HiTEC

AC/DC HIGH OUTPUT
FOUR PORT CHARGING SYSTEM

multi charger X4 AC PRO

INSTRUCTION MANUAL

WARNING: THE CHARGING AND DISCHARGING OF RC HOBBY BATTERIES CAN BE DANGEROUS. FAILURE TO FOLLOW THE INSTRUCTIONS AND WARNINGS IN THIS MANUAL MAY RESULT IN PROPERTY DAMAGE AND/OR LOSS OF LIFE.

Table of Contents:

Congratulations on your choice of the X4 AC Pro charger from Hitec RCD, USA. The X4 AC Pro is a high-performance, microprocessor-controlled charger/discharger with battery management capabilities that are suitable for use with most popular battery types. The X4 AC Pro also features integrated balancing for six-cell Lithium-Polymer (LiPo), Lithium-Ferrite (LiFe) and Lithium-Ion (Li-Ion), as well as the latest high voltage Lithium-Polymer (LiHV) batteries.

Please read this entire operating manual before using the X4 AC Pro Charger. If you are unsure of its proper operation after reading the manual, please seek advice from an experienced hobbyist or someone familiar with proper battery charging procedures.

Warning **THE CHARGING AND DISCHARGING OF RC HOBBY BATTERIES CAN BE DANGEROUS. FAILURE TO FOLLOW THESE EXPLICIT WARNINGS CAN RESULT IN PROPERTY DAMAGE AND/OR LOSS OF LIFE.**

⚠ **NEVER LEAVE YOUR CHARGER UNATTENDED WHILE IN OPERATION.**

⚠ **NEVER CHARGE ON OR AROUND COMBUSTIBLE MATERIALS.**

⚠ **NEVER CHARGE A DAMAGED BATTERY PACK.**

⚠ **LOW COST, NO-NAME BATTERY PACKS POSE THE MOST DANGER. WE RECOMMEND YOU ONLY USE BATTERY PACKS THAT ARE SOLD AND WARRANTED BY A REPUTABLE COMPANY.**

⚠ **IT IS HIGHLY RECOMMENDED THAT YOU UTILIZE A SAFETY DEVICE SUCH AS A STEEL CASE OR LIPO SACK™ WHILE CHARGING LITHIUM CHEMISTRY BATTERIES.**

⚠ **IT IS HIGHLY RECOMMENDED THAT YOU KEEP AN OPERABLE "CLASS A" FIRE EXTINGUISHER IN THE CHARGING AREA.**

FAILURE TO FOLLOW THESE WARNINGS CAN BE CONSIDERED NEGLIGENCE BY THE OPERATOR AND MAY NEGATE ANY CLAIMS FOR DAMAGES INCURRED.

Hitec RCD USA will not be held responsible for any damages or injuries that may occur by persons who fail to follow these warnings or who fail to properly follow the instructions in this manual.

Warnings and Safety Notes


Warning


Tip

Warning: Be sure to read this section for your own safety.

Tip: This section will help you maximize the performance of your charger.


Note


Caution

Note: This section will provide more detailed explanations.

Caution: Be sure to read this section to prevent accidents and damage to your charger.

These warnings and safety notes are of the utmost importance. You must follow these instructions for maximum safety. Failure to do so can damage the charger and the battery and in the worst cases, may cause a fire.


Warning

NEVER LEAVE THE CHARGER UNATTENDED WHILE IT IS CONNECTED TO ITS POWER SOURCE. IF ANY MALFUNCTION IS FOUND, TERMINATE THE PROCESS AT ONCE AND REFER TO THE OPERATION MANUAL.

⚠ The allowable AC input voltage is 100 - 240V AC

⚠ The allowable DC input voltage is 11-18V DC.

⚠ Keep the charger away from dust, damp, rain, heat, direct sunlight and excessive vibration.

⚠ If the charger is dropped or suffers any type of impact, it should be inspected by an authorized service station before using it again.

⚠ This charger and the battery should be put on a heat-resistant, non-flammable and non-conductive surface.

⚠ Never place a charger on a car seat, carpet or similar surface. Keep all flammable volatile materials away from the operating area.

⚠ Make sure you know the specifications of the battery to be charged or discharged to ensure it meets the requirements of this charger. If the program is set up incorrectly, the battery and charger can be damaged.

⚠ Fire or explosion can occur due to overcharging.

⚠ To avoid a short circuit between the charge lead, always connect the charge cable to the charger first, then connect the battery. Reverse the sequence when disconnecting.

Warnings and Safety Notes

⚠ Never attempt to charge or discharge the following types of batteries:

- A battery fitted with an integral charge circuit or a protection circuit
- A battery pack which consists of different types of cells (including different manufacturer's cells)
- A battery that is already fully charged or just slightly discharged and non-rechargeable batteries (these pose an explosion hazard)
- A faulty or damaged battery
- Batteries installed in a device or which are electrically linked to other components
- Batteries that are not expressly stated by the manufacturer to be suitable for the currents the charger delivers during the charge process

PLEASE BEAR IN MIND THE FOLLOWING POINTS BEFORE YOU COMMENCE CHARGING:

- Did you select the appropriate program suitable for the type of battery you are charging?
- Did you set up the 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

	LiPo	LiPo HV	LiIon	LiFe	NiCd	NiMH	Pb
Nominal Voltage	3.7V/cell	3.8V/cell	3.6V/cell	3.3V/cell	1.2V/cell	1.2V/cell	2.0V/cell
Max. Charge Voltage	4.2V/cell	4.35V/cell	4.1V/cell	3.6V/cell	1.5V/cell	1.5V/cell	2.46V/cell
Storage Voltage	3.8V/cell	3.85V/cell	3.7V/cell	3.3V/cell	n/a	n/a	n/a
Allowable Fast Charge	≤ 1C	≤ 1C	≤ 1C	≤ 4C	≤ 1-2C	≤ 1-2C	≤ .04C
Min. Discharge Voltage	3.0-3.3V/cell	3.1-3.4V/cell	2.9-3.2V/cell	2.6-2.9V/cell	0.1-1.1V/cell	0.1-1.1V/cell	1.8V/cell

Warning **WHEN ADJUSTING YOUR X4 AC PRO CHARGING PARAMETERS, BE SURE YOU SELECT THE PROPER BATTERY TYPE AND CELL VOLTAGE FOR THE TYPE OF CELL YOU ARE CHARGING. CHARGING BATTERIES WITH THE WRONG SETTINGS MAY CAUSE THE CELLS TO BURST, CATCH FIRE OR EXPLODE.**

Charging

Before charging your batteries, it is critical that you determine the maximum allowable charge rate for your batteries. The X4 AC Pro is capable of charging at high rates that may not be suitable or safe for your particular batteries. For example, Lithium cells are typically safe to charge at 1C, or the total mAh÷1000. A 1200mAh battery would have a 1C charge rate of 1.2 amps. A 4200mAh battery would have a 1C charge rate of 4.2 amps. Some manufacturers are offering Lithium cells that can be charged at greater than 1C but this should ALWAYS be verified before charging a Lithium battery at rates higher than 1C. Voltage is just as critical as the charging amperage rate and this is determined by the number of cells in series, or "S". For example, a 3S LiPo is rated at 11.1 volts ("S" multiplied by a single LiPo cell with a nominal voltage of 3.7 volts DC. 3 cells x 3.7 volts each equals 11.1 volts DC).

Connect the battery's main leads to the charger output: red is positive and black is negative. Keep in mind that the gauge or thickness of your charging leads from the X4 AC Pro to your battery must be of an acceptable current rating to handle the applied charge current. For maximum safety and charging effectiveness, always match or exceed the main battery lead rating when assembling or selecting your charging leads. If you charge a

Warnings and Safety Notes

battery at a high current rate (amperage) with a charging lead not rated for the chosen amperage, the wire could get hot, catch fire, short out and/or potentially destroy your battery and the charger. When in doubt, always use a higher gauge wire (lower AWG number). It is common to see charging leads constructed of 14AWG, 16AWG or 18AWG wire.

Always refer to recommendations from your battery manufacturer for your specific battery type and size before initiating a charge or discharge process.

Do not attempt to disassemble or modify Lithium or Lead-Acid battery packs.

Discharging

The X4 AC Pro discharging functions are for two specific purposes:

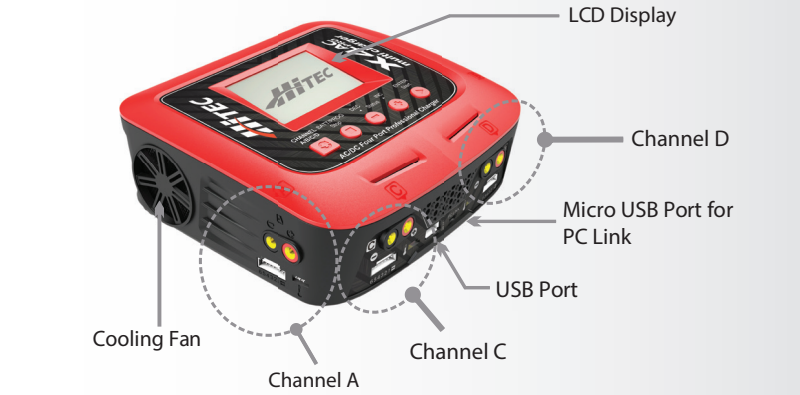
- Refreshing the capacity of a Nickel-based battery that has lost capacity over time (NiMH or NiCd).
- Reducing the voltage of a Lithium battery for safe storage.

Warning **LITHIUM CHEMISTRY BATTERY PACKS SHOULD ONLY BE DISCHARGED TO THEIR MINIMUM SAFE VOLTAGE, NO LOWER. DEEP DISCHARGING A LITHIUM CELL WILL DO PERMANENT DAMAGE. REFER TO THE STANDARD BATTERY PARAMETERS TABLE ON PAGE 6 OF THIS MANUAL FOR MINIMUM DISCHARGE VOLTAGES.**

LiPo & LiHV Charge/Discharge Cycling

Lithium batteries are known to reach full capacity after a break-in period of about 10 charge/discharge cycles. We do not recommend you use the X4 AC Pro charger to do this; normal use and recharging will achieve the same results. If you wish to perform a Lithium break-in on the bench with the X4 AC Pro discharging to minimum acceptable voltages and performing a balance charge at 1C maximum rate is recommended. If you choose to break in your Lithium batteries under normal use, charging at only 1C for the first ten cycles will help ensure full performance and service life from your Lithium cells.

Charger Layout



Included Accessories

A Universal Balancing Cord

B. XH Type Balancing Cord

C. XT-60 Charge Cable

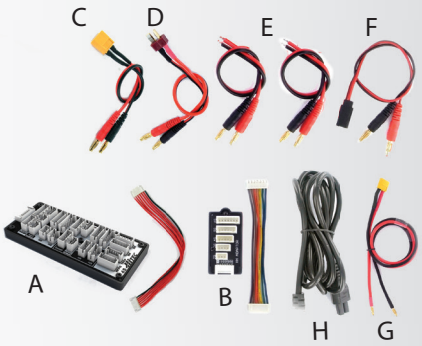
D. 2 Pin T-type Charge Cable

E. 2 x Bare Charge Cables

F. Receiver Battery Charge Cable

G. DC Power Source Cable

H. AC Power Cord



X4 AC Pro Specifications

AC Input	100 - 240 Volts AC
DC Input	11 - 18 x Volts DC
Total Charge Circuit Power on AC Power	200 Watts with Power Distribution
AC Power Distribution	Channels A & C 100 Watts Total Channels B & C 100 Watts Total
Power Distribution Adjustable Range	Channels A and B 50 ~ 100 Watts Channels C and D 0 ~ 50 Watts
Total Charge Circuit Power on DC Power	300 Watts Total Power (CHs A & B 100W each / CHs C & D 50W each)
Charge Current	Channels A & B: 0.1 ~ 10.0 Amps Channels C & D: 0.1 ~ 5.0 Amps
Charge Voltages	NiMH / NiCd: Uses Delta Peak Detection LiPo: 4.18 ~ 4.25 V/Cell LiHV: 4.25 ~ 4.35 V/Cell LiFe: 3.58 ~ 3.7 V/Cell Lilon: 4.08 ~ 4.2 V/Cell
Discharge Wattage	10 Watts per Channel
Discharge Current	0.1 ~ 2.0 Amps per Channel
Discharge Cut-off Voltages	NiMH / NiCd: 0.1 ~ 1.1 Volts per Cell LiPo: 3.0 ~ 3.3 V/Cell LiHV: 3.1 ~ 3.4 V/Cell LiFe: 2.6 ~ 2.9 V/Cell Lilon: 2.9 ~ 3.4 V/Cell
LiPo, LiHV, LiFe and Lilon Cell Count	1 ~ 6
Balance Current for LiXXx Balance	200 mAh
NiMH / NiCd Cell Count	1 ~ 15 cells
Pb/ Lead Acid Voltage Range	2 ~ 20 VDC
Battery Capacity Range	100 ~ 50,000 mAh
Auxillary Output	5 Volt 2.1 Amp DC USB Device Charge Port
Communication Methods	USB Port for PC Control & Firmware Upgrades Bluetooth 4.0 for Smartphone Apps
Dimensions	3.8 x 7.2 x 2.8 in. 97 x 182 x 71 mm.
Weight	47 oz. / 1335 g.

Features

Four Channel Charger:
The X4 AC Pro allows you to connect up to 4 batteries of varying chemistries (NiMH/NiCd/LiPo/LiFe/LiIon/LiHV/Pb) to any of the charging channels. Each channel can perform a process independently of each other.

Dual Input and Power Distribution:
The X4 AC Pro has a dual AC/DC input comprised of AC 100-240V and DC 11-18V. In DC mode, the power of each channel A&B is 100W each with an overall power of 200W, Channel C&D is 50W each with an overall power of 100W (total charger power is 300W). Power distribution is supported in AC mode. For example, if Channel A is 70W and Channel B is 30W, total power is 100W.

Optimized Operating Software:
The X4 AC Pro features an AUTO function that sets the feeding current during charging or discharging. It can also disconnect the circuit automatically and sound an alarm if an abnormal reaction has been detected. Each programming feature of your X4 AC Pro is controlled by a two way linkage and communication and is completely customizable to the user's preferences.

Battery Memory (Data Store/Load):
The charger can store up to 10 unique charge/discharge profiles for each channel and lets you recall the data from each program setting at any time.

PC Control Software "Charge Master":
Equipped with free "Charge Master" software, the v AC Pro gives you the unparalleled ability to operate the charger via your personal computer. You can monitor pack voltage, cell voltage, and other data during battery charging or view the charge data in real-time graphs. The "Charge Master" gives you the option to initiate and update firmware as well.

Smart Phone Control via Wi-Fi Module (iOS and Android):
Finally, a battery charger with its own apps! This charger has built-in Bluetooth 4.0 and can be operated using a smart phone.

Internal Independent Lithium Battery Balancer
The X4 AC Pro features a built-in cell voltage balancer so you don't need to fuss with external balancers while charging or discharging.

Features (continued)

Re-Peak Mode of NiMH/NiCd Battery:
In re-peak charge mode, the charger can peak charge the battery once, twice, or three times in a row automatically. This function is useful for ensuring a full battery charge.

Delta-Peak Sensitivity for NiMH/NiCd:
This automatic charge termination program is based on the principle of the Delta-peak voltage detection. When the battery's voltage exceeds the threshold, the process will be terminated automatically.

Cyclic Charging/Discharging:
1 to 5 cyclic and continuous charge > discharge or discharge > charge sessions are optimal for battery performance and balancing.

Automatic Charging Current Limit:
You can set the upper limit of the charging current when charging your NiMH or NiCd battery. The 'AUTO' charging mode, however, is recommended when charging NiMH batteries with low impedance and capacity.

LiPo Battery Meter:
The user can check the battery's total voltage, the highest voltage, the lowest voltage and the voltage of each cell.

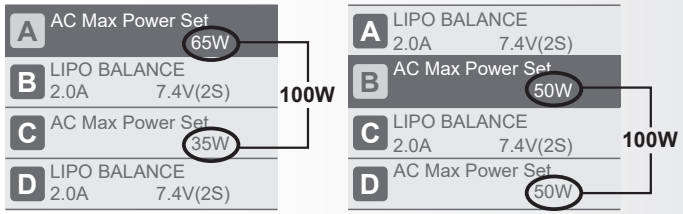
Battery Internal Resistance Meter:
The user can check the battery's total internal resistance and the internal resistance of each cell.

Capacity Limit:
The charging capacity is always calculated as the charging current multiplied by time. If the charging capacity exceeds the limit, the process will automatically terminate according to the maximum value previously set.

Temperature Threshold*:
The battery's internal chemical reaction will cause the temperature of the battery to rise. If the temperature limit is reached, the process will be terminated.
* This function is available by connecting an optional temperature probe which is available as a separate purchase.

Power Distribution

Powered by AC Household Current:
In AC mode, the X4 AC Pro has a maximum charging output of 200 watts total power. This charge output can be allocated differently to each channel utilizing the Power Distribution feature.



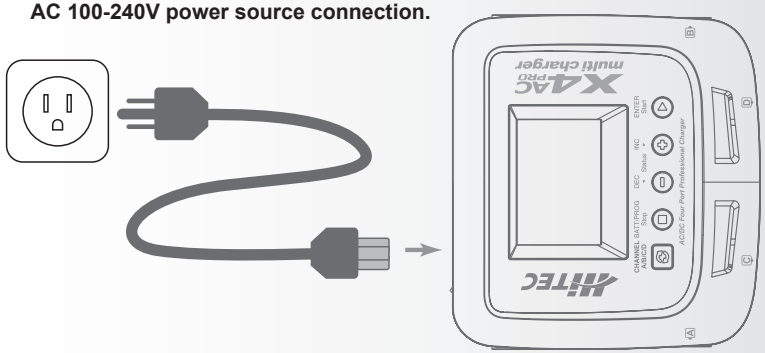
To adjust the wattage between channels, go to BATT/PROGRAM menu and use the INC. – or DEC + buttons to get to the SYSTEM SETTINGS, press ENTER/Start to enter the System settings menu and use the – or + buttons to scroll to the AC Max Power Set screen. Press ENTER/Start and the wattage amount will begin to blink. Use the – or + buttons to adjust the wattage for that channel. Adjusting power on one channel will also adjust the power on the corresponding linked channel . The X4 AC Pro links channels A with C and B with D. The adjustment ranges for Channels A & B are 50 - 100 watts while the adjustment range for channels C and D are 0 - 50 watts.

Powered by an Automotive Battery or DC Power Supply:
In DC mode, the X4 AC Pro has a maximum charging output of 300 watts total. This is allocated at 100 watts per channel on channels A and B and 50 watts per channel on channels C and D. These are fixed values and cannot be adjusted.
It is extremely important that you use either a fully charged 13.8V car battery or a high quality AC/DC power supply in the range of 11-18V DC output with minimum power of 350W or higher to ensure a reliable performance.

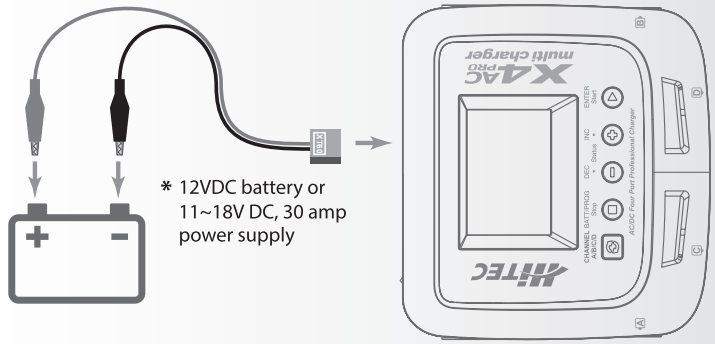
Power Connections

The X4 AC Pro can operate on 100 ~ 240 volts AC household current or from a 11 ~ 18 volts DC power source such as a car battery or DC power supply.

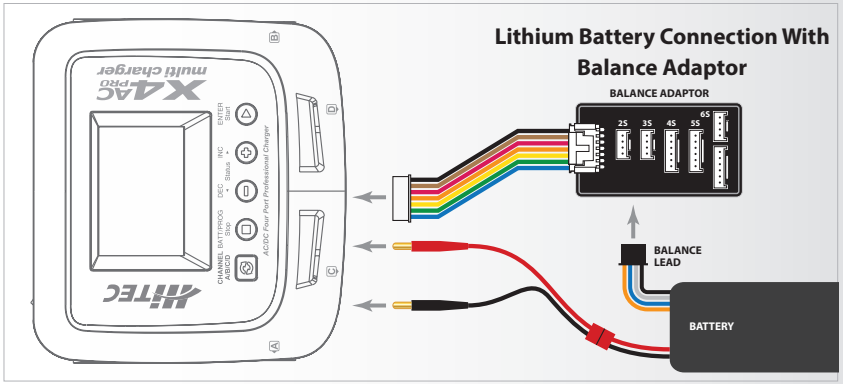
AC 100-240V power source connection.



12V DC Battery / DC power supply connection.



Warning **TO AVOID SHORT CIRCUITS, ALWAYS CONNECT THE CHARGE LEADS TO THE CHARGER FIRST, AND THEN TO THE BATTERY. REVERSE THE SEQUENCE WHEN DISCONNECTING THE PACK.**

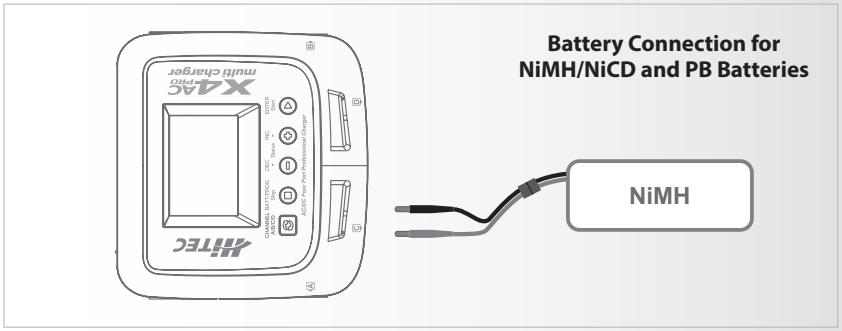


Balance Socket

For safety reasons, the default setting for charging Lithium (LiPo, Lilon, LiFe and LiHV)batteries is using a balancing connector to connect the battery and charger in Charge, Fast Charge, Balance Charge and Storage modes. If your battery does not have a balance adaptor without a balance wire connector, you must disable this function in the system settings as follows.

BATT / PROGRAM SYTEM SETTINGS → BAL. Connection ON

The balance wire attached to the battery must be connected to the charger with the black wire aligned with the negative marking. Ensure correct polarity!

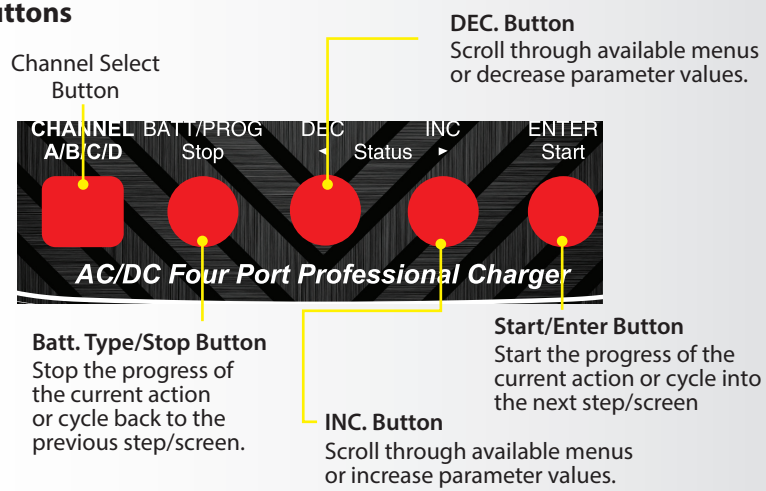


Initial Setup of the Charger

After connecting the battery, you are now ready to set up the charger to charge your specific type of battery. When the charger is first powered on, it will start at Channel A. The default mode of the charger is for a regular charge mode of a 2 Cell (7.4V) 2000 mAh Lithium Polymer battery. If this is not the battery you plan on working with, then you will need to make changes to the operation programming based on the following instruction.

Warning **BEFORE SELECTING AN OPERATION, IT IS CRITICAL THAT YOU KNOW THE TYPE OF BATTERY YOU ARE WORKING WITH AND WHAT THE MANUFACTURER RECOMMENDATIONS ARE FOR CHARGING OR DISCHARGING. FAILURE TO FOLLOW THE MANUFACTURERS REC-OMMENDATIONS CAN RESULT IN DAMAGE TO THE BATTERY AND POSSIBLE EXPLOSION.**

Input Buttons



Available Operations

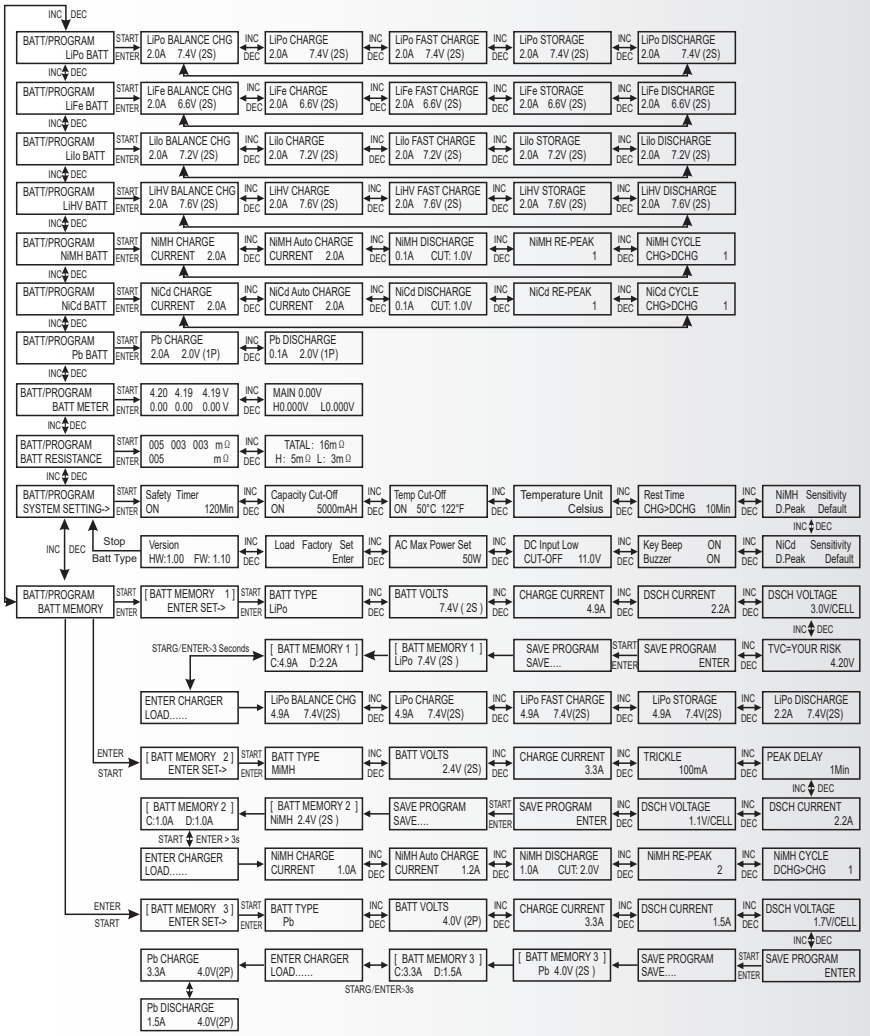
Depending on the battery type, different operations will be available. The chart on the following page shows which operations are available for the different types of batteries the X4 AC Pro is capable of working with.

Battery Type	Process	Description
LiPo LiIon LiFe LiHV	CHARGE	The charge mode is for charging LiPo/LiFe/LiIon/ LiHV batteries in normal mode.
	DISCHARGE	This mode is for discharging LiPo/LiFe/LiIon/LiHV batteries.
	STORAGE	This program is for charging or discharging a lithium battery which will not be used again for an extended period of time.
	FAST CHG	A fast charge will result in a smaller than usual charging capacity but will reduce the total charge time.
	BAL CHARGE	This mode is for balancing the voltage of Lithium battery cells while charging.
NiMH NiCd	CHARGE	The charger will charge NiMH and NiCd batteries using the charge current set by the user.
	AUTO CHG	In this program, the charger detects the condition of the connected battery and automatically charges the battery. **Note:** You should set the upper limit of the charge current to avoid damage by excessive charging current. The X4 AC Pro may not be able to detect the charge capacity of low resistance batteries.
	DISCHARGE	This mode is for discharging a NiMH/NiCd battery
	RE-PEAK	In re-peak charge mode, the charger can peak charge the battery once, twice, or three times in a row automatically. This is good for confirming the battery is fully charged and for checking how well the battery receives fast charges.
	CYCLE	Automatically charges/discharges the battery up to 5 times. This process can enhance the performance of NiMH/NiCd batteries.
Pb (Lead Acid)	CHARGE	This mode is for charging a Pb battery.
	DISCHARGE	This mode is for discharging a Pb battery.

Operation Flow Chart

Note

The flow chart depicts one channel as the example for all channels. Channels A, B, C and D operate identically.



Lithium Battery Program

This program is only suitable for charging/discharging Lithium chemistry batteries (LiPo, LiHV, LiIon and LiFe). The X4 AC Pro offers the following lithium charge modes: Charge, Balance Charge, Fast Charge, Storage and Discharge. The example shown here if for charging a LiPo battery in Balance Mode.

Whenever a parameter value in the program needs to be adjusted, highlight the value by pressing the START/Enter button to make it blink; to change the value press the DEC or INC buttons. The new value will be stored by re-pressing the START/Enter button. If there is another parameter to be adjusted as part of a range on the same screen, it will start blinking after the first parameter value has been confirmed.

Warning **BEFORE YOU BEGIN CHARGING YOUR BATTERY, MAKE SURE YOU HAVE READ AND UNDERSTAND ALL OF THE WARNINGS AND SAFETY INFORMATION CONTAINED ON PAGES 3-7.**

Lithium Battery (LiPo, LiHV, LiFe, LiIon) Charge Modes

The following steps will guide you through setting up a Lithium Chemistry Battery in a Charge Mode. These instructions apply to Charge, Balance Charge, Storage Charge and Fast Charge. For the purpose of this example we will use balance charge as it is the safest way to charge Lithium Batteries.

BATT/PROGRAM Select
Press INC and DEC to cycle through all battery types and press START/ENTER to select the appropriate battery types to be charged.

Warning **BEFORE SELECTING A CHARGE MODE, IT IS CRITICAL THAT YOU SELECT THE CORRECT TYPE OF LITHIUM BATTERY TO BE CHARGED. FAILURE TO DO SO CAN RESULT IN DAMAGE TO THE BATTERY AND POSSIBLE EXPLOSION.**

Mode Select
Press INC and DEC to scroll through all available modes. If you want to balance charge your battery, select BALANCE mode. Press the START/ENTER button to confirm the mode of your choice.

Lithium Battery Program (continued)

Charge Current
Press INC and DEC to adjust the charge current. Press the START/ENTER button to confirm the setting of your choice. Adjustment range is 0.1 ~ 10.0 Amps.

Warning **SETTING A CHARGE CURRENT THAT IS TOO HIGH CAN HAVE DANGEROUS RESULTS. NEVER EXCEED THE BATTERY MANUFACTURERS RECOMMENDED CHARGE RATE**

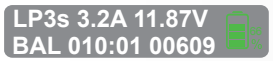
Battery Cells
Press INC and DEC to scroll through the battery cells supported by the charger. Press START/ENTER to select the appropriate cells for your battery.

Now that you have set all the parameters for your battery you are ready to execute the operation. Now would be a good time to check to make sure the charge settings are correct and within the battery manufacturers recommendations.

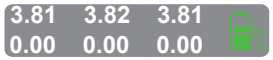
Caution **DURING CHARGING/DISCHARGING, THE BATTERY SHOULD BE PLACED INSIDE A FIRE PROOF/RETARDANT BAG AND ON A FIRE PROOF SURFACE, AWAY FROM OTHER COMBUSTIBLE OBJECTS.**

Program Start
Press and hold the START/ENTER button until you see "BATTERY CHECK..." followed by the confirmation screen. This screen displays the number of cells you set up as "R" and the number of cells detected by the processor as "S". If both numbers are identical, you may press the START button once to confirm and begin charging. If these numbers do not match, press the STOP button to return to the previous screen and carefully check the number of cells before proceeding.

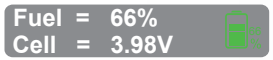
Charge Status Monitor
Use the **INC.** and **DEC.** buttons to scroll through the various information displayed during the process.



This screen shows the type of battery, number of cells, charge/discharge current, total voltage of the pack, type of process, elapsed time and number of mAh fed into the battery.



This screen shows the voltage of each individual cell when a balancing cable is connected.



Charged capacity percentage and average cell voltage of the pack.

Program Stop

During the charging process, press STOP button to stop the process.

Program Complete

When the charging process is finished, an audible sound will be heard and the charger will indicate END: FINSHED. The charger displays the total pack voltage, total mAh fed into the battery and the elapsed time of the process.

NOTE: The battery charge indicator displays **Green** during charging and **Red** during discharging.

Lithium Battery (LiPo, LiHV, LiFe, LiIon) Discharge Mode

The following steps will guide you through setting up a Lithium Chemistry Battery Discharge Mode.

Warning

DISCHARGING LITHIUM CHEMISTRY BATTERIES CAN CAUSE PERMANENT DAMAGE TO THE BATTERY AND IT IS NOT RECOMMENDED FOR ANYTHING OTHER THAN THE DISPOSAL OF THE BATTERY. IF YOU CHOOSE TO DISCHARGE YOUR LITHIUM BATTERIES, MAKE SURE TO PAY CLOSE ATTENTION TO THE MINIMUM VOLTAGE SETTING. IF YOU WANT TO STORE YOUR BATTERY FOR A LONG PERIOD OF TIME YOU SHOULD UTILIZE THE STORAGE MODE CHARGE PROGRAM AS THIS IS THE SAFEST METHOD OF STORING YOUR LITHIUM CHEMISTRY BATTERIES.

BATT/PROGRAM Select

Press INC and DEC to cycle through all battery types and press START/ENTER to select the appropriate battery types to be charged.

Discharge Current

Press INC and DEC to adjust the discharge current. Press the START/ENTER button to confirm the setting of your choice. Adjustment range is 0.1 ~ 2.0 Amps.

Battery Cells

Press INC and DEC to scroll through the battery cells supported by the charger. Press START/ENTER to select the appropriate cells for your battery.

Now that you have set all the parameters for your battery you are ready to execute the operation. Now would be a good time to check to make sure the charge settings are correct and within the battery manufacturers recommendations.

Caution

DURING CHARGING/DISCHARGING, THE BATTERY SHOULD BE PLACED INSIDE A FIRE PROOF/RETARDANT BAG AND ON A FIRE PROOF SURFACE, AWAY FROM OTHER COMBUSTIBLE OBJECTS.

Program Start

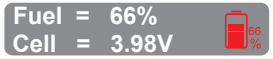
Press and hold the START/ENTER button until you see "BATTERY CHECK..." followed by the confirmation screen. This screen displays the number of cells you set up as "R" and the number of cells detected by the processor as "S". If both numbers are identical, you may press the START button once to confirm and begin charging. If these numbers do not match, press the STOP button to return to the previous screen and carefully check the number of cells before proceeding.

Discharge Status Monitor

Use the **INC.** and **DEC.** buttons to scroll through the various information displayed during the process.

This screen shows the type of battery, number of cells, discharge current, total voltage of the pack, type of process, elapsed time and number of mAh fed into the battery.

This screen shows the voltage of each individual cell when a balancing cable is connected.



Discharged capacity percentage and average cell voltage of the pack.

Program Stop
During the charging process, press STOP button to stop the process.

Program Complete
When the discharging process is finished, an audible sound will be heard and the charger will indicate END: FINSHED. The charger displays the total pack voltage, total mAh drawn from the battery and the elapsed time of the process.

NOTE: The battery charge indicator displays **Green** during charging and **Red** during discharging.

Other Information Displayed During the Process
Pressing the INC or DEC buttons during the charging or discharging process allows you to see a variety of other information on the screen.

End Voltage 12.6V (3S)	Final voltage at the end of the program.
IN Power Voltage 14.82V	Input voltage from internal or external power source.
Ext. Temp ---- Int. Temp 37°C	Internal and external temperatures. External Temperature requires optional temperature sensor. #44159
Temp Cut-Off 50°C	Cut-off temperature when using external temperature sensor.
Safety Time ON 120min	Safety timer ON and duration of time in minutes.
Capacity Cut-Off ON 5000mAh	Capacity cut-off ON and set value of the capacity limit.

This program is only suitable for charging/discharging NiCD/NiMH batteries. The X4 AC Pro offers the following NiCD/NiMH charge modes: Charge, Auto Charge, Discharge, Re-Peak and Cycle.

Whenever a parameter value in the program needs to be adjusted, highlight the value by pressing the START/Enter button to make it blink; to change the value press the DEC or INC buttons. The new value will be stored by re-pressing the START/Enter button. If there is another parameter to be adjusted as part of a range on the same screen, it will start blinking after the first parameter value has been confirmed.

Warning **BEFORE YOU BEGIN CHARGING YOUR BATTERY, MAKE SURE YOU HAVE READ AND UNDERSTAND ALL OF THE WARNINGS AND SAFETY INFORMATION CONTAINED ON PAGES 3-7.**

Warning **BEFORE SELECTING A CHARGE MODE, IT IS CRITICAL THAT YOU SELECT THE CORRECT TYPE OF BATTERY TO BE CHARGED. FAILURE TO DO SO CAN RESULT IN DAMAGE TO THE BATTERY AND POSSIBLE EXPLOSION.**

BATT/PROGRAM Select
Press INC and DEC to cycle through the battery types and press START/ENTER to select the appropriate battery type to be charged.

NiMH / NiCd Charge Mode:

Press INC and DEC to scroll to **Charge Mode**. Press the START/ENTER button to confirm.

Setting the Charge Current
Press INC and DEC to increase or decrease the charge current. Press the START/ENTER button to confirm the setting. The rate can be adjusted from 0.1 ~ 10A.

Warning **SETTING A CHARGE CURRENT THAT IS TOO HIGH CAN HAVE DANGEROUS RESULTS. NEVER EXCEED THE BATTERY MANUFACTURERS RECOMMENDED CHARGE RATE**

Program Start
Press and hold the START START/ENTER button until you see "BATTERY CHECK..." the battery should then begin charging.

Once charging has started the screen will display the battery type, charge rate, total pack voltage, elapsed time, and total current fed in mAh.

Once the battery is fully charged, the screen will read "END: FINISHED" and the charger will emit a chiming sound. You can press the ■ button at any time during the charging process to stop charging.

NiMH / NiCd Auto Charge Mode

In this mode, the charger automatically detects the connected NiMH or NiCd battery and determines the proper full charge and cutoff thresholds. Setting the upper charge current limit for safe levels based on your battery specifications will ensure safe charging of your specific battery. If you are unsure of the maximum allowable charge rates, set the charger to a maximum of 1C (battery mAh/1000, i.e., 2500mAh = 2.5A).

After selecting the correct battery type use the INC and DEC to scroll to **Auto CHARGE Mode**. Press the START/ENTER button to confirm.

Setting the Charge Current
Press INC and DEC to increase or decrease the charge current. Press the START/ENTER button to confirm the setting. The rate can be adjusted from 0.1 ~ 10A.

Program Start
Press and hold the START START/ENTER button until you see "BATTERY CHECK..." the battery should then begin charging.

Once the battery is fully charged, the screen will read "END: FINISHED" and the charger will emit a chiming sound. You can press the ■ button at any time during the charging process to stop charging.

NiMH / NiCd Discharge Mode

After selecting the correct battery type use the INC and DEC to scroll to **DISCHARGE Mode**. Press the START/ENTER button to confirm.

Setting the Discharge Current
Press INC and DEC to increase or decrease the charge current. Press the START/ENTER button to confirm the setting. The rate can be adjusted from 0.1 ~ 2.0A.

Setting the Cut-Off Voltage
Press INC and DEC to increase or decrease the cut-off voltage Press the START/ENTER button to confirm the setting.

Caution

Make sure to follow the instructions provided with your battery when setting the voltage cutoff. The X4 AC Pro will stop discharging when the battery has reached the preset voltage cutoff.

Program Start
Press and hold the START START/ENTER button until you see "BATTERY CHECK..." the battery should then begin discharging.

Once discharging has commenced, the charger will display the following information: battery type, discharging current, battery voltage, discharging time and discharged capacity.

When discharging is complete, the screen will read "END:CUTOFF-VOL" and the charger will emit a ringing sound. The charger will display the elapsed time, end voltage and the discharged capacity in mAh. You can press the ■ button at any time during the charging process to stop charging.

NiMH / NiCd Re-Peak Mode

Applicable to NiMH and NiCD batteries only, in re-peak mode the charger can peak charge the battery once, twice, or three times in a row automatically. This process is good for confirming the battery is fully charged and for verifying how well the battery can accept a fast charge. A five-minute cool-down delay occurs after each re-peak charge.

Note **IN RE-PEAK MODE, THE X4 AC PRO USES THE CHARGE AMPERAGE AND VOLTAGE SETTINGS ENTERED IN CHARGE MODE (SEE PAGE 20.**

After selecting the correct battery type, use the INC or DEC buttons to select the "RE-PEAK" mode. Press the START/ENTER button to confirm.

The number of Re-Peak cycles will begin flashing use the INC or DEC buttons to select the number of Re-peak cycles you want to perform up to 3 total cycles.

Program Start

Press and hold the START START/ENTER button until you see "BATTERY CHECK..." the battery should then begin Re-Peak charging.

Once Re-Peak process has begun, the charger will display the following real-time information: battery type, charging current, battery voltage, elapsed time and charged capacity.

Once the Re-Peak process has completed, the screen will read "END: RE-PEAK" and the charger will emit a chiming sound. The X4 AC Pro will display the charge/discharge capacity for each cycle. Using the + and - buttons, you can scroll through this data for each cycle.

NiCD/NiMH Cycle Mode

The X4 AC Pro makes cycling of NiCD/NiMH batteries easy. The process of discharging and recharging (cycling) can be achieved automatically with one simple step and will improve the performance of NiCD/NiMH batteries. We strongly recommend cycling any battery that has been discharged and stored for a period of time. This will increase battery life and improve performance.

Note **FOR CYCLING, THE X4 AC PRO USES THE CHARGE/DISCHARGE AMPERAGE AND VOLTAGE SETTINGS ENTERED IN THE CHARGE AND DISCHARGE MODES (SEE PAGES 20 ~ 22).**

After selecting the correct battery type use the INC and DEC to scroll to **CYCLE Mode**. Press the START/ENTER button to confirm.

The "CHG>DCHG" option will first charge the battery and then discharge the battery. If this screen does not currently show the cycling option you desire, press the START/ENTER button once and this setting will begin flashing. Use the INC or DEC buttons to change this setting.

Pressing the START/ENTER button again will cause the number of cycles option to begin flashing. Use the INC or DEC buttons to change this to the number of cycles you want the X4 AC Pro to run. The X4 AC Pro can cycle the battery a maximum of 5 times consecutively.

Program Start

Press and hold the START START/ENTER button until you see "BATTERY CHECK..." the battery should then begin the cycle process.

Once cycling has commenced, the charger will display the following real-time information: battery type, charging/discharging current, battery voltage, charging time and charged capacity. You will also see "D>C" or "C>D". This will indicate which cycling order you have chosen. Either "D" or "C" will be flashing. This flashing indicates which part of the cycle is currently being executed.

Once the cycling process is complete, the screen will read "END: CYCLE" and the charger will emit a chiming sound. The X4 AC Pro will display the charge/discharge capacity for each cycle. Using the INC. and DEC. buttons, you can scroll through this data for each cycle.

Additional Information Displayed During the Process

Pressing the INC or DEC buttons during the charging or discharging process allows you to see a variety of other information on the screen.

Delta Peak voltage sensitivity setting

Temperature Cut-off setting

External / Internal temperatures

Capacity Cut-off setting

Safety timer setting

Input Voltage

This program is only suitable for charging Pb (lead-acid) batteries with nominal voltages of 2 to 20V. A Pb (lead-acid) battery is significantly different from NiCD/NiMH batteries. Pb batteries can only deliver current lower in comparison to their capacity. The same restriction applies to the charging process. Consequently, the optimum charge current can only be 1/10 of the capacity. A Pb battery cannot be used for fast charging. Please follow the instructions provided by the battery manufacturer.

The X4 AC Pro offers the following Pb charge modes: Charge and Discharge.

Pb Charge Mode:

Warning **BEFORE YOU BEGIN CHARGING/DISCHARGING YOUR BATTERY, MAKE SURE YOU HAVE READ AND UNDERSTAND ALL OF THE WARNINGS AND SAFETY INFORMATION CONTAINED ON PAGES 3 ~ 7.**

After selecting the correct battery type, use the INC or DEC buttons to change it to the "CHARGE" mode.

Press the START/ENTER button and the amp rate value will begin flashing. Use the INC or DEC buttons to adjust the value to the desired charge rate. The amp rate should be set to 1/10 of capacity. For example if you are charging a 7Ah battery the charge rate should be set to 0.7A. Follow the instructions provided with your battery when setting the amp rate.

Press the START/ENTER button again and the voltage rate value will begin flashing. Use the INC or DEC buttons to set the voltage and number of cells.

Press and hold the START/ENTER button and charging will begin.

Once charging has commenced, the charger will display the following real-time information: battery type, charging current, battery voltage, charging time and charged capacity.

When charging is complete, the screen will read "FINISHED" and the charger will emit a chiming sound.

Pb Discharge Mode:

After selecting the correct battery type, use the INC or DEC buttons to change it to the "CHARGE" mode.

Press the START/ENTER button and the amp rate value will begin flashing. Use the INC or DEC buttons to adjust the value to the desired discharge rate. The discharge amperage can be set between 0.1 and 2.0 Amps

Press the START/ENTER button again and the voltage rate value will begin flashing. Use the INC or DEC buttons to set the voltage and number of cells.

Press and hold the START/ENTER button and charging will begin.

Once charging has commenced, the charger will display the following real-time information: battery type, charging current, battery voltage, charging time and charged capacity.

When charging is complete, the screen will read "FINISHED" and the charger will emit a chiming sound.

Other Information Displayed During the Process

Pressing the INC or DEC buttons during the charging or discharging process allows you to see a variety of other information on the screen.

Input voltage from internal or external power source.

Internal and external temperatures. External Temperature requires optional temperature sensor. #44159

Cut-off temperature when using external temperature sensor.

Safety timer ON and duration of time in minutes.

Capacity cut-off ON and set value of the capacity limit.

System Settings

When powered on for the first time, your X4 AC Pro charger will load with default values in the programmable user settings. Each channel has it's own system setting allowing for a great of flexibility in controlling the various processes.

Use the INC or DEC buttons to scroll to the BATT/PROGRAM SYSTEM SETTING-> screen, press the START/ENTER button to enter the systems setting menu. The screen displays the following information in sequence and the user can change the value of the parameters on each screen.

Item	Selection	Description
Safety Timer ON 120min	OFF / ON 1 ~ 720 Minutes	When you start a charge process, the internal safety timer automatically starts running at the same time. It is programmed to prevent overcharging, if the battery proves to be faulty or if the termination circuit cannot detect the full battery. The value of the safety timer should be generous enough to allow full charging of the battery.
Capacity Cut-Off ON 5000mAh	OFF / ON 100 ~ 50000 mAh	This sets the maximum charge capacity that will be supplied to the battery during charge. If the delta peak voltage is not detected for any reason or the safety timer has not expired, this feature will automatically stop the process at the selected capacity value.
Temp Cut-Off ON 50°C	OFF/ ON 20C ~ 80C 68F ~ 176 F)	NICD/NiMH batteries internal Chemical reaction will cause the temperature of the battery to rise. If the temperature limit is reached, the process will be terminated.
Temperature Unit Celsius	Celsius Fahrenheit	Adjusts the units the temperature is measured in.

Item	Selection	Description
Rest Time CHG>DCHG 10min	1 - 60 Minutes	Rest time allows the battery to cool down between charging/discharging cycles
NiMH Sensitivity D.Peak Default	Default: 4mV/Cell 3 ~ 15mV/Cell	This setting is for NiMH/NiCd batteries only. When the charger detects that the delta peak value you set has been reached, the charger will indicate the battery is fully charged.
NiCd Sensitivity D.Peak Default		
Key Beep ON Buzzer ON	ON / OFF	Key Beep sounds every time you press a button. Buzzer beep or melody sounds at various instances during operation to alert you to certain process events.
DC Input Low Cut-Off 11.0V	10.0 ~ 11.0V	This setting controls the DC input voltage. If the voltage drops below the value you set the charging operation will be terminated to protect the charger.
BAL. Connection ON	ON / OFF	The default setting for charging Lithium batteries is to use a balance adaptor to connect the battery and charger in Charge, Fast Charge, Balance Charge and Storage modes. This function could be disabled here.
AC Max Power Set 100W	O - 100	See Page 12 for a complete explanation of the Power Distribution Function
Load Factory Set Enter		Press ENTER to load the factory default settings
Version HW 1:01 SW1:00		Indicates the hardware and firmware versions

The Save Data and Load Data programs make it easy to store and load charge and discharge profiles for up to 10 batteries per channel. Data can be saved for each battery type and each charge mode available with the X4 AC Pro. This allows you to recall data for each battery when charging or discharging without having to set up the program over again. You can also edit settings for each saved battery.

Save Data:

BATT/PROGRAM
BATT MEMORY

From the BATT/PROGRAM menu use the INC or DEC buttons to scroll to the BATT MEMORY program and press the ENTER/START button to enter the battery memory program.

[BATT MEMORY 1]
ENTER SET ->

In the corner of the screen you will see the number 1 flashing, use the INC or DEC buttons to select a memory to program. Press the ENTER/START button again to enter the memory setup menu.

BATT TYPE
LiPo

Press the ENTER/START button again and the battery type will begin to flash. Use the INC or DEC buttons to select the battery type (LiPo, LiFe, LiIon, LiHV, NiMH, NiCd or Pb, then press the ENTER/START button to confirm your selection.

Now you will set up the battery parameters. Use the INC or DEC buttons to change the parameters then press ENTER/START to confirm your selection. Press the INC button to move to the next parameter,

Caution **MAKE SURE TO FOLLOW YOUR BATTERY MANUFACTURERS RECOMMENDATIONS REGARDING CHARGING AND DISCHARGING. FAILURE TO DO SO MAY DESTROY THE BATTERY AND HAVE HAZARDOUS RESULTS**

BATT VOLTS
7.4V (2S)

Voltage and Number of Cells: Enter the number of cells in the pack.

CHARGE CURRENT
4.0A

Charge Current: Enter the desired charge current.

DSCH CURRENT
1.0A

Discharge Current: Enter the desired discharge current.

DSCH VOLTAGE
3.0V/CELL

Per Cell Discharge Voltage: Enter the desired end per cell voltage.

TVC YOUR RISK
4.20V

Terminal Voltage (Lithium Batteries): Sets the upper per cell charge voltage:

Warning **CHANGING THE TERMINAL VOLTAGE IS ONLY INTENDED FOR EXPERT USERS, ANY CHANGES TO DEFAULT SETTINGS ARE COMPLETELY AT YOUR OWN RISK. DO NOT EXCEED BATTERY MANUFACTURERS RECOMMENDATIONS**

TRICKLE
OFF

Trickle (NiMH/NiCd): OFF or 50 ~ 300mAh Sets the desired trickle charge voltage once the battery has reached full charge.

PEAK DELAY
5 Min

Peak Delay (NiMH/NiCd): OFF or 1 ~ 5 minutes. Sets the time between re-peak cycles

SAVE PROGRAM
ENTER

Save Program: Press the ENTER/START button to save the program. **SAVE…..** will appear momentarily while the program is written to the memory.

[BATT MEMORY 1]
LiPo 7.4 (2S)

[BATT MEMORY 1]
C:4.0A D:1.0

Once saved the screen indicate the memory number, battery type, cell count, charge current and discharge current.

Recall Memory:

BATT/PROGRAM
BATT MEMORY

[BATT MEMORY 1]
LiPo 7.4 (2S)

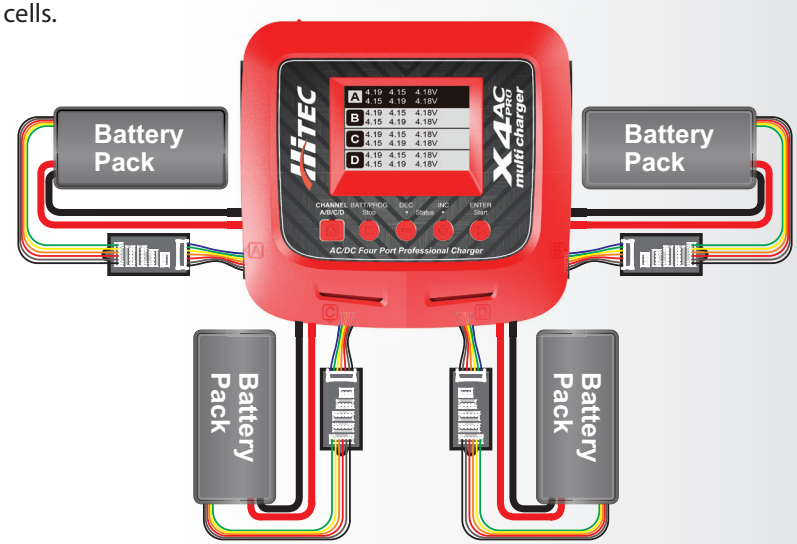
LiPo BALANCE
2.5A 7.4V(2S)

From the BATT/PROGRAM menu use the INC or DEC buttons to scroll to the BATT MEMORY program and press ENTER/START button to enter the battery memory program . Scroll to the memory number you wish to use then press and hold the ENTER/START button for 3 seconds to begin the selected process.

Battery Meter

The user can check the battery's total voltage, the highest voltage, the lowest voltage and each cell's voltage. Connect the battery via the charger's main battery lead to battery socket and balance wires to the balance socket as shown below.

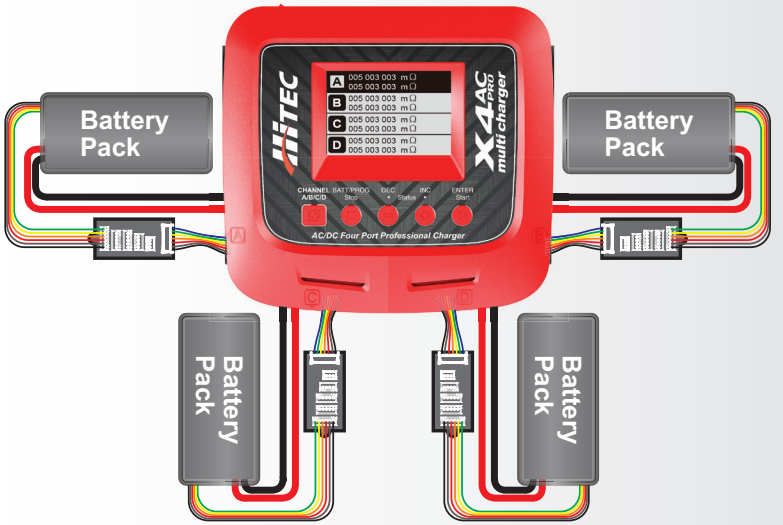
The display indicates the current Main Voltage, Percentage of Charge, Individual Cell Voltage, and the Highest and Lowest voltages of the packs cells.



BATT/PROGRAM BATT METER	From the BATT/PROGRAM menu use the INC or DEC buttons to scroll to the BATT METER program, press the ENTER/START button to enter the battery meter program.
4.20 4.19 4.19 V 4.18 4.18 4.19 V	The first screen indicates each cell's voltage.
MAIN 25.13V H4.200V L4.182V	Press the INC or DEC buttons to view the packs total voltage and the cell with the highest and lowest voltage.

Battery Resistance Meter

The X4 AC Pro has the ability to check your battery's total internal resistance, highest total resistance, lowest total resistance and the resistance of each cell. Simply connect the battery to the charger via the main battery lead to battery socket and the balance wires to the balance socket as shown below.



BATT/PROGRAM BATT RESISTANCE	From the BATT/PROGRAM menu use the INC or DEC buttons to scroll to the BATT RESISTANCE program, press the ENTER/START button to enter the battery resistance meter program.
012 005 005 mΩ 006 mΩ	The first screen indicates each cell's internal resistance.
TOTAL: 28mΩ H: 12mΩ L: 5mΩ	Press the INC or DEC buttons to view the packs total voltage and the cell with the highest and lowest internal resistance.

Warnings and Error Messages

In the event of an error or fault, the screen will display a message and emit an audible sound.

REVERSE POLARITY	Incorrect polarity detected.
CONNECTION BREAK	The connection to the battery has been broken.
CONNECT ERROR CHECK MAIN PORT	The main battery connection is incorrect.
BALANCE CONNECT ERROR	The Balance Cable on a Lithium Battery is not connected.
DC IN TOO LOW	The DC input voltage is less than the value set in system settings.
DC IN TOO HIGH	The DC input voltage is higher than 18V.
CELL ERROR LOW VOLTAGE	Voltage in one of the cells in battery is too low.
CELL ERROR HIGH VOLTAGE	Voltage in one of the cells in battery is too high.
CELL ERROR VOLTAGE - INVALID	Voltage in one of the cells in battery is invalid.
CELL NUMBER INCORRECT	The number of cells is incorrect.
INT.TEMP.TOO HI	The internal temperature of the charger is too high.
EXT.TEMP.TOO HI	The temperature of the battery is exceeding cut-off limit set in sytem settings.
OVER CHARGE CAPACITY LIMIT	The battery capacity has exceeded the capacity cut-off limit set in sytem settings.
OVER TIME LIMIT	The charging time has exceeded the safety timer limit set in sytem settings.
BATTERY WAS FULL	The battery voltage is higher than the maximum voltage that has been set for balance charge mode.

X4 AC Pro Software and Smartphone APPs

Software for PC's

The free "Charge Master" software gives you unparalleled ability to operate the charger through the computer. You can monitor pack voltage, cell voltage and other data while charging, view charge data in real-time graphs and you can control charging and update firmware via the "Charge Master" software. In order to connect the charger to the computer and use the "Charge Master," you will need a USB cable which is not included in this package. The cable must end on one side with an "A" plug and the opposite side with a "micro-B" plug to connect to the charger directly.

Download the latest ChargeMaster Software at: http://hitecrcd.com/support/software-downloads, the X4 AC Pro uses the ChargeMaster 4 software.

Smartphone APPs

The X4 AC Pro features Bluetooth 4.0 connectivity which allows the user to remotely control and monitor the charger through an app on a portable device such as Android smartphone, iPad, or iPhone.

The iOS app can be downloaded from iTunes Store and you can download the Android app from the Google Play Store. Operation of the app is self-explanatory and the same on iOS and on Android.

Pairing is not required, after downloading and installation of the app just activate Bluetooth on your mobile device and launch the app. The X4 AC Pro and your device should automatically establish a Bluetooth connection. For complete app instructions visit http://hitecrcd.com/support/manuals/chargers.

Warranty and Service

LIABILITY EXCLUSION

This charger is 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. We are unable to ensure that you follow the instructions supplied with the charger, and we have no control over the methods you employ for using, operating and maintaining the device. For this reason, we are obliged to deny all liability for loss, damage or costs which are incurred due to any misuse or operation of our products. Unless otherwise prescribed by law, our obligation to pay compensation, regardless of the legal argument employed, is limited to the invoice value of Hitec RCD, USA products which were immediately and directly involved in the event in which the damage occurred.

ONE YEAR LIMITED WARRANTY

For a period of one year from the date of purchase, HITEC RCD USA, INC. shall REPAIR OR REPLACE, at our 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 charger. 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 this product and for products purchased and used in the United States of America, Canada and Mexico. Plastic cases 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 MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED TO THE DURATION OF THIS WARRANTY, REPAIR AND SERVICE.

Warranty and Service (cont.)

SERVICE AND REPAIR INFORMATION

To have your Hitec charger serviced:

1. Visit the Hitec website at **www.hitecrcd.com** and download the service request form (under Support section).
2. Fill out the service request form completely and include a copy of your original receipt showing the purchase date.
3. Package your product in its original packaging or use a suspension-type packaging (foam peanuts or crumpled newspaper). Hitec RCD shall not be responsible for goods damaged in transit.
4. Ship prepaid (COD or postage-due returns will not be accepted) via a traceable common courier (UPS, insured parcel post, FedEx, etc.) to:

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

Disposal and Proposition 65 Warning

This symbol indicates that when this type of electronic device reaches the end of its service life, it cannot be disposed of with normal household waste and must be recycled. To find a recycling center near you, refer to the internet or your local phone directory for electronic waste recycling centers.

STATE OF CALIFORNIA PROPOSITION 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.

Regulatory Compliance

Hitec's X4 AC Pro satisfies all relevant and mandatory CE directives and complies with FCC Part 15 Subpart B: 2010.

www.hitecrcd.com

MADE IN CHINA

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