

**AC/DC LiPO/NiMH/NiCD CHARGER with Peak-Detection  
Circuitry and Auto Voltage Sensor**

Product Part # 130116

**Charge-It-All Sport Features:**

- AC/DC Input Voltage (110V or 12V)
- Peak-Detection Circuitry with Timed Safety Auto-Cutoff
- 1A, 2A, 3A, 4A or 6A Selectable Charge Rates in NiCD/NiMH Mode
- 100mAH, 300mAH, 700mAH, 1.3A or 2A Selectable Charge Rates in Lithium Mode
- Charges 1 - 8 NiCD or NiMH Cells and 1-3 LiPO Cells
- Automatic Voltage Detection
- Reverse Polarity Protection
- Internal Cooling Fan to Reduce Heat
- Easy to Set Up and Use

**Included with Your Charger:**

- 2-Pronged 110V AC Input Cord
- Output Cord w/Banana Plugs
- 12V DC Input Cord w/Alligator Clips
- JST Plug Adapter

**Introduction:**

Thank you for choosing the Wattage Charge-It-All Sport AC/DC Peak-Detection charger. This charger is designed to charge 1 (1.2V) to 8 (9.6V) Nickel-Cadmium or Nickel-Metal Hydride cells ranging from 250mAH and higher and 1 (3.7V) to 3 (11.1V) Lithium Polymer cells ranging from 100mAH and higher. Please read through this operations sheet completely before using your charger for the first time. If charging LiPO cells, please read and understand the special warnings specifically for LiPO cells.

**Please Read and Understand the Following Warnings:**

- This charger is designed to charge 1-8 NiCD and NiMH battery cells and 1-3 LiPO cells ONLY. Do not attempt to charge any other type of battery, such as gel cell, lead-acid or Alkaline batteries.
- NEVER connect the AC power and the DC power input cords at the same time and never allow the 12V DC alligator clips to touch or short out.
- When the charger is connected to an automotive battery (12V DC power source), do not start the automobile's engine. The engine can be running during the charging process, but starting or turning off the engine during the charging process can damage the charger and/or your battery pack.
- Do NOT allow children to use the charger without adult supervision.
- NEVER leave the charger connected to a power source when not in use.
- NEVER leave the charger unattended when the charger is in use.
- NEVER place the charger on a carpeted surface during use.
- ALWAYS disconnect the battery pack from the charger if the battery pack becomes unusually warm or hot.
- AVOID using the charger in direct sunlight.
- ALWAYS allow the battery pack to cool before recharging it.

**When charging LiPO battery packs, please read and understand the special warnings listed below. Also make sure to read any and all warnings included in the packaging with your battery. If used improperly, LiPO batteries can be very dangerous, so please follow these warnings and suggestions at all times.**

- DO NOT use the product if you do not understand the warnings and proper use of the product.
- ALWAYS let the battery cool and "rest" between uses and charging.
- We recommend the use of a fire-safe container when charging or storing.
- DO NOT charge inside your car or inside your house.
- Inspect the battery before each use for swelling or other malformation. If the cell has ballooned, it MUST be discarded.
- Set the charger to 1C (charge at 1/2C or less for the first 5 cycles).
- Check polarity and then connect battery to charger.
- When handling the battery, remember not to poke, bend or damage the cell. The cell outer casing is soft and can be damaged.
- Remember, the cells must never exceed 160 degrees Fahrenheit for any reason.
- LiPO cells may explode or catch fire. Serious injury can result from misuse. Serious injury, loss of property, fire and death can result from misuse of this product.
- All instructions, warnings and cautions must be followed at all times. Failure to do so can lead to serious injury or fire.
- DO NOT overcharge. Maximum voltage for each pack must be followed.
- DO NOT leave in direct sunlight or in a hot car or storage area.
- DO NOT get wet or expose to moisture.
- DO NOT short-circuit the battery.
- DO NOT leave the battery connected when not in use.
- DO NOT operate or charge unattended.

### Charge-It-All Sport Safety Features:

- If the battery pack polarity is reversed or if the battery pack has a short circuit, the charger will shut off and the charge rate LEDs will blink together. If this happens, unplug the battery pack from the charger and double-check all wires for polarity and short circuits before reattaching the battery pack to the charger.
- When the START/STOP button is pressed to start the charging process, an internal safety timer is automatically started. If the battery pack malfunctions or misses the "peak," the timer will automatically stop the charging process after the following elapsed times:

#### NiCD and NiMH MODE

1 Amp .....	300 Minutes
2 Amps .....	150 Minutes
3 Amps .....	100 Minutes
4 Amps .....	75 Minutes
6 Amps .....	50 Minutes

#### LITHIUM MODE

All Amp Ratings ..... 3 Hours

**After the charge process is complete, the charger switches to trickle charge mode at 1/10th of the selected charge rate, regardless of the charge mode**

### Using Your Charge-It-All Sport Charger:

**Before using your charger for the first time, please read and understand the warnings listed on the front page. Failure to understand and follow these warnings can result in damage to the charger, your flight battery or worse.**

- Plug the desired input cord into the back of the charger (either 12V DC or 110V AC), then plug the input cord into the power source. The red and green LEDs will default to the position they were in when the charger was last used.



**WARNING** Never plug the charger into a 220V power source and never connect the charger to a 12V DC and a 110V AC power source at the same time. Use only one desired power source at a time. If connecting the charger to a 12V DC power source, make sure to attach the red alligator clip to the positive terminal and the black alligator clip to the negative terminal.

- Plug the banana plugs on the output cord into the front of the charger, making sure that the polarity is correct (red to red and black to black), then connect your battery to the output cord.



**IMPORTANT** If the connector on your battery is different from the connector on the output cord, you will need to change the connector on the output cord. If you do, double-check that the polarity is correct when you install your new connector.

**NOTE** The charger includes a JST adapter if your battery uses a JST plug. The JST plug is typically referred to as a BEC connector and is red.

- Choose the charge type (either NiMH, NiCD or Lithium) by pressing and holding the MODE button for 1.5 seconds. The charge mode will change as indicated by the green LED. If your battery has NiCD cells, choose the NiCD charge mode. If your battery has NiMH cells, choose the NiMH charge mode. If you have a Lithium Polymer (LiPO) battery,



choose the Lithium charge mode.

**WARNING** Always make sure that you choose the charge mode that matches the type of cells in your battery pack. Charging your battery pack using a charge mode that's different than the cell type you're charging will damage the battery pack and possibly result in fire.



- After selecting the charge mode, select the charge rate by briefly pressing the MODE button until the desired charge rate is selected as indicated by the blinking red LED. See the table below for recommended charge rates.

### Recommended Charge Rates

We recommend choosing a charge rate for NiMH batteries that is close to the batteries' rated mAh capacity (e.g., charge a 2000mAh NiMH battery at no more than 2 amps). For NiCD batteries, we recommend choosing a charge rate that is 1-3 times the batteries' rated mAh capacity (e.g., charge a 1400mAh NiCD battery at 2-4 amps).

#### NiCD Charge Rates

1000mAh	1A - 3A
1200mAh	2A - 3A
1400mAh	2A - 4A
1600mAh	2A - 5A
1800mAh	2A - 5A
2000mAh	2A - 6A
2400mAh	3A - 6A
2800mAh	3A - 6A
3000mAh	3A - 6A

#### NiMH Charge Rates

1000mAh	1A
1200mAh	1A
1400mAh	1A
1600mAh	1A - 2A
1800mAh	1A - 2A
2000mAh	2A
2400mAh	2A
2800mAh	3A
3000mAh	3A

#### Lithium Charge Rates

145mAh	.1A (100mAh)	1250mAh	1.3A
340mAh	.3A (300mAh)	1500mAh	1.3A
350mAh	.3A (300mAh)	2000mAh	2A
520mAh	.3A (300mAh)	2100mAh	2A
750mAh	.7A (700mAh)	2150mAh	2A
830mAh	.7A (700mAh)	2500mAh	2A
910mAh	.7A (700mAh)	3200mAh	2A
1050mAh	.7A (700mAh)	4000mAh	2A

#### Sample average charge time for a 1600mAh battery charged at:

- 1Amp is 96 minutes
- 2Amps is 48 minutes
- 4Amps is 24 minutes

**1000mA in 1A**

$$1600/4000=0.4 \times 60=24 \text{ Minutes}$$

**IMPORTANT** Batteries may be charged at different rates depending on the manufacturer's suggestions. The table above is for general reference only and errs on the side of caution.

**IMPORTANT** If you are charging 8 cells using a 12V DC power source, the DC input (your power source) MUST be higher than 14V.

- After selecting the proper charge rate and double-checking that the proper charge mode is selected, press the START/STOP button to begin the charge process. During the charge process the red LED will be steady. If you need to stop the charge process before charging is complete, press the START/STOP button again or disconnect your battery from the charger.



**IMPORTANT** If there is a battery error (i.e., reversed polarity or internal short), the charge rate LEDs will blink together shortly after you press the START/STOP button. If this occurs, remove the battery from the charger and check all connections and battery integrity before attempting to charge the battery again.

- At the end of the charging process, the charger will detect when the battery reaches its peak and will stop fast charging. At this point, the charge rate LED will begin to blink, indicating that the charger is now in trickle mode and that the battery is ready for use.

### Charging Tips:

- Always unplug the charger when you are finished charging.
- Let the charger cool between uses, especially on hot or humid days.
- New batteries should be charged at the lowest recommended charge rate for the first 3 charging cycles (5 cycles for LiPO cells). This will ensure your batteries' long life and optimal capacity.
- Always use your charger on a hard surface. Never use it while setting on carpeted surfaces. Carpeted surfaces will block the cooling vents on the bottom of the charger, which can cause the charger to overheat during use.
- Most LiPO cells can be charged at 1C, but charging at .5C will produce a better charge and prolong the life of the battery. It will also lessen the chance of damaging the battery during the charging process.

Your new WattAge Charge-It-All Sport AC/DC Peak Charger is guaranteed to be free of workmanship and component error for a period of 90 days starting from the original time of purchase. Warranty claims must be accompanied by an itemized sales receipt that shows the purchase date.

In that WattAge has no control over the final use of this product, by installing and using the product, the user accepts all liability resulting from or included with the installation and use of this product. In no instance will the liability cost of the charger exceed the original purchase price of the charger.

#### FOR SERVICE AND INFORMATION WITHIN THE USA:

Global Services/WattAge Customer Care  
 18480 Bandilier Circle  
 Fountain Valley, CA 92708  
 Phone: (714) 963-0329 Fax: (714) 964-6236  
 Email: [service@globalhobby.net](mailto:service@globalhobby.net)  
<http://globalservices.globalhobby.com>

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