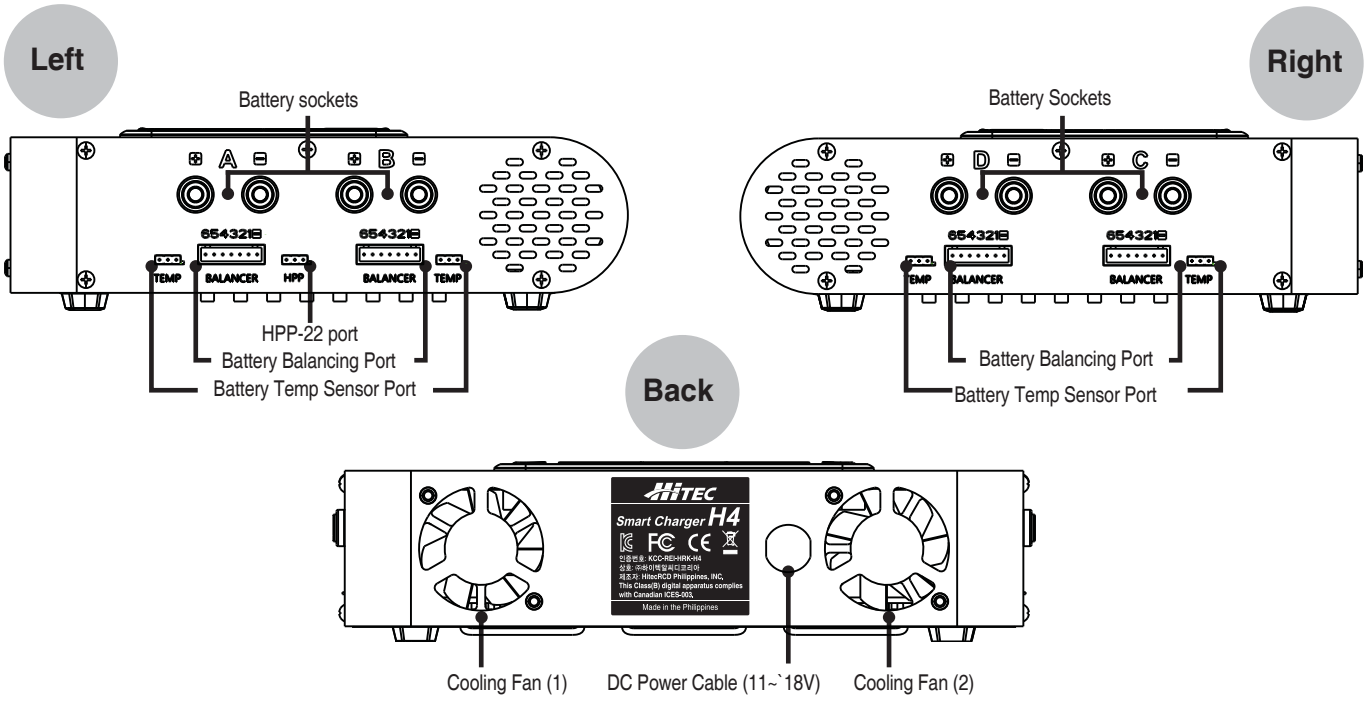
※ **The contents of the package may differ from country to country.**

Please use the correct battery connector according to your battery type. Connectors, cables and cell balancer boards are sold separately. Please contact your local hobby shop or the battery manufacturer for the right battery connector. For more information please visit the Hitec website at www.hitecrcd.com.

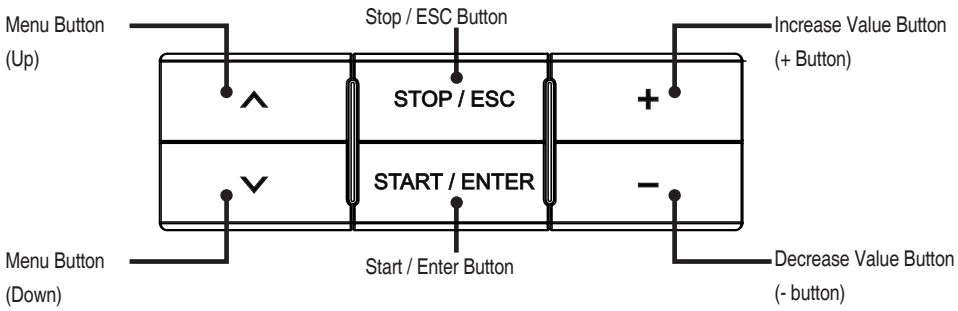
H4 Layout



Layout



H4 Input Button



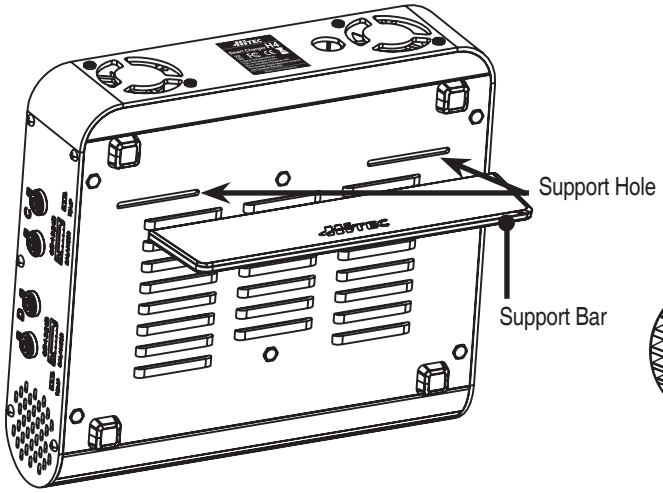
1. ∧,∨ Menu Button
Move the menu with this button

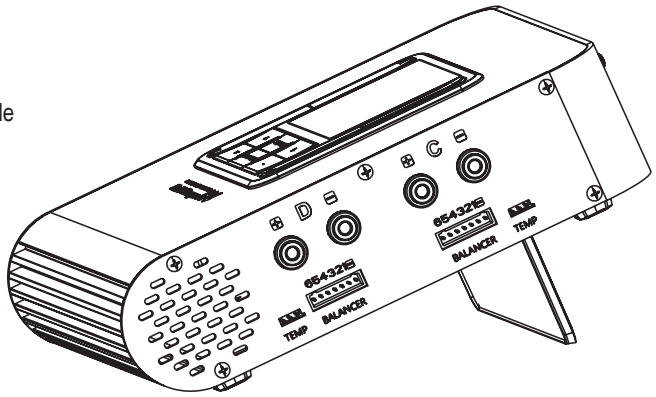
2. START / ENTER Key Button
Start function or Enter the Submenu with this button

3. STOP / ESC Key Button
Cancel or Stop operation with this button

4. + / - Key Button
Value can be changed by this button

Support Bar





Special Features

Optimized Operating Software

The Hitec H4 Multi Charger automatically controls the current rate during the charging or discharging process. This feature can prevent the user from overcharging their batteries which could lead to damage or injury. If the charger detects a malfunction, the circuit automatically disconnects and an alarm will sound. The operating functions of the Hitec H4 Multi Charger are controlled through a two-way communication link in order to maintain maximum safety with minimal errors.
All of these functions and settings are easily configured by the user.

Cell Voltage Balancer For Lithium Chemistry (LiPo/LiFe/LiIon) Type Batteries

The Hitec H4 Multi charger provides cell balance function for battery charge/discharge status on each 4 channels.

A 4 Channel 120W Charger Or A 2 Channel 240W Charger Using Hitec's Channel Bridge Technology

The 4-channel chargers on the market today can't support high amperage charge currents.
With Hitec's Channel Bridge System, the H4 Multi Charger supports up to 240W capacity.

Multi-Display Screen

The Hitec H4 Multi Charger is designed to check all 4 channels' charging/discharging status at the same time on one screen.

Cell Balance Check Function For Lithium Chemistry (Lipo/Lilon/Life) Type Batteries

The Hitec H4 Multi Charger provides battery cell balance status.

The user can check the battery cell's balance status on the H4's screen without having to use a separate cell balancer.

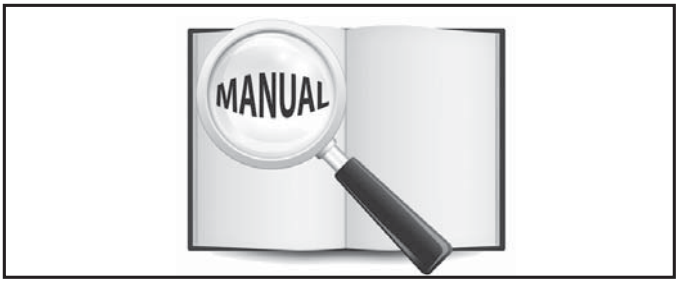
Firmware Upgrade & Display Charge/Discharge Data On A PC Using The Hitec HPP-22

The firmware of the H4 Multi Charger can be upgraded by the HPP-22.

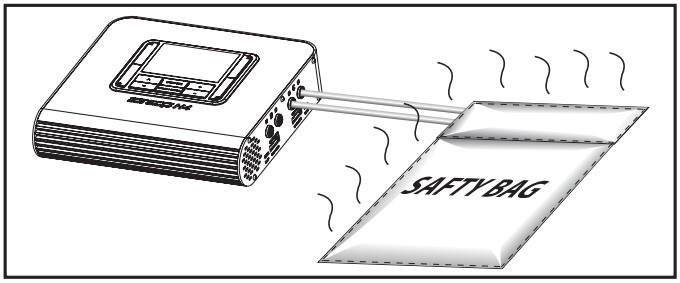
The user can check the battery's charge/discharge data on a PC screen for more effective battery care.

Warnings And Safety Information

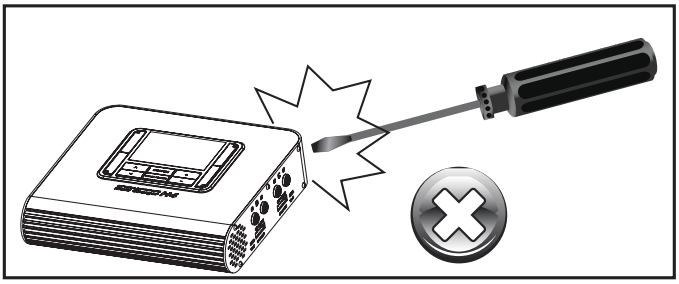
FAILURE TO FOLLOW THESE IMPORTANT SAFETY NOTES OR THE INSTRUCTION MANUAL CAN RESULT IN SEVERE INJURY, PROPERTY DAMAGE OR LOSS OF LIFE.



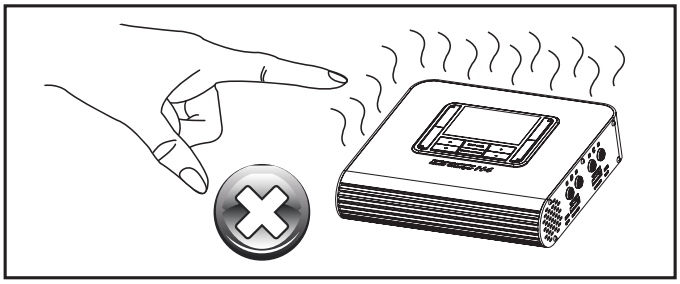
PLEASE READ THIS ENTIRE INSTRUCTION MANUAL COMPLETELY AND ATTENTIVELY BEFORE USING THIS PRODUCT, AS IT COVERS A WIDE RANGE OF INFORMATION ON OPERATION AND SAFETY. FAILURE TO FOLLOW THESE IMPORTANT SAFETY NOTES IN THE INSTRUCTION MANUAL CAN RESULT IN SEVERE INJURY, PROPERTY DAMAGE OR LOSS OF LIFE.



NEVER LEAVE THE BATTERY CHARGER UNATTENDED WHILE PLUGGED IN OR WHILE CHARGING OR DISCHARGING A BATTERY. DO NOT CHARGE BATTERIES ON ANY FLAMMABLE MATERIAL OR NEAR FLAMMABLEOBJECTS OR FUMES. HITEC RECOMMENDS CHARGING YOUR BATTERIES IN AN ENCLOSEDFIRE PROOF CONTAINER.

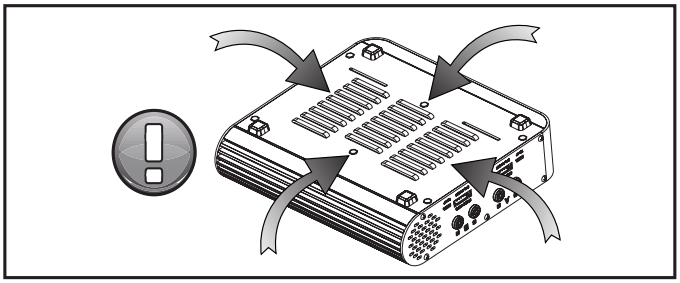


PLEASE DO NOT THROW, DISSAMBLE, MODIFY OR CHANGE THE PARTS OF H4 CHARGER DISCRETIONALLY.

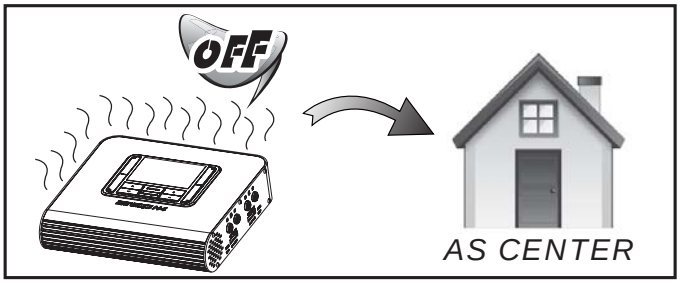


WHEN CHARGING PROCESS, H4 WILL GET HEAT. PLEASE DO NOT MOVE H4 CHARGER TO OTHER PLACE WHEN H4 OPERATE THE CHARGING PROCESS AGAINST BURNS.

Warnings and Safety Information



BOTTOM OF H4 IS DESIGNED FOR VENTILATION. PLEASE DO NOT COVER THIS PLACE WHEN OPERATE H4. IF UNAVOIDABLE, PLEASE USE SUPPORT BAR FOR SECURE VENTILATION.



IF THE CHARGER MALFUNCTIONS FOR ANY REASON, TERMINATE THE PROCESS IMMEDIATELY AND REFER TO THE INSTRUCTION MANUAL OR CONTACT HITEC CUSTOMER SERVICE.

- **DO NOT USE THE CHARGER IN AN ENCLOSED CAR, ON A SEAT IN A CAR OR IN THE CAR'S ENGINE COMPARTMENTS WHERE THERE ARE FLAMMABLE OBJECTS.**
- **THE CHARGER SHOULD BE USED ON A NON-FLAMMABLE, NON-CONDUCTIVE, HEAT RESISTANT SURFACE.**
- **KEEP THE CHARGER AWAY FROM DUST, MOISTURE, WATER, EXCESSIVE HEAT, DIRECT SUNLIGHT AND VIBRATION.**
- **THE MAXIMUM ALLOWABLE INPUT VOLTAGE IS 18V DC USING AN EXTERNAL DC POWER SOURCE.**
- **MAKE SURE YOU KNOW THE SPECIFICATIONS OF THE BATTERY YOU ARE CHARGING OR DISCHARGING TO ENSURE IT MEETS THE REQUIREMENTS OF THIS CHARGER.**
- **EXPLICITLY FOLLOW THE BATTERY MANUFACTURER'S CHARGING RECOMMENDATIONS FOR YOUR BATTERY.**
- **IF THE PROGRAM IS SET UP INCORRECTLY, THE BATTERY AND CHARGER MAY BE DAMAGED. FIRE OR EXPLOSION CAN\OCCUR DUE TO OVERCHARGING.**
- **TO AVOID SHORT CIRCUITING BETWEEN THE CHARGE LEAD, ALWAYS CONNECT THE CHARGE CABLE TO THE CHARGER FIRST, THEN CONNECT THE BATTERY. REVERSE THE SEQUENCE WHEN DISCONNECTING.**
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Warnings and Safety Information

NEVER ATTEMPT TO CHARGE OR DISCHARGE THE FOLLOWING TYPES OF BATTERIES

- A battery pack which consists of different types of cells (including different manufacturers)
- A battery that is already fully charged or just slightly discharged
- Non-rechargeable batteries (they pose an explosion hazard)
- Batteries that require a different charge technique from NiCd, NiMH, LiPo or gel cell (Pb, lead-acid battery)
- 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

BEFORE YOU START CHARGING OR DISCHARGING YOUR BATTERIES CONSIDER THE FOLLOWING

- Do you have the time to monitor the charge / discharge process without leaving the charger unattended?
- Did you select the appropriate program suitable for the type of battery you are charging?
- Did you set up adequate current for charging or discharging?
- 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 secure?
- Make sure there are no intermittent contacts at any point in the circuit.

STANDARD BATTERY PARAMETERS – THESE ARE THE STANDARD PARAMETERS FOR CHARGING EACH DIFFERENT TYPE OF BATTERY. REFER TO THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS FOR SPECIFIC INFORMATION RELATIVE TO YOUR BATTERY.

	Nickel Cadmium (NiCd) & **Nickel Metal Hydride** (NiMH)	**Lithium Ion** (LiIon)	**Lithium Polymer** (LiPo)	**Lithium Ferrite** (LiFe)	**Sealed Lead Acid** (Pb)
Nominal Voltage	1.2V/Cell	3.6V/cell	3.7V/Cell	3.3V/Cell	2.0V/Cell
Max Chg Voltage	1.5V/Cell	4.1V/cell	4.2V/Cell	3.7V/Cell	2.45V/Cell
Allowable Fast Chg	1C-2C	1C or Less	1C -2C	4C or Less	0.4C or Less
Dchg Cut-Off Voltage	(NiCd. NiMH) 0.9V / Cell	3.0V/Cell or more	3.0V/Cell or more	3.0V/Cell or more	1.8V/Cell or more

The charging and discharging of radio control model batteries can be dangerous if proper care is not taken. Be sure to read this manual in its entirety before operating the charger.

Warnings and Safety Information

CHARGING

During the 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 provided by the battery manufacturer. Only batteries that are expressly stated to be capable of quick charge should be charged at rates higher than the standard charge current.

Connect the battery to the terminals of the charger. RED is positive and BLACK is negative. In the event there is any significant resistance in the battery cable and/or connector, the charger will not be able to properly detect the resistance of the battery pack, resulting in an error. It is essential, in order for the charger to operate properly, that the battery charge leads should be of adequate quality for the size of the battery.

Always refer to the manual by the battery manufacturer pertaining to charging methods. Operate according to their recommended charging current and charging time. Lithium batteries, in particular, should be charged strictly according to the manufacturer's instruction. Pay close attention to the connection of lithium batteries.

Do not attempt to disassemble the battery pack.

You should note that lithium battery packs can be wired in PARALLEL and in SERIES.

In the PARALLEL configuration, the battery's amperage capacity is calculated by multiplying the single battery's capacity by the number of cells, bearing in mind that total voltage stays the same. If the voltage is imbalanced, it may cause a fire or explosion.

In the SERIES configuration, the battery's voltage is calculated by multiplying the single battery's voltage by the number of cells, bearing in mind that total amperage stays the same. If the voltage is imbalanced, it may cause a fire or explosion.

Lithium batteries are always recommended to be charged in series.

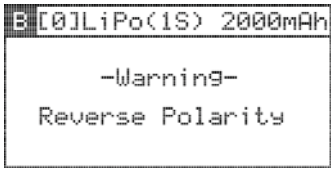
DISCHARGING

The main purpose of discharging a battery is to clean the residual capacity of the battery or to reduce the battery's voltage to a defined level. It is critical that the same attention be paid to the discharging process as to the charging process. The final discharge voltage should be set correctly to avoid deep discharging. Lithium batteries cannot be discharged to a voltage lower than the minimum voltage for the cell type. Doing so will result in a rapid loss of capacity and/or total failure.

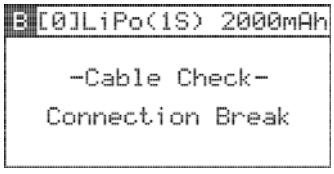
Generally, lithium batteries should not be discharged and it is not recommended. If you choose to discharge your lithium batteries, make sure to pay attention to the minimum voltage setting.

Some rechargeable batteries have a memory effect. If they are partly used and recharged before the complete charge/discharge cycle is accomplished, they remember this and will only use that part of their capacity next time. It is generally known that NiCd and NiMH batteries suffer from this memory effect.

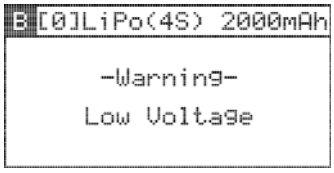
Warning and Error Messages



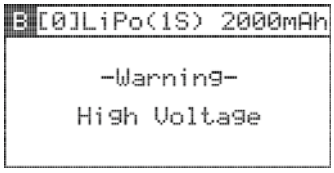
This screen indicates an incorrect polarity connection, please check the battery polarity again.



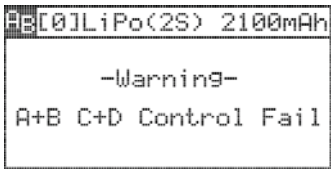
This screen indicates an interruption in the battery connection, please check that the battery is connected correctly.



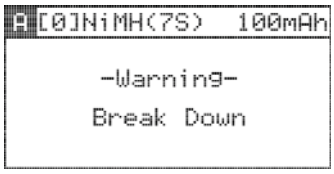
This screen indicates that the voltage is lower than which is set, check the number of cells in the battery pack.
Please check your battery cell number again.



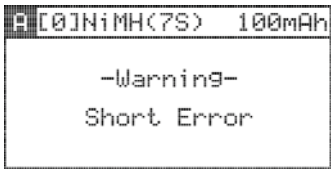
This screen indicates that the voltage is higher than which is set, check the number of cells in the battery pack.
Please check your battery cell number again.



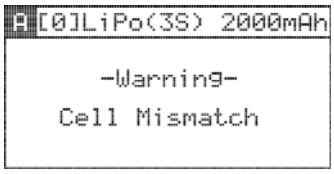
This screen indicates that in the Hitec Channel Bridge function, a voltage level difference occurred between the bridged channels. Please reset the H4 charger and check the battery as well.



This screen indicates that the charger has malfunctioned for some reason. Contact the Hitec RCD USA customer service department immediately.



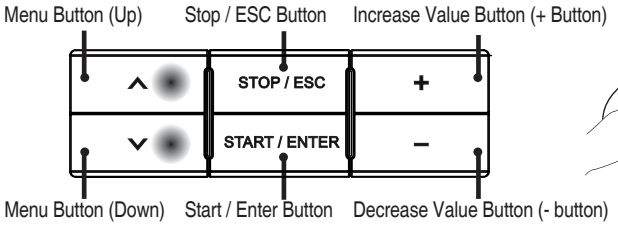
This screen indicates a short circuit in the battery connection or an internal disconnection. Please make sure all wires are connected correctly.

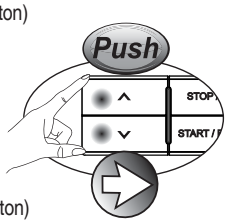


This screen indicates a mismatch of battery cells between the H4 and the battery. Please make sure battery cells are programmed correctly.

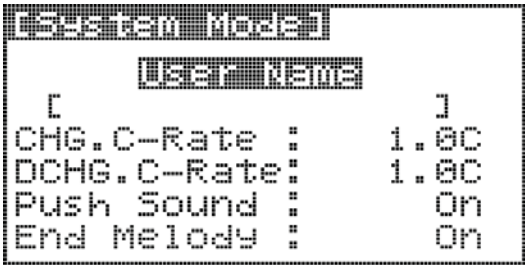
System Setup Mode

In System Setup Mode, the H4 allows the user to set a variety of custom parameters including, user name, default charge rate, audible sounds on/off, minimum input voltage, temperature mode, backlight on/off, LCD contrast, Channel Bridge function setup, and language. Additionally you can reset the charger to the factory defaults and use the Discard Mode feature.

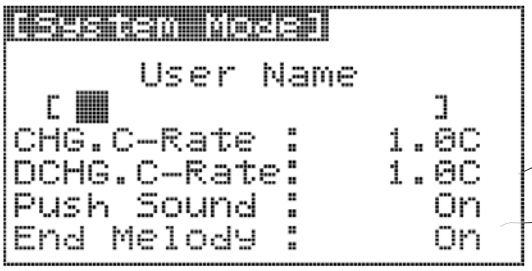




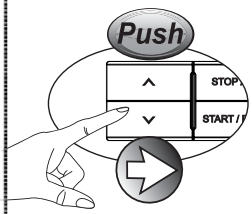
To enter system setup mode press the Up and Down menu buttons at the same time. To exit press the Stop / ESC button.

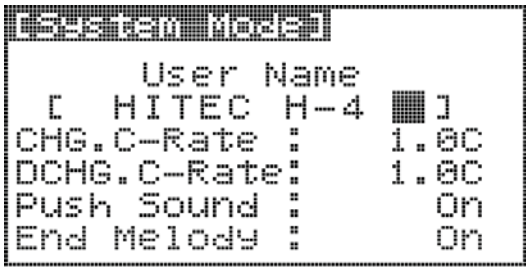


Initial System Mode display screen



before user name set up





after user name set up

User Name

Setup your user name by choosing from a maximum of 12 alphabetic, numerical and special characters. When you have completed this setup, the user name will be displayed on the screen whenever the H4 is powered on.

User Name Setup

In system mode, move the cursor to [User Name] and press the [START/ENTER] button. The cursor will move down to User Name Entry location so that characters can be entered. Use the [+] [-] and [^] [v] keys to enter the user name of your choice. When completed, press the [STOP/ESC] button to store.

[START/ENTER] => Start User Name set up
[STOP / ESC] => Store User Name
[^] [v] => Move left [^] or Right [v]
[+] [-] => Scroll through Alpha, Numeric and special characters with these keys

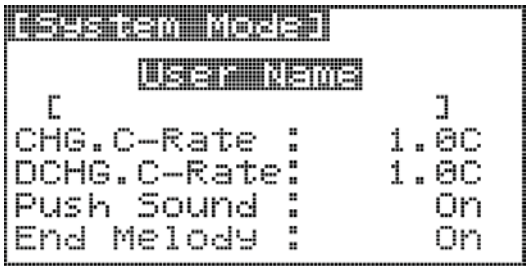
Set Charge C-Rate According To Battery Capacity

The Hitec H4 has a default charge C rate of 1.0, however this can be adjusted between 0.5C and 3.0C depending on the user's needs. It is recommended that this rate always be set to the default. You can always adjust the charge rate during the individual battery charge / discharge setup procedure.

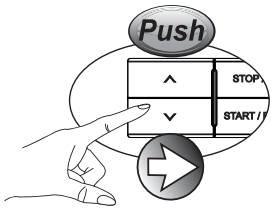
System Setup Mode

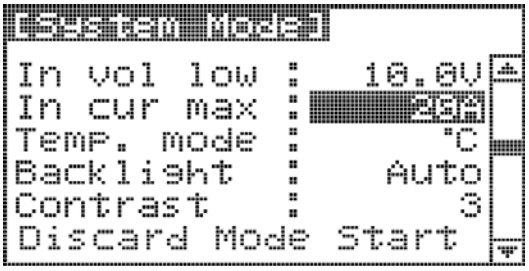
Warning

We strongly recommend not changing the default 1C charge/discharge settings. If you choose to charge/discharge at a rate higher than 1C make sure it is recommended by the battery's manufacturer.

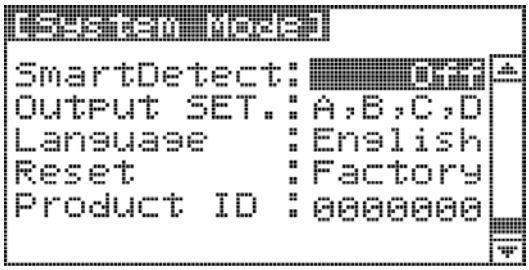


Second System Mode display screen (1)





Second System Mode display screen (2)



Second System Mode display screen (3)

Set Disharge C-Rate According To Battery Capacity

The Hitec H4 has a default discharge C rate of 1.0, however this can be adjusted between 0.5C and 3.0C depending on the user's needs. It is recommended that this rate always be set to the default. You can always adjust the charge rate during the individual battery charge / discharge setup procedure.

Set Push Button Sound

The H4 button sound can be switched to ON or OFF.

Set Charge and Discharge Melody On/Off

Charge/Discharge End Melody can be switched to ON or OFF.

Set Minimum Input Voltage

For safe operation, the user can select a minimum input voltage value. When the input voltage reaches the minimum or lower level during the charge/discharge process, an 'Error' message will be shown and the operation will stop.

Caution

We highly recommend the minimum input voltage of 10.0V

System Setup Mode

In cur max (Input current limit)

Maximum current from power supply or power source battery can be adjusted by this function. In order to get maximum performance, please use 12V 500watts (Apprx 40A) or more power supply or power source battery. Default sets 20A (Apprx 250W) for safety reason. If the Power supply capacity is lower than recommendation (below than 500W), please adjust max current to prevent overload or Shutdown. When H4 operate with vehicle battery on outdoor, please select max current within vehicle battery max allowable current. To prevent get damage or malfunction, please do not extend or change H4 supplied wires.

Set Temp Mode

The Temp Mode can be switched to C, [Celsius] or F,[Fahrenheit].

Set Back Light LCD On/Off

The LCD Backlight setting can be set to Auto or can be turned ON or OFF. In Auto mode, the backlight will turn itself off after 5 minutes of inactivity.

Set LCD Contrast

The Hitec H4 Multi Charger can set up LCD brightness. Levels are available from 0 to 8, with level 3 being the default level.

Smart Detect at Balancing Charge (off/on)

When battery balancer is connected to H4, each cell numbers will be detected automatically and start to charge without final confirmation screen. This function can be selected ON or Off from system menu

ON: Check and confirm the charge process automatically when selected battery cell numbers and detected battery cell numbers are same.
Off: Final check prompt will appear when before start to charge.(Dafault)

! Default value is 'off' ! This function only can activate Li-Po and Li-Fe batteries. ! With turn to 'SmartDetect', provide more comfortable and easy.

Set Channel Bridge Function

The Hitec Channel Bridge Function provides higher charge amperage for charging high capacity batteries faster. With this function, two 120W output powers can transform into a single 240W output. Hitec's H4 allows for 4 different types of charge/discharge channel setup: 'A,B,C,D' , 'A+B, C,D', 'A,B,C+D' and 'A+B, C+D' Please refer to the section Hitec Channel Bridge Charging on page 30 for more details.

Discard Mode Start

Discard mode is a feature used to prepare batteries for disposal. Refer to the section Battery Discard Mode on page 28 for more details on this function.

Language Set

With the H4, you can choose from one of 5 different languages as the default. The choices are English, Spanish, German, Czech and Italian.

Factory Default Reset

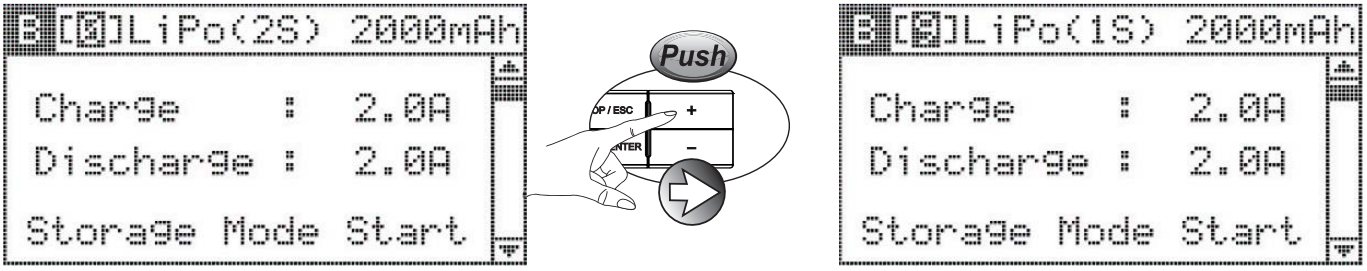
This resets the H4 to all factory defaults and erases any stored information. Press enter to see the prompt asking if you'd like to perform a factory reset. If you want to proceed, hold down the Start/Enter button for 5 seconds to begin the reset procedure.

To exit the System Setup Mode, press the Stop / ESC key at any time.

Battery Charge / Discharge Setting Memory Save/Load

Whenever you setup a battery to charge or discharge the configurations is automatically saved. Each 4 independent channels can store 10 battery memories. Channels utilizing a Channel Bridge can store and additional 10 battery memories.

An example of this feature is if you charge a 2,000mah 2cell Li-Po battery on memory number [0] it will automatically keep that setting using that memory number. If you want to use a different number to memorize a different type of battery's settings use the [Λ] [V] buttons to move the cursor to the Memory Number and use the + or – to change the number, setup your battery and the configuration is automatically saved. Later if you want to process the same battery, you just select data memory number and press the start button.



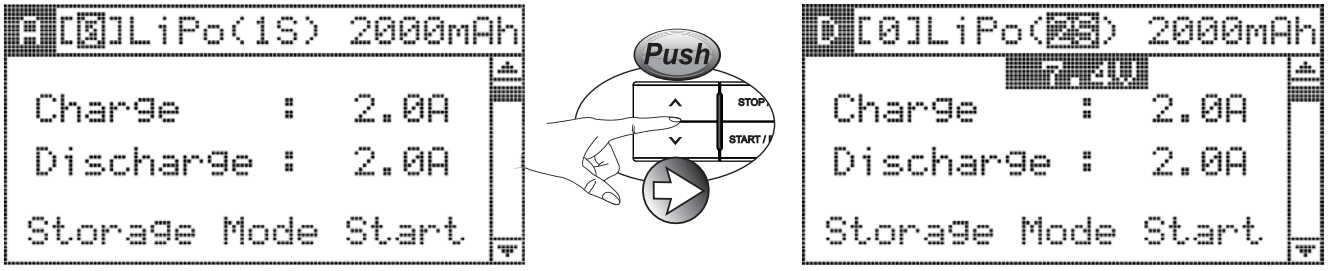
The Cursor above is on battery data memory number

Each channel can be save 10 separate battery setups [0-9]

Caution

The previous charge setup is automatically stored in the memory for each channel. This makes it easy to repeat the charge process on the exact same type of battery.

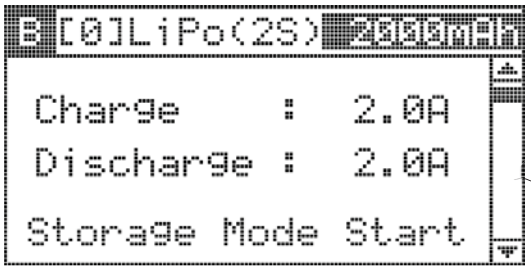
The Hitec H4 Multi Charger is designed to charge/discharge Lithium batteries: Lithium Ferrite (LiFe), Lithium Ion (LiIon) and Lithium Polymer (LiPo).
It is very important that you determine the type of battery you are charging and set the charging parameters correctly. It is important that the nominal voltage, final voltage, and battery capacity be properly set for the desired operation. Please refer to page 18 for more information.

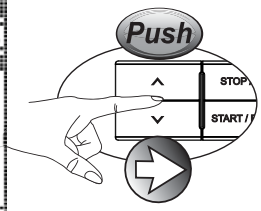


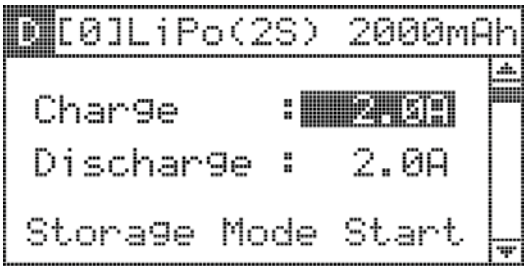
Please select the exact battery type you want to charge on the screen. Press the [V] button to continue.

Now select the exact number of cells in your battery. Press the [V] button to continue.

Lithium Battery Charging (LiPo, LiFe, Lilo) - Quick Start Program

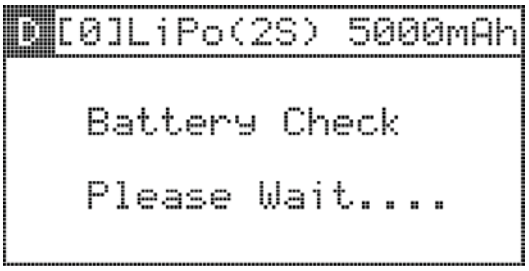


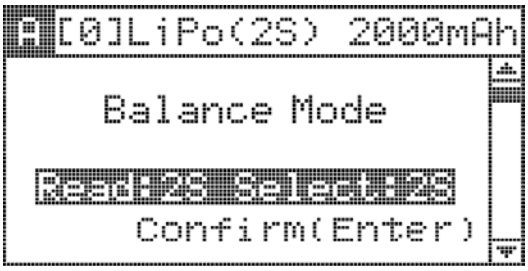




Please set up the exact battery capacity in mAh. Since the battery capacity is interlocked with the charging Amps (A), the charging Amps is based on a 1C charge rate (When the battery capacity increases by 100mAh, the charging Amps will be increased by 0.1A). When the battery reaches the target capacity, the charge process will terminate automatically

Set up the charging Amps (A). The default charging Amperage is based on 1C, however, if you want to charge at a higher you can set it here.
WARNING: Do not charge at an amperage rate higher than what is recommended by the battery's manufacturer.





When the set-up is complete, move the cursor to the Charge (for charging) or Discharge (for Discharging) amperage setting and press and hold the 'START' button until the battery check screen appears.

After checking, the H4 will display the battery type, number of cells, mAh capacity and type of charging to be performed. If everything is correct and the same as your battery, press the 'START' button to start the charging process. If not recheck your set-up to ensure it is correct.

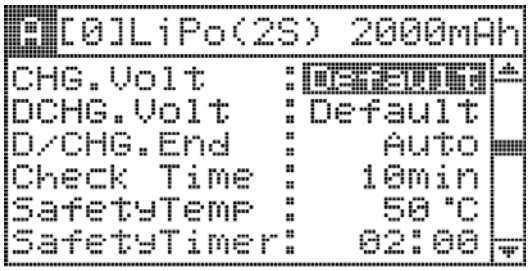
Tip

In menu of Battery type/capacity - When you press 'ENTER', charging function will activate right away.
When press 'ESC/STOP', menu will be moved to model memory menu.

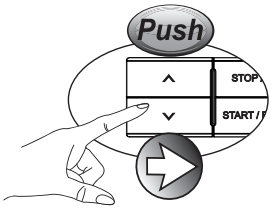
Caution

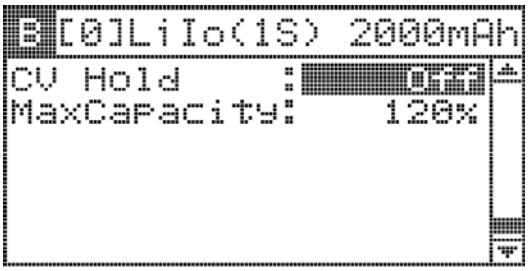
Failure to properly setup your charging parameters increases the risk of a fire or explosion that can result in property damage, injury or loss of life. Before proceeding double check your setup to ensure it is correct.

Lithium Battery Charging (Lipo/Lilon/Life) - Advanced Setup



Advanced Charge/Discharge Setup Page 1





Advanced Charge/Discharge Setup Page 2

CHG. Volt: Sets the Charge End Voltage

The Hitec H4 Multi Charger provides a maximum charge voltage for your battery. This function is helpful in safely charging your Lithium chemistry batteries. Before changing this setting, refer to the data from the battery's manufacturer. The factory set up is the 'Default' value which is: LiPo = 4.2v, LiIon =4.1v, LiFe = 3.6v. You can manually set it up by 0.01v increments.

DCHG. Volt: Sets the Discharge End Voltage

The Hitec H4 Multi Charger provides a minimum discharge voltage for your battery. This function is helpful in safely discharging your Lithium chemistry batteries. Before changing this setting, refer to the data from the battery's manufacturer. The factory set up is the 'Default' value which is: LiPo = 3.7v, LiIon =3.7v, and LiFe = 3.3v. You can manually set it up by 0.01v increments.

D/CHG. End: Set the Discharge or Charge End Current (Auto or 60~500mA)

This sets the final charge/discharge current at the end of the process. In 'Auto' mode, the process will terminate when the charging current goes to 1/10th of its initial value. Otherwise, the charge current will be decreased until the designated value has been reached. The end current should be less than the initial charge current.

Check Time: Set Cycle Interval Time (In Cycle Mode)

In 'Cycle Mode,' the batteries' internal temperatures are increased when charged and discharged and need time to cool down. You can manually set up cool down in one minute increments with a set up range from 5 - 250 minutes. The default check time is 10 minutes.

Safety Temp: Sets the Safety Temperature when using the optional temperature probe

You can monitor battery temperature during the charge/discharge process via the Temp sensor (sold separately). The default is set to 50°C (122°F) but can be adjusted between 20°C to 80°C (68° to 176°F).

Caution

This function will be activated when the temp sensor is connected to the H4 charger.

Safety Timer: Sets the maximum time the H4 will charge or discharge a battery.

When you start to charge or discharge the battery, the H4's internal clock will start counting total processing time. By having a set safety time, the function will help prevent battery damage from over charging or discharging. The default is set at 2 hours and can be set from 10 to 1,380 minutes.

Information Displayed While Charging/ Discharging Lithium Batteries

CV Hold: Sets the Constant Voltage Hold Mode

CV Hold Mode can hold the battery voltage even when the charging is complete. If CV Hold is 'ON,' the H4 charger keeps feeding a small amount of current to the battery to prevent voltage drops. This function can be set ON or OFF. WARNING: It is recommended that you disconnect your battery immediately after the charge or discharge process is completed.

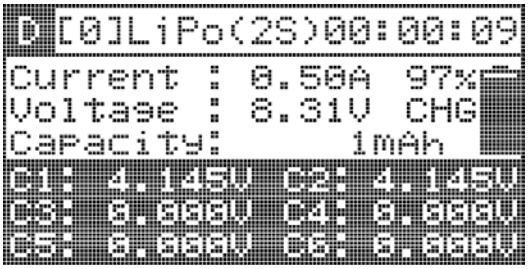
Max Capacity: Sets the Maximum Battery Capacity in Percentage

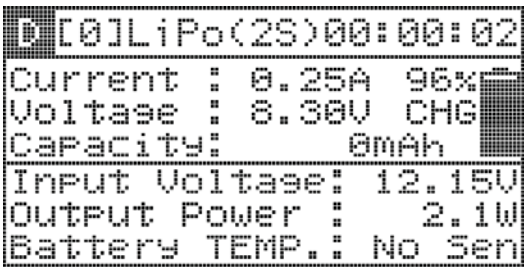
The Hitec H4 Multi Charger provides battery capacity based on percentage(%). If somehow the battery has not been fully charged, you can charge your battery according to the 'Max Capacity' rate. The default is set at 100% and is adjustable between 50 to 150%.

Caution

Use this feature with caution to avoid overcharging your battery which could cause the battery to explode.
% value from charge/discharge screen is showed just for your reference. It can be differed depending on battery condition

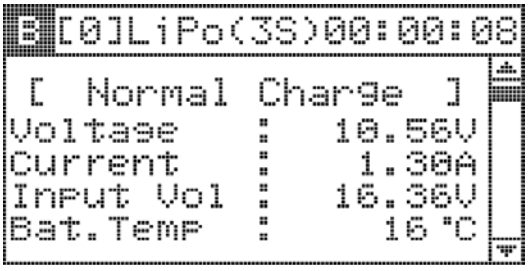
The following section describes the various types of information available to you when charging or discharging lithium chemistry batteries. Use the ^ and v menu buttons to scroll through the displays. When charging lithium chemistry batteries there are two types of charge/discharge screens, one is when the cell is connected to the balancer, the other one is when it is not connected to the balancer.

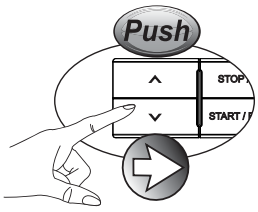


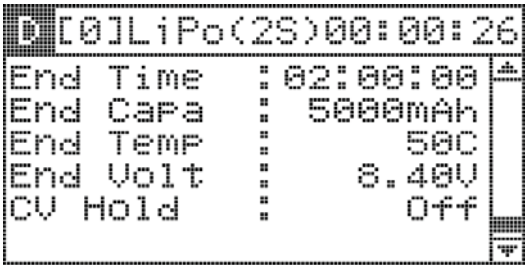


When connected to the balancer, the main display indicates Charging Current, Current Battery Voltage, percentage of charge, as well as the voltage of the individual cells.

When not connected to the balancer,v the main display indicates Charging Current, Current Battery Voltage, percentage of charge, Input Voltage, Output power and battery temperature if temp probe is connected.







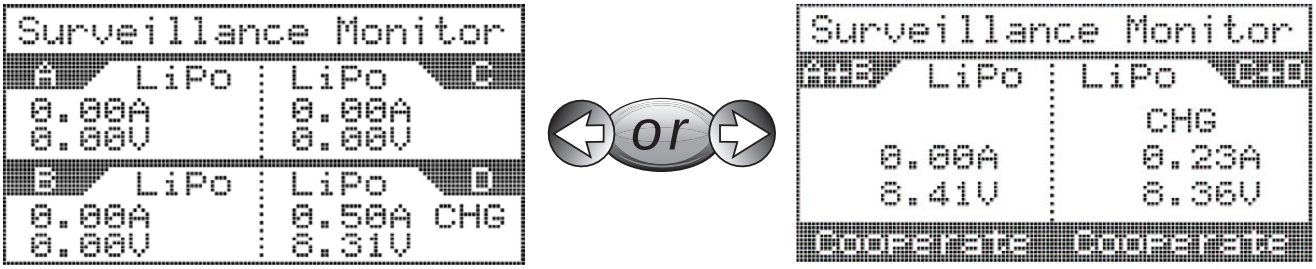
Summary Charge Screen

This screen shows the type of process, current voltage and charge current of the pack along with chargers input voltage and packs temperature if a temp sensor is being used.

Secondary Charge/Discharge Screen

This screen displays the End Time, End Capacity, End Temperature: End Voltage cutoff and CV Hold On/Off information.

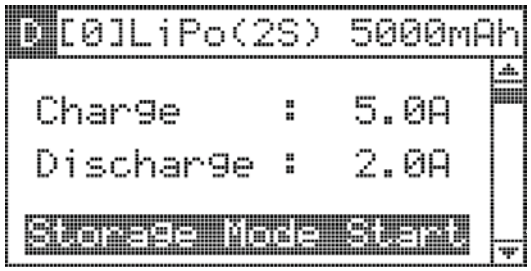
Battery Storage Mode

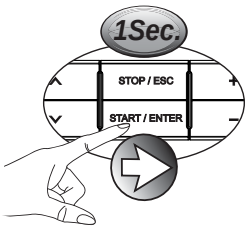


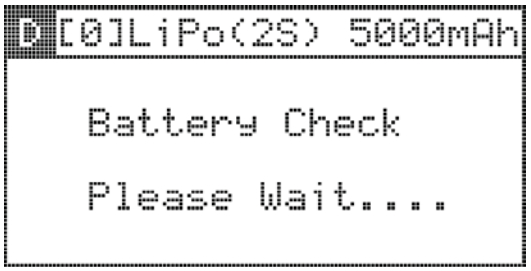
Surveillance Monitor Screen

The H4 can display each of the 4 channel's information at the same time. Displayed are each battery's voltage, charge Amperage and charge/discharge status.

It is recommended that Lithium batteries are charged at a certain capacity if you plan to store them for a long period of time. The H4 charger's storage charge mode provides the perfect battery capacity for storage.

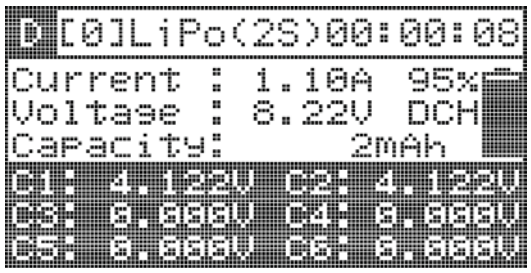






Move the cursor to 'Storage Mode Start' and press the 'START' button for 1 second.

The H4 will begin to check your battery condition automatically.



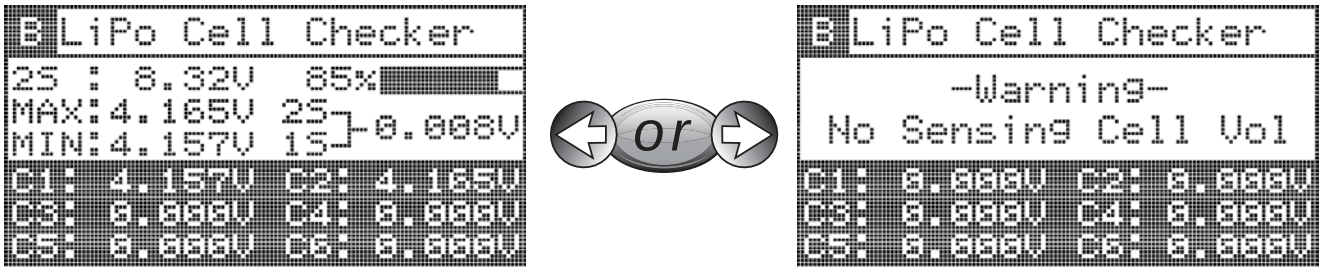
After the H4 checks your battery, the 'Storage Mode' process will begin. Depending upon the condition of your battery, the H4 will select charge or discharge automatically until it reaches the desired capacity.

Caution

'Storage Mode' setup is the same as charging or discharging your battery with the default settings. Make sure you set up the 'Storage Mode' according to your battery manufacturers recommendations. Storage Mode is operated independently on all 4 channels.

Lithium Battery Balance Checker

The Hitec H4 Multi Charger provides a Battery Cell Balance Check function so you don't need a separate device to check the balance of your battery's cells. The display will show, the number of cells, percentage of capacity remaining, minimum and maximum cell voltage as well as the range of balance. Also displayed are each individual cells voltage so you easily identify a bad cell if necessary.



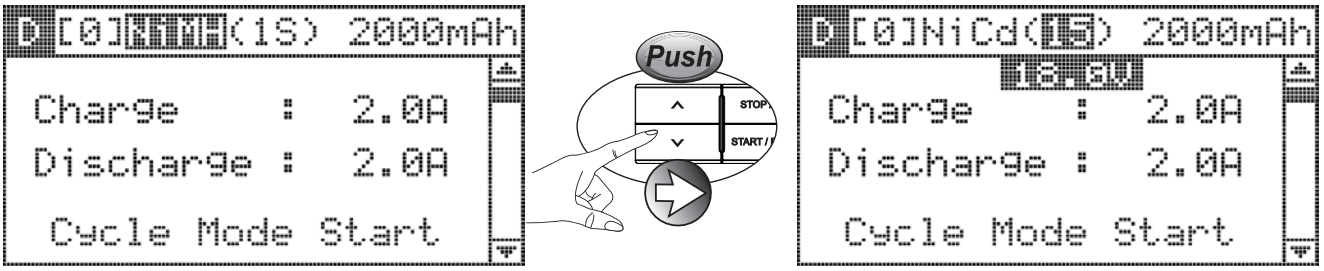
Plug the battery cell balance cord into any one of the H4 channels, and press and hold the channel select for 2 seconds or until the Cell Checker screen appears indicating the battery is connected to the H4. With this feature you can easily check the cell's status on the screen. Use the +/- keys, you can select your battery type. Use the Stop / ESC button to exit the feature.

Note

The cell value displayed may differ from other manufacturer's cell balancers.
% value from charge/discharge screen is showed just for your reference. It can be differed depending on battery condition

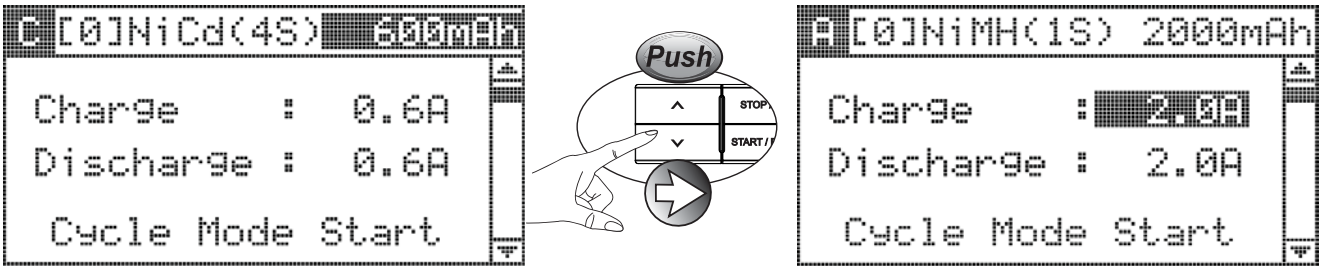
NiCd and NiMH Battery Charging - Quick Start Program

The Hitec H4 Multi Charger is designed to charge and discharge NiCd and NiMH type batteries. It is very important that you determine the exact type of battery you are charging and set the charging parameters correctly. The following information refers to basic charging setup for more advanced setup options refer to page 23.



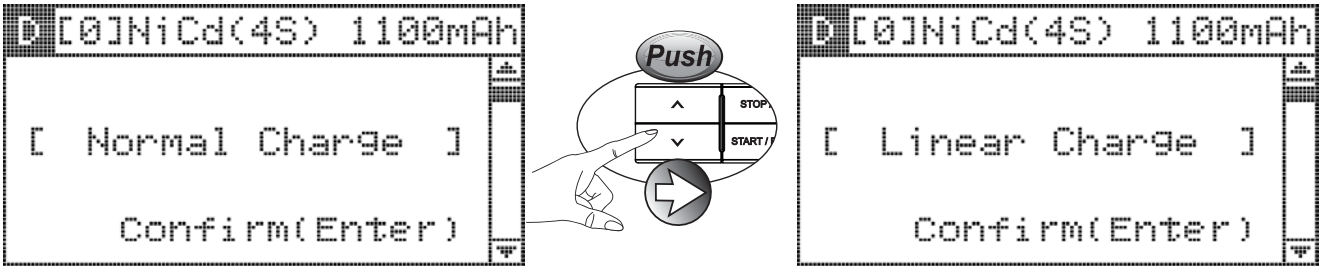
Please select either NiCd or NiMh depending on the type of battery type you want to charge. If the wrong selection is made, you will damage the H4 and the battery. Press the V button to continue.

Select the exact numbers cells in your battery. Choosing the incorrect number of cells will damage the H4 and your battery. Press the V button to continue.



Please set up the exact battery capacity in mAh. Since the battery capacity is interlocked with the charging Amps (A), the charging Amps is based on a 1C charge rate (When the battery capacity increases by 100mAh, the charging Amps will be increased by 0.1A). When the battery reaches the target capacity, the charge process will terminate automatically. Press the V button to continue.

Highlight the Charge or Discharge Amperage depending on what action you want to process. Press and hold the Start button until the Normal/Linear Charge screen appears. In menu of Battery type/capacity - When you press 'ENTER', charging function will activate right away.
When press 'ESC/STOP', menu will be moved to model memory menu.

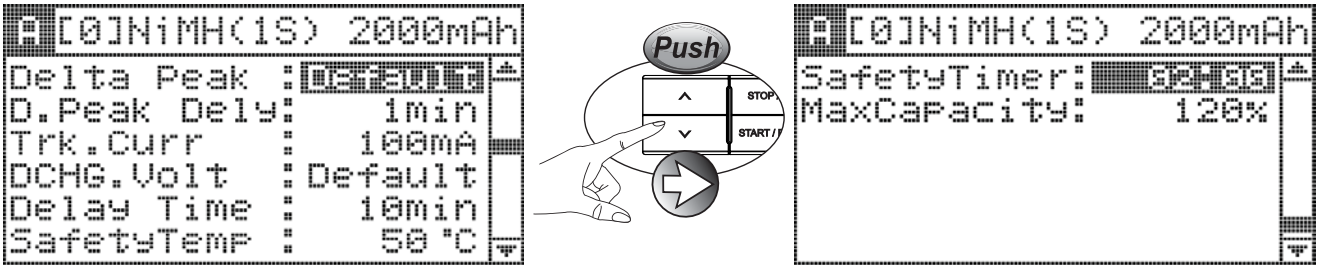


Use the + and – buttons to toggle between selections. Once your selection is made press enter to begin the charging process.

Normal Mode : The charge will process in accordance to your battery set up. For better efficiency, the charging current will be halted every 9 minutes for 6 seconds. Linear Mode: There will be no interval time during fast charge, linear mode.

NiCd and NiMH Battery Advanced Setup

The previous section referred to the quick start method of charging NiCd and NiMH batteries. In this section, you will find information about fine tuning your setup to get the most out your battery. Be sure to follow the battery manufacturer's recommendations when setting up these advanced features. To get to the advanced setup screen, use the (V) to scroll down to the following screens.



Delta Peak: The automatic charge termination program utilizes Delta Peak voltage detection. When the battery's voltage exceeds the threshold, the charge process is terminated automatically.

Default: Default refers to the basic sensitivities of Delta Peak. If you are not familiar with this function, you should use the default value.
Delicate: Some batteries need to be charged with a sensitive Delta Peak value.
Disable: If you don't want to use Delta Peak detecting, please select 'Disable.'
Manual Adjustment: The Delta Peak value adjustable range is 5mV/Cell to 20mV/C. We recommend you use 10mV/Cell on a NiMH battery and 15mV/Cell on a NiCd battery.

D.Peak Delay: Sets the Delay for the Delta Peak Function
The Delta Peak function will not initiate once the charge process begins, until you reach the set delay time. Since some batteries have high internal resistance, the Delta Peak works before it is fully charged. If your battery is old and is fully discharged enough, we recommend you use this function to stabilize the voltage. However, if you have no idea if your battery is fully discharged or not, do not use this function on your battery. The function can be turned OFF or adjusted between 1 and 15 minutes.

Trk.Curr: Sets the Trickle Current Rate
When the charge process ends, current is fed to the battery to compensate for the natural discharge. Use this feature to set the trickle current rate. The function can be turned OFF or adjusted between 50 to 300mA.

DCHG. Volt: Sets the Minimum Discharge Voltage
Use this function to prevent the decline of your battery's life and performance. When used, over discharging will not occur. You should set the discharge voltage according to the battery manufacturer's recommendations. The default setting is 0.9V/Cell.

Delay Time: Sets Charge/Discharge Cycle Delay Time
A battery's internal temperature increases during the charge or discharge process and needs time to cool down in 'Cycle Mode.' The adjustable range for this interval is 0 to 60 minutes. This delay time function is only activated when using 'Cycle Mode.'

Safety TEMP: Sets the Safety Temperature when using the optional temperature probe
You can monitor battery temperature during the charge/discharge process via the Temp sensor (sold separately). The default is set to 50°C (122°F) but can be adjusted between 20°C to 80°C (68° to 176°F).

Safety Timer: Sets the maximum time the H4 will charge or discharge a battery
When you start to charge or discharge the battery, the H4's internal clock will start counting total processing time. By having a set safety time, the function will help prevent battery damage from over charging or discharging. The default is set at 2 hours and can be set from 10 to 1,380 minutes.

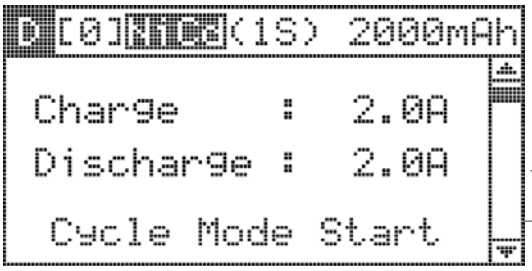
Max Capacity: Sets the Maximum Battery Capacity in Percentage
The Hitec H4 Multi Charger provides battery capacity based on percentage (%). If somehow the battery has not been fully charged, you can charge your battery according to the 'Max Capacity' rate. The defa ult is set at 100% and is adjustable between 50 to 150%.

Caution

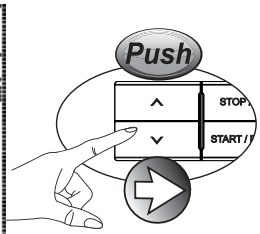
Use this feature with caution to avoid over charging your battery which could cause the battery to explode.

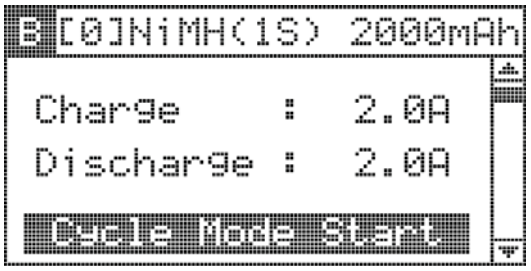
NiMH/NiCd Battery Cycle Mode

Battery Cycle Mode can be used only with NiCd/NiMH types of batteries. When your battery performance is not at its optimal point due to long periods of storage or improper charging, you can recover the battery's performance by performing as series of charge / discharge processes with the Battery Cycle Mode.

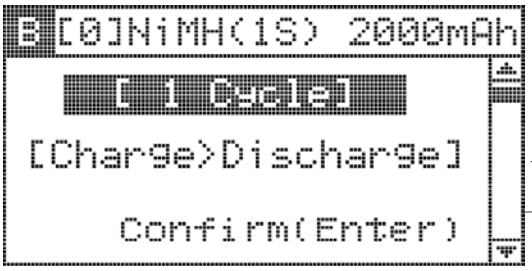


When you select NiCd or NiMH, as seen in the screen shot above, the 'Cycle Mode Start' is shown on the bottom of the screen.

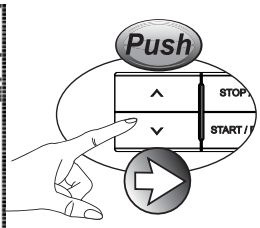


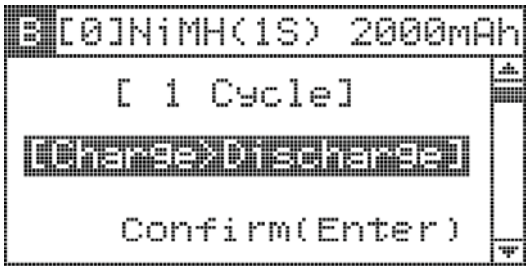


Move the cursor down until 'Cycle Mode Start' is highlighted. Press and hold the start button until the Cycle Mode menu appears.



Using the + or – button you can choose the number of cycles you want the H4 to perform. You can select to repeat from 1 to 10 cycles. Press the V to move the cursor to the next prompt.



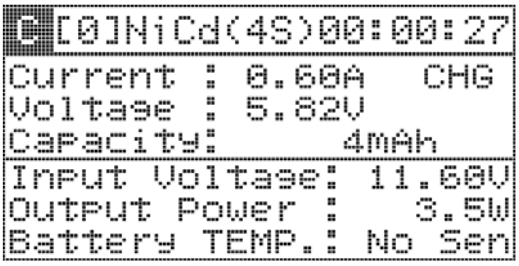


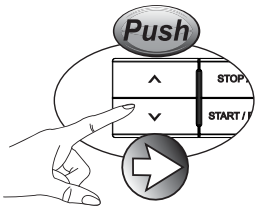
Here you can program where you want the cycle to start, either Charge / Discharge or Discharge / Charge

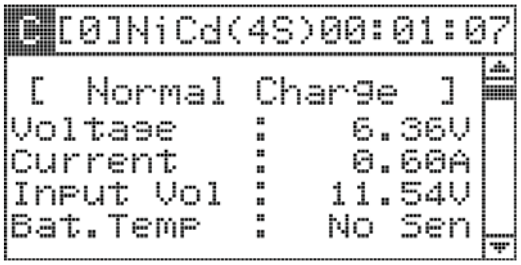
Detail Charge/Discharge Battery Information on Screen

Information Displayed While Charging/Discharging NiCd or NiMh Batteries

The following section describes the various types of information available to you during the charge or discharge process for NiCd or NiMh batteries. Use the [Λ] and [V] menu buttons to scroll through the displays.





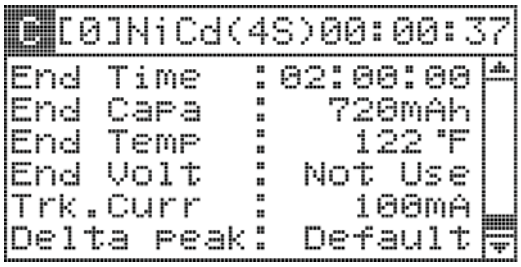


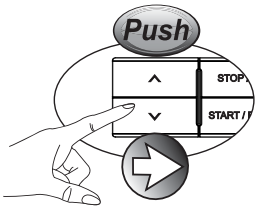
Main Charge / Discharge Display Screen

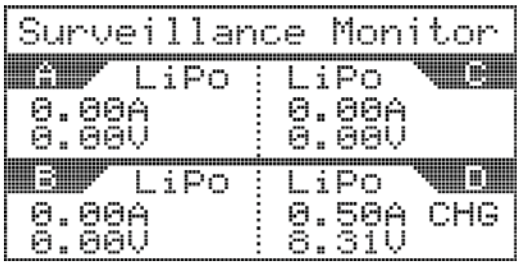
The main display indicates Charging Current, Current Battery Voltage, current Process, Input Voltage, Output power and battery temperature if temp probe is connected.

Summary Charge Screen

This screen shows the type of charging or discharging, current voltage and charge current of the pack along with the chargers input voltage and the packs temperature if a temp sensor is being used.





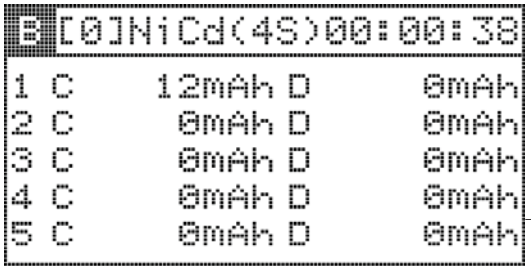


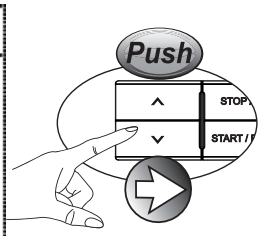
Secondary Charge/Discharge Screen

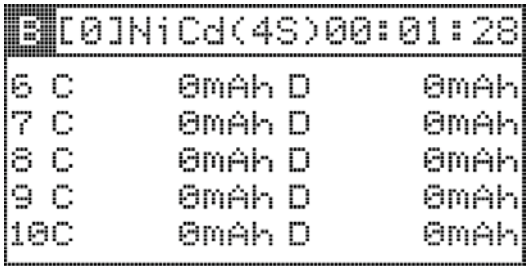
This screen displays the type of charge End Time, End Capacity, End Temperature, End Voltage cutoff, Trickle current and Delta Peak setup.

Surveillance Monitor Screen

The H4 can display each of the 4 channel's information at the same time. Displayed are each battery's voltage, charge Amperage and charge/discharge





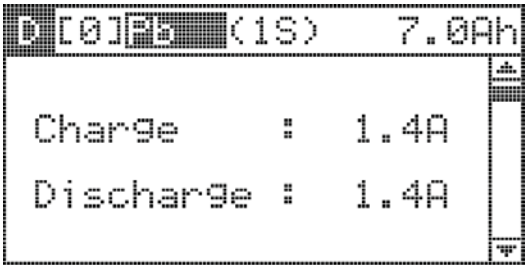


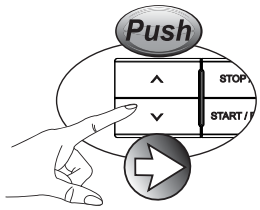
During the Cycling, you can see the battery cycle data.

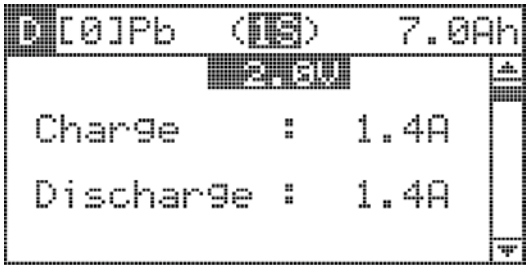
Lead Acid (Pb) Battery Charging Program

This program is only suitable for charging a lead acid (Pb) type battery with a nominal voltage range of 2 to 20 volts. Lead acid (Pb) batteries can only deliver currents lower in comparison to their capacity. The same restriction applies to the charging process. The optimal charge current for lead acid (Pb) batteries is 1/10th of its rated capacity. (i.e. battery capacity is 4,000 mAh, charging current is 400 mAh). You cannot fast charge lead acid (Pb) batteries. You should refer to the battery's detailed specs from the battery manufacturer. **The following specifications pertain to charging and discharging lead acid (Pb) batteries.**

Nominal Voltage Level: 2.0V per cell
Maximum Charge Voltage: 2.46V per cell
Allowable Charge Current: 0.4C or less
Discharge Voltage Cut Off Level: 1.75V or higher per cell

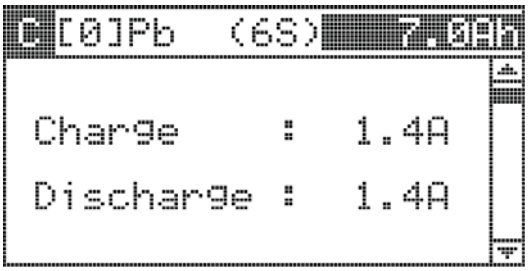


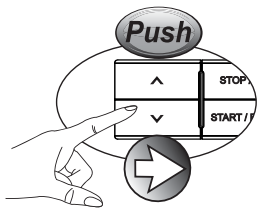


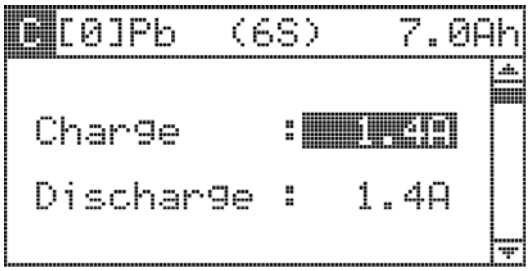


Please select Pb from the battery type prompt. If the wrong selection is made, you will damage the H4 and the battery. Press the (V) button to continue.

Select the exact numbers cells in your battery. Choosing the incorrect number of cells will damage the H4 and your battery. Press the (V) button to continue.

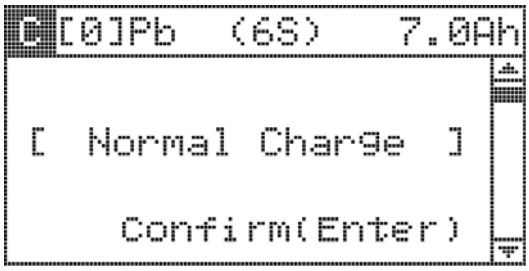


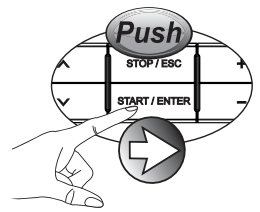


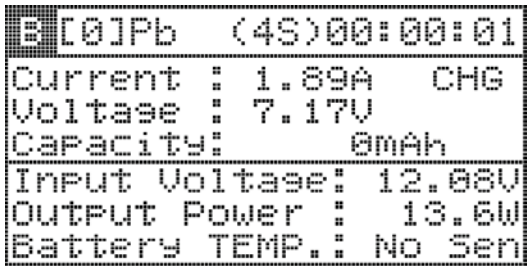


Please set up the exact battery capacity in mAh. Since the battery capacity is interlocked with the charging Amps (A), the charging Amps are based on a 1C charge rate When the battery reaches the target capacity, the charge process will terminate automatically. Press the (V) button to continue.

Highlight the Charge or Discharge Amperage depending on what action you want to process. Press and hold the Start button until the Normal/Pulse Charge screen appears





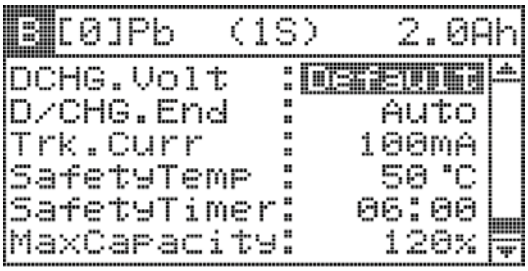


Choose either Normal or Pulse Charge and press enter to begin the Charge process.

Once started the charging progress screen will appear.

Lead Acid (Pb) Battery Advanced Setup

The previous section referred to the quick start method of charging Lead Acid batteries. In this section, you will find information about fine tuning your setup to get the most out your battery. Be sure to follow the battery manufacturer's recommendations when setting up these advanced features. To get to the advanced setup screen, use the (V) to scroll down to the following screens.



DCHG. Volt: Set the Minimum Discharge Voltage

Use this function to prevent the decline of your battery's life and performance. When used, over discharging will not occur. You should set the discharge voltage according to the battery manufacturer's recommendations. The default setting is 1.4V/Cell.

D/CHG. End: Set the Discharge or Charge End Current (Auto or 60~500mA)

This sets the final charge/discharge current at the end of the process. In 'Auto' mode, the process will terminate when the charging current goes to 1/10th of its initial value. Otherwise, the charge current will be decreased until the designated value has been reached. The end current should be less than the initial charge current.

Trk.Curr: Sets the Trickle Current Rate

When the charge process ends, current is fed to the battery to compensate for the natural discharge. Use this feature to set the trickle current rate. The function can be turned OFF or adjusted between 50 to 300mA.

Safety TEMP: Sets the Safety Temperature when using the optional temperature probe

You can monitor battery temperature during the charge/discharge process via the Temp sensor (sold separately). The default is set to 50°C (122°F) but can be adjusted between 20°C to 80°C (68° to 176°F).

Safety Timer: Sets the maximum time the H4 will charge or discharge a battery

When you start to charge or discharge the battery, the H4's internal clock will start counting total processing time. By having a set safety time, the function will help prevent battery damage from over charging or discharging. The default is set at 2 hours and can be set from 10 to 1,380 minutes.

Max Capacity: Sets the Maximum Battery Capacity in Percentage

The Hitec H4 Multi Charger provides battery capacity based on percentage (%). If somehow the battery has not been fully charged, you can charge your battery according to the 'Max Capacity' rate.

The default is set at 100% and is adjustable between 50 to 150%.

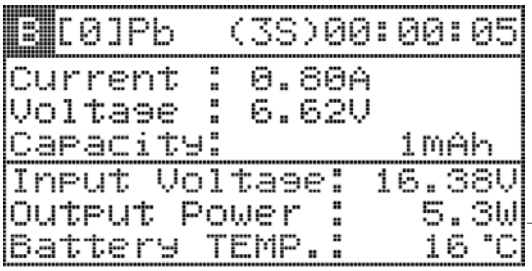
Caution

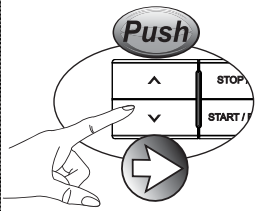
Use this feature with caution to avoid over charging your battery which could cause the battery to explode.

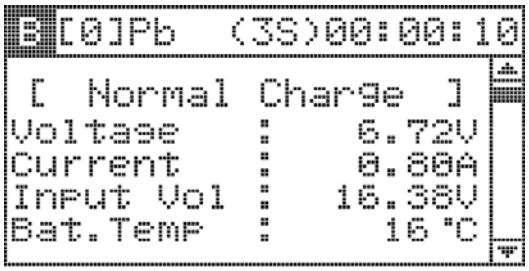
Detail Charge/Discharge Battery Information on Screen

Information Displayed During the Charge/Discharge Process

The following section describes the various types of information available to you during the charge or discharge process for Lead Acid (Pb) type batteries. Use the ^ and v menu buttons to scroll through the displays.





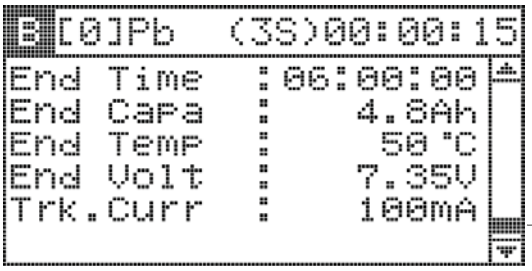


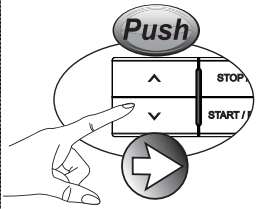
Main Charge / Discharge Display Screen

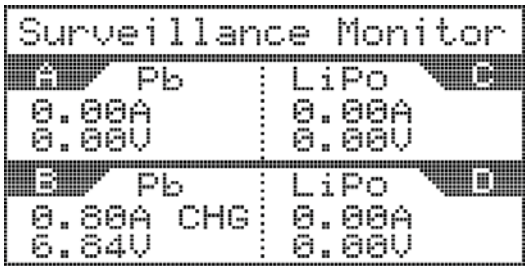
The main display indicates the Type of process, Batter Voltage, Charge / Discharge current, Input Voltage, and batterytemperature if temp probe is connected

Summary Charge Screen

This screen shows the type of charging, current voltage and charge current of the pack along with the chargers input voltage and the packs temperature if a temp sensor is being used.







Secondary Charge/Discharge Screen

This screen displays the type of charge End Time, End Capacity, End Temperature: End Voltage cutoff, and Trickle current.

Surveillance Monitor Screen

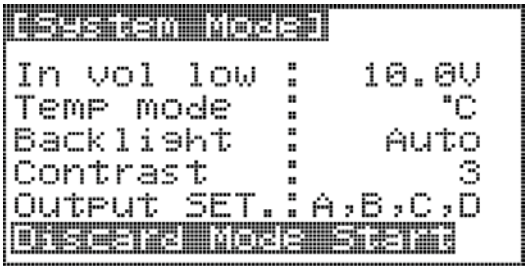
The H4 can display each of the 4 channel's information at the same time. Displayed are each battery's voltage, charge Amperage and charge/discharge status.

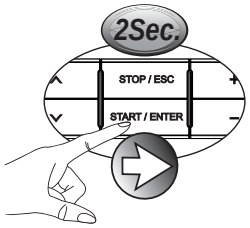
Battery Discard Mode

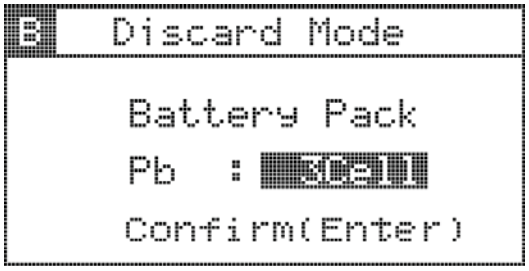
The H4's Battery Discard function is very useful for safely disposing your batteries. When you have to dispose of any rechargeable batteries, you should discharge the to a safe voltage level.

Warning

Once the Discard Mode processed most batteries cannot be recovered. Please use this function carefully. Discard Mode supports all batteries that can be charged with the Hitec H4 Multi charger

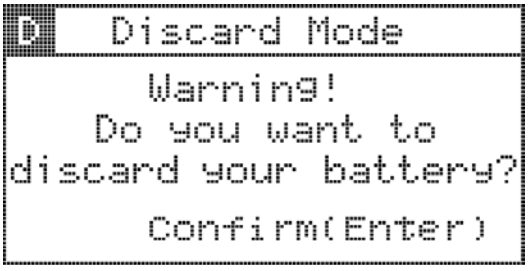


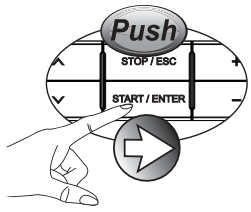


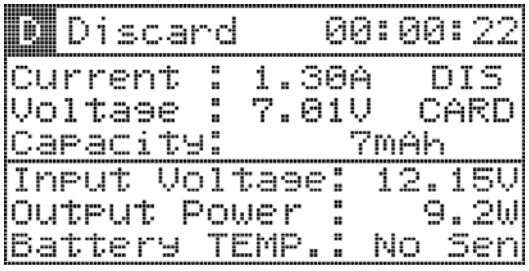


To get to the Battery Discard Mode function you must go to the second System Mode screen. To enter System Mode simultaneously press the [Λ] [V] buttons until the System Mode screen appears. Use the V button to scroll down to Discard Mode Start. Press and Hold until the battery type screen appears.

The type of battery pack will appear along with the number of cells. If the battery type is incorrect you must go back to the charge setup menu and change it. If the number of cells is incorrect use the + or – buttons to enter the correct number of cells. Once everything is correctly set press Enter to continue.







You will receive a final warning before the execution of this function. Press enter to proceed.

You can watch the status of the Discard Mode function on the screen.

Warning

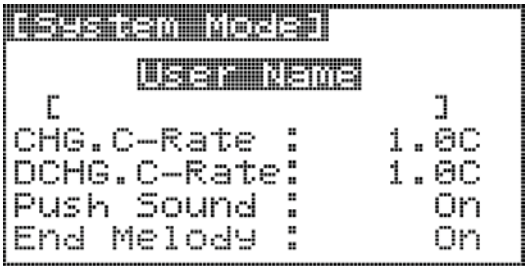
Battery type should be selected before enter the 'System Menu'

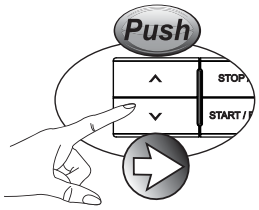
Hitec Channel Bridge Charging

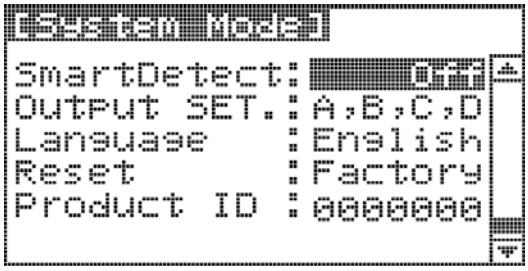
Channel Bridge Setup

The Hitec Channel Bridge function has a unique and specialized R/C purpose. Using the Hitec Channel Bridge system you can bridge two 120 watt charge ports together so they can be used as a higher current 240 watt single port. With this innovative function, the H4 can cover both the R/C novice and high end user's demands.

Warning The charge/discharge rates used with Hitec's Channel Bridge Function requires a high current power supply source. Please read these instructions carefully.







The first choice you must make is the type of bridge setup you wish to employ. To get to the Channel Bridge setup you must go to the second System Mode screen. To enter System Mode simultaneously press the [Λ] [V] buttons until the System Mode screen appears.

Use the V button to move the cursor to 'OUTPUT SET' to select the bridge channel ports. There are 4 types of bridges to choose from. See Page 31 & 32 for detailed information on the types of bridges available. Select the type of bridge for your purpose and press the 'STOP/ESC' button.

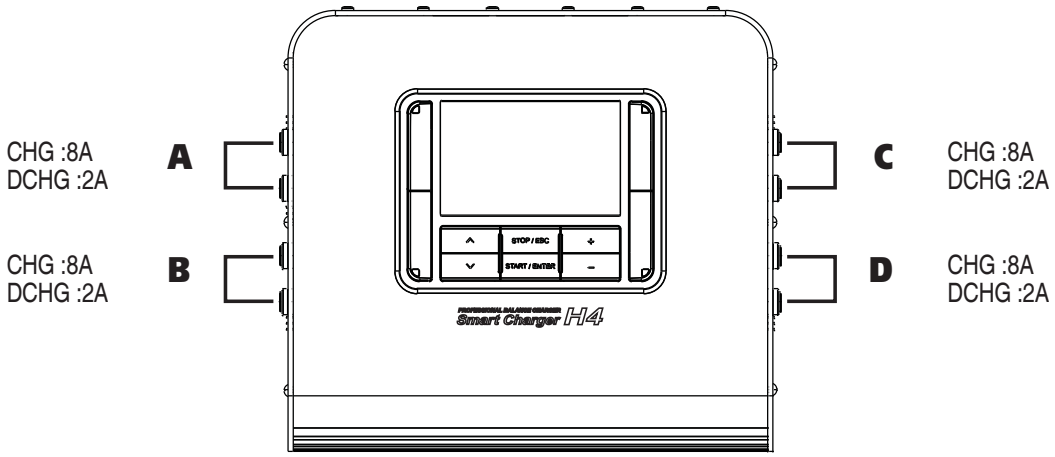
Channel Bridge Charging

Setting up charging using two bridged channels is exactly the same as setting up an individual channel. When you select bridged channels to setup both LED lights will be lit indicating what channels are bridged.

Hitec Channel Bridge Charging

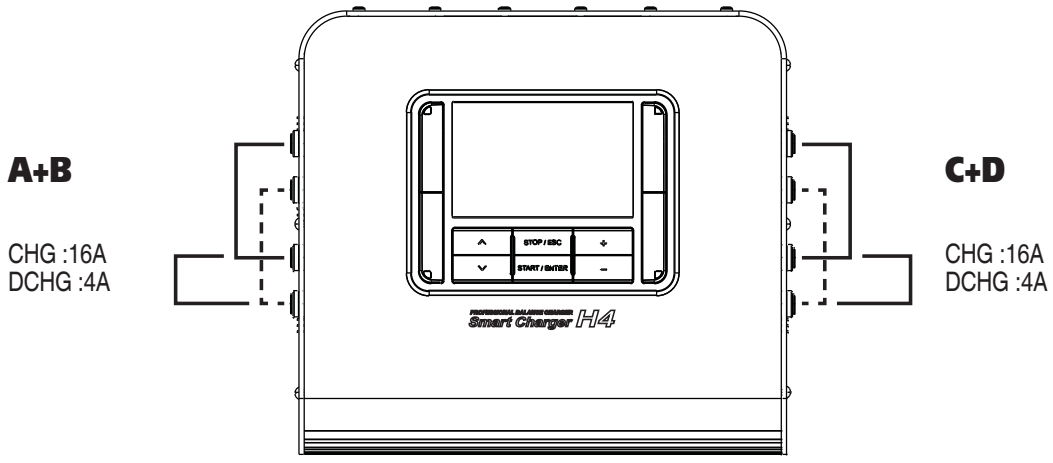
[A.B.C.D] Type:

This is the default 4 channel mode which uses no bridge type. Each channel is operated independently and provides 8A for charging and 2A for discharging.



[A+B, C+D] Type:

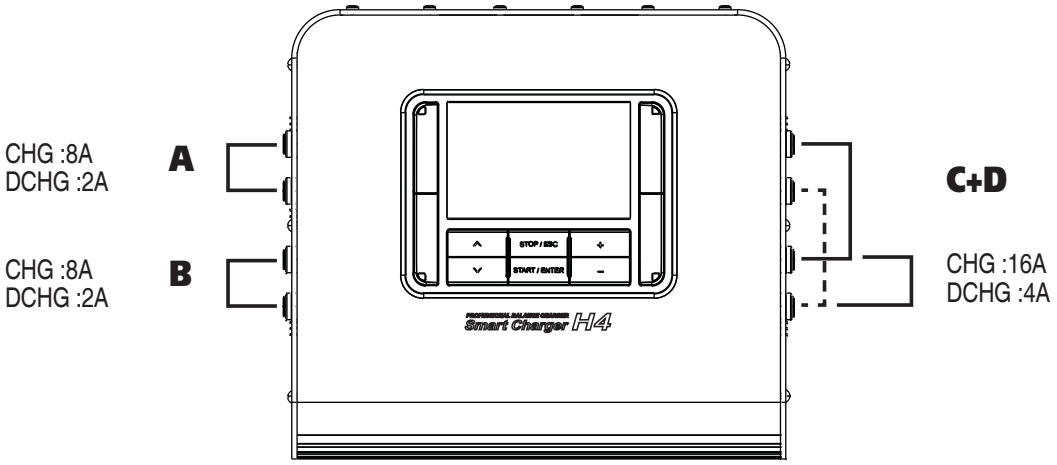
This bridges channels A and B on one side and the other two channels C and D on the other side of the H4 charger. Each bridged channel provides 16A charging, 4A discharging. This is very useful when you want to charge high capacity batteries, such as those used in electric helicopters, large scale planes, electric monster trucks and off road buggies.

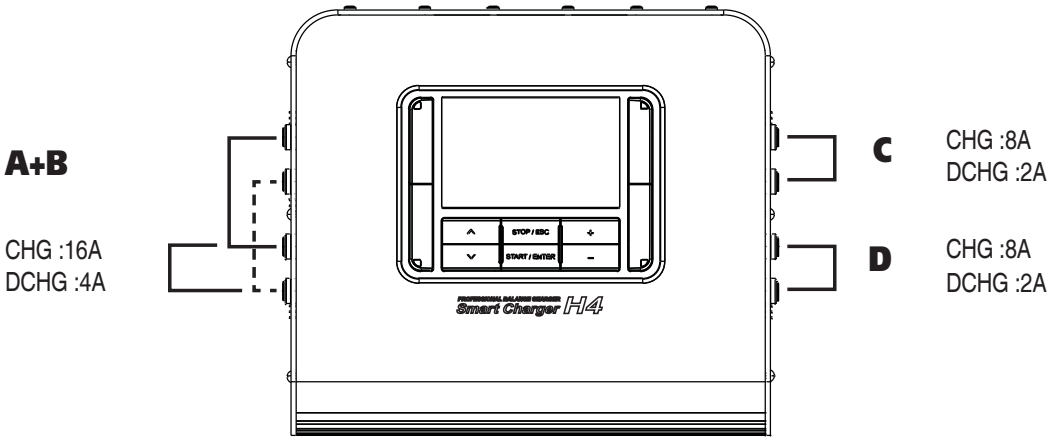


Hitec Channel Bridge Charging

[A, B, C+D] or [A+B, C, D] Type:

This is used to bridge only one side of the two channels into one. This allows for one powerful bridge channel and two basic channels. The bridged channel provides 16A for charging and 4A for discharging. Each of the two basic channels provides 8A for charging and 2A for discharging.





Connecting the Bridge Cable

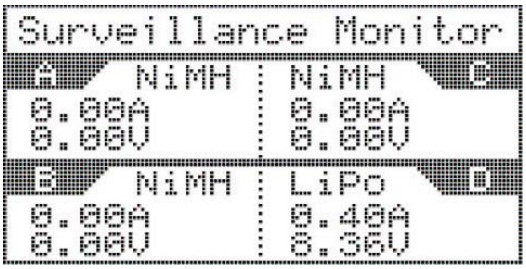
The Hitec Channel Bridge function can only be used with the Bridge cable. A set of Bridge cables is provided in the H4 Box. Extra Bridge cables are sold separately. Make sure to connect the bridge according to your setup as shown in the illustrations.

Caution

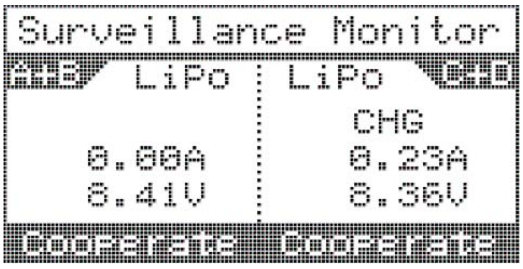
Before beginning the Charge or Discharge process with the Channel Bridge system make sure to check the program is properly setup.

Surrveillance Monitor

The Surveillance Monitor screen adapts to the H4's innovative Channel Bridge system by automatically changing to the bridge type. The H4 charger can monitor all 4 channels charge and discharge status at the same time. From any channel that's in processing a battery use the [Λ] [V] buttons to scroll to the Surveillance Monitor screen

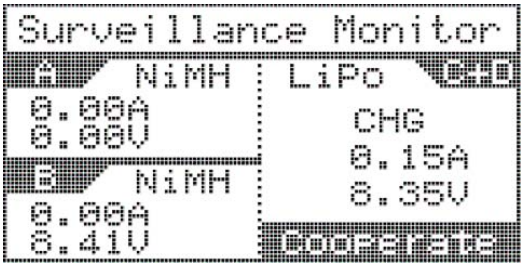


When 4 channels are used independently

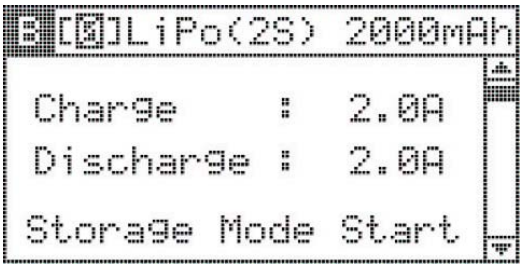


When A+B and C+D channels are bridged

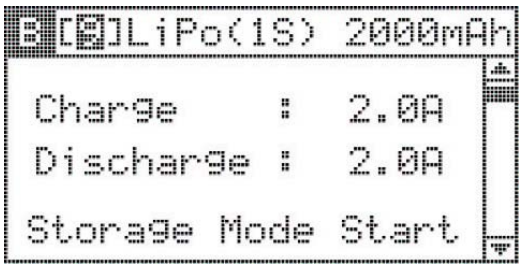
When A+B channels are bridged and C & D operated independently



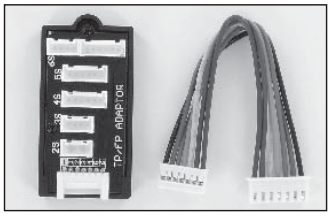
When C+D channels are bridged and A & B operated independently



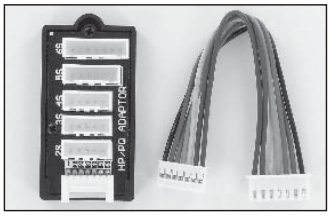
The Cursor above is on battery data memory number



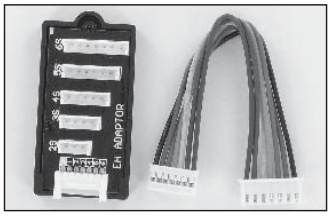
Each channel can be save 10 separate battery setups [0-9].



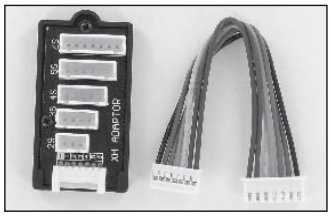
#44152 TP/FP Balancing adapter



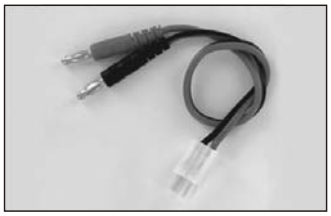
#44153 HP/PQ Balancing adapter



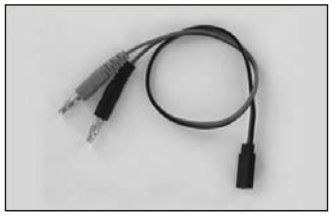
#44154 EH Balancing adapter



#44155 XH Balancing adapter



#44156 Tamiya Charging Cables



#44157 Receiver Battery Charging Connector

#44158 Alligator Clip Charging Connector

#44161 TRAXXAS Charging Cables

#44162 Deans Type Charging Connector

CONFORMITY AND REGULATORY INFORMATION

The Hitec H4 satisfies all relevant and mandatory FCC and EC regulatory directives including the following.

	Test Standards	Title	Result
CE-LVD	EN60335	For safety of household and similar electrical appliances.	Conform
CE-EMC	EN 55014-1:2006	Electromagnetic compatibility-Requirements for household appliances ,electric tools and Similar apparatus - Part 1: Emission	Conform
	EN55014-2:1997 +A1:2001	Electromagnetic compatibility-Requirements for household appliances, electric tools and Similar apparatus - Part 2: Immunity-Product familys	Conform
	EN61000-6-1(2007)	Electromagnetic compatibility (EMC) -- Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments	Conform
	EN61000-6-3(2007)	Electromagnetic compatibility (EMC) -- Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments.	Conform
FCC-VOC	FCC Part 15B	Electromagnetic compatibility (EMC).	Conform
		Conduction Emission & Radiation Emission.	

Service and Support

This symbol means that when any type of electronics reaches the end of its life, it cannot be disposed with normal household waste and must be recycled. To find a recycling center near you, refer to the internet or Yellow Pages under electronic
waste recyclers.

STATE OF CALIFORNIA PROP 65 WARNING
This product contains chemicals known to the State of California to cause cancer. Use caution when handling this product and avoid exposure to any electronic components or internal assemblies.

WARRANTY AND SERVICE INFORMATION
ONE YEAR LIMITED WARRANTY
For a period of one year from the date of purchase HITEC RCD USA, INC. shall REPAIR OR REPLACE, at HITEC RCD, INC.'s option, defective equipment covered by this warranty, otherwise the purchaser and/or consumer is responsible for any charges for the repair or replacement of the radio. This warranty does not cover cosmetic damages and damages due to acts of God, accident, misuse, abuse, negligence, improper installation, or damages caused by alterations by unauthorized persons or entities. This warranty only applies to the original purchaser of HITEC RCD, INC.'s products purchased and used in the United States of America, Canada and Mexico. Batteries, plastic cases and gears are not covered by this warranty.

THIS WARRANTY IS IN LIEU OF ANY AND ALL OTHER WARRANTIES, WHETHER FOR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND WHETHER EXPRESS OR IMPLIED. REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY. HITEC RCD, INC. SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY RELATING TO THIS PRODUCT.
EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

REPAIR AND SERVICING
To have your Hitec H4 Multi Charger Serviced follow these instructions.
1. Visit the Hitec RCD USA website and download the service request form.
http://www.hitecrcd.com/files/serviceform.pdf
2. Complete the service request form in its entirety and include a COPY of your original receipt showing the purchase date.
3. PACKAGE YOUR RETURN IN ITS ORIGINAL PACKAGING OR USE A TOTAL SUSPENSION TYPE PACKAGING (FOAM PEANUTS OR NEWSPAPER). HITEC RCD SHALL NOT BE RESPONSIBLE FOR GOODS DAMAGED IN TRANSIT.
4. Ship prepaid (COD or postage due returns will be refused) via a traceable common carrier (UPS, insured parcel post, FED EX, etc.) TO:

Hitec RCD USA, Inc.
Customer Service Center
12115 Paine St.
Poway, CA 92064

Smart Charger H4 Firmware Version 1.02

Smart Charger H4 Firmware Upgrade Ver. 1.02

Add " Recent History"

Battery information of your recent Charge/Discharge history can be stored automatically. Up to 7 histories can be stored and it is very useful that Charge/Discharge data set up when you have different type of batteries.

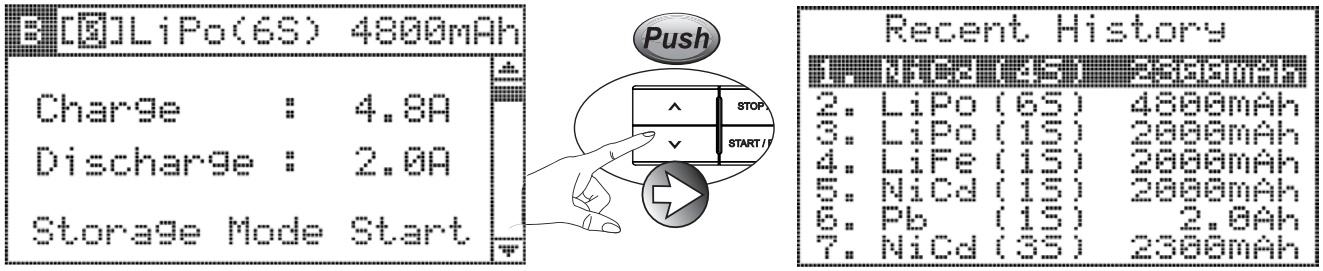
Firmware Upgrade by HPP-22

Please make a plan to visit to Hitec RCD Homepage www.Hitecrcd.com for firmware upgrade (Smart Charger H4 firmware can be upgraded by HPP-22 device)

Caution

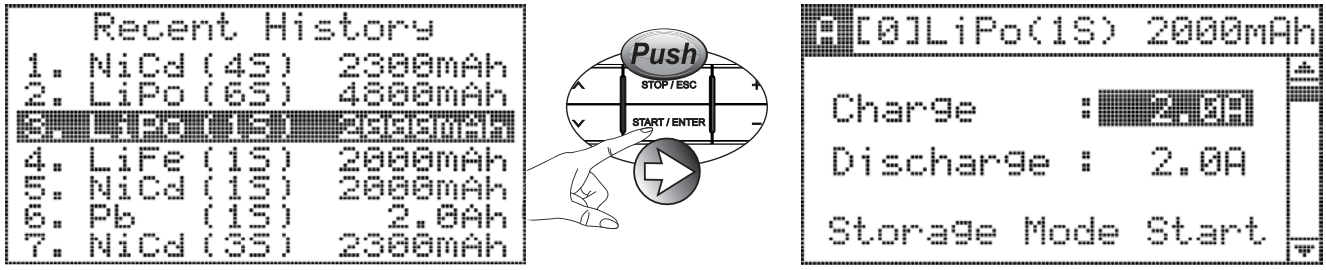
During the firmware upgrade, Stored Charge/Discharge Data will not be erased. However, please make sure right upgrade process since incorrect upgrade process may be occurred data lost

Recent History



Recent History function can be stored Charge/Discharge history from all 4 channels, To enter 'Recent History' please press "UP" button in first menu screen

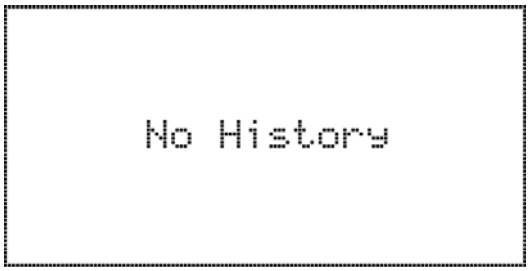
History shows like above picture, "No History" can show when you operate this function for the first time. Please refer to 2 page



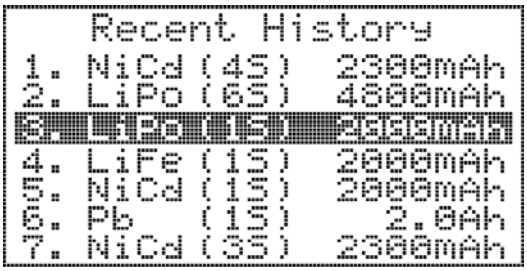
Topline information shows last Charge/Discharge operation. Please use "Up/Down" button for select data. And press 'START/ENTER" button to confirm.

If you have an operation that Charge/Discharge the same battery before, this function is very useful to reduce battery set up time.

Smart Charger H4 Firmware Version 1.02



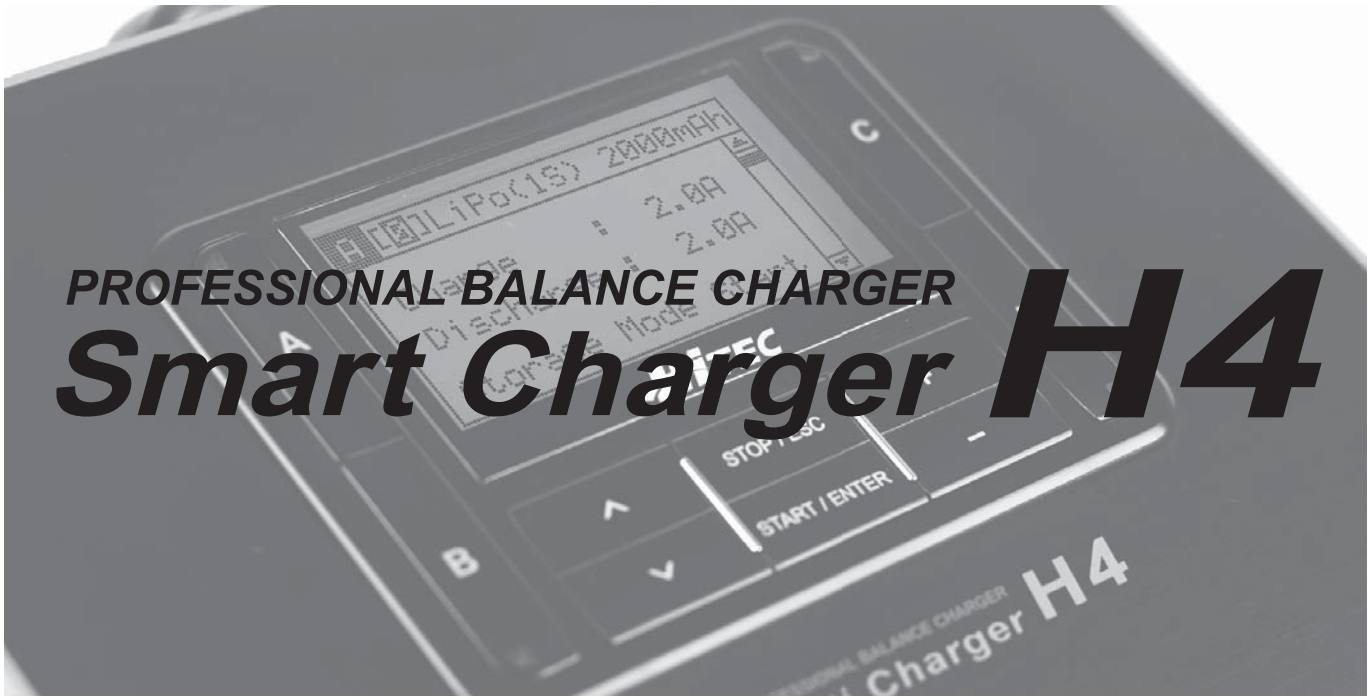
or



Just after Firmware upgrade, screen will shows “No History” which mean need to have your Charge/Discharge history. Please Charge/Discharge your battery and back to check this screen. Your previous Charge/Discharge will be shown on this screen as a history

History can be stored up to 7 Charge/Discharge data, if you have a new history, the data form bottom of screen will be erased.

Caution **Hitec Channel Bridge Data will be shown while only Channel Bridge function is operating.**



PROFESSIONAL BALANCE CHARGER

Smart Charger H4

HiTEC

Made in the Philippines