DC Vision Peak™ Ultra

DC Peak Charger For 1- to 8-Cell Ni-Cd, Ni-MH and 1- to 3-Cell Lithium Polymer Battery Packs

INSTRUCTION MANUAL

- Vision LCD icon shows charge status
- Multi-function LCD shows charge time, charge current and voltage
- Charges virtually all 1- to 8-cell Ni-MH & Ni-Cd packs and 1- to 3-cell Li-Po packs
- Adjustable charge rates from 0.1A–5A (Ni-MH & Ni-Cd)
- Adjustable charge rates from 0.1A–3A (Li-Po)
- Input and output circuit protection
- Automatic trickle charge
NOTICE
All instructions, warranties and other collateral documents are subject to change at the sole discretion of Horizon Hobby, Inc. For up-to-date product literature, visit www.horizonhobby.com/ProdInfo/Files/dyn4033-manual.pdf.

MEANING OF SPECIAL LANGUAGE
The following terms are used throughout the product literature to indicate various levels of potential harm when operating this charger:

NOTICE: Procedures, which if not properly followed, create a possibility of physical property damage AND a small or null possibility of injury.

CAUTION: Procedures, which if not properly followed, create the probability of physical property damage AND a possibility of serious injury.

WARNING: Procedures, which if not properly followed, create the likely probability of physical property damage AND may lead to a dangerous condition or cause death or serious injury to the user, OR procedures, which if not followed, create the high probability of superficial injury.

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

- Read all safety precautions and literature prior to use of this product.
- Never leave the battery and charger unattended during use.
- Never attempt to dismantle the charger.
- Never attach your charger to both an AC and DC power source at the same time.
- Never connect the charger to an automobile 12V battery while the vehicle is running.
- Never reverse the positive and negative terminals. Wrong connection will damage the battery and may cause damage to the charger.
- Never allow minors to charge battery packs without adult supervision.
- Never drop charger or batteries.
- Never attempt to charge dead or damaged batteries.
- Never attempt to charge a battery pack containing different types of batteries.
- Never charge a battery if the cable has been pinched or shorted.
- Never allow batteries or battery packs to come into contact with moisture at any time.
- Never charge batteries in extremely hot or cold places (recommended between 50-80 degrees F) or place in direct sunlight.
- Never connect the input jack (DC input) to AC power.
- Always use only rechargeable batteries. This charger cannot charge batteries such as “heavy duty,” “Alkaline battery,” or “Mercury battery.”
- Always connect the positive red lead (+) and negative black lead (-) terminals of the battery to the charger terminals correctly.
- Always disconnect the battery after charging, and let the charger cool between charges.
- Always inspect the battery before charging.
- Always terminate all processes and contact Horizon Hobby if the product malfunctions.
- Always keep batteries and charger away from any material that could be affected by heat (such as ceramic and tile), as they can get hot.
- Always monitor the area, use a fire alarm and have a fire extinguisher available at all times.
- Always ensure program settings are correct to prevent battery damage or fire.
- Always 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 may be damaged. Improper settings can cause the battery to become overcharged potentially leading to fire or explosion.
- Always connect the charge cable to the charger first, then connect the battery to avoid short circuit between the charge leads. Reverse the sequence when disconnecting.
- Never connect more than one battery pack to this charger at a time.
- Always ensure DC input is between 11–14V DC.
- Always constantly monitor the temperature of the battery pack while charging.
- Always end the charging process if the charger or battery becomes hot to the touch or starts to change form (swell) during the charge process.
- Always check battery type for Li-Po or Lithium Ion, and number of cells before charging.

This is a sophisticated hobby product and NOT a toy. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this Product in a safe and responsible manner could result in injury or damage to the product or other property. This product is not intended for use by children without direct adult supervision. This manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in the manual, prior to assembly, setup or use, in order to operate correctly and avoid damage or injury.
1. 12V DC input
2. Adjustable .1 to 5 amps fast charge rate (.1 to 3 amps for Li-Po)
3. LCD charge level/charging information display
4. LED charge status indicator
5. Tamiya-style output (battery) connector
6. Receiver pack charge lead adapter
7. 10-amp fuse
8. 7.5-amp fuse
9. Start/Select switch
10. Display Mode Button

CAUTION: Attempting to charge batteries different than those specified in this manual can result in excessive heat and other related product malfunctions, which can lead to user injury or property damage. Please contact Horizon Hobby or an authorized retailer with compatibility questions.

CONNECTING THE INPUT POWER SOURCE
This charger is powered by connecting the provided alligator clips to connect the charger to a 12V DC power source, such as a 12V hobby battery (HAN102) or an automobile battery. Connect the red (positive) end of the alligator clips to the red terminal of the DC power source and the black (negative) end of the alligator clips to the black terminal of the DC power source.

CAUTION: If you choose to power your charger with an automobile battery, never do so with the automobile running as fluctuation in power can cause product malfunction and possibly injury.

NOTICE: Always consult 12V battery collateral materials or Horizon Hobby before using with sources other than standard AC wall outlet.

FEATuRES

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SETTING THE CHARGE PERIMETERS
When power is supplied to the charger, the charger will beep and the cooling fan will begin to run. The display will default to the “Voltage” indicator.

Connect the battery to the charge lead. Use the included charge adapter (figure 1) if you are charging a radio battery. The charger will beep and the battery voltage will be shown on the LCD.

Notice which LED is flashing (figure 2). If it is not the LED indicating the chemistry of the battery cell you intend to charge, press and hold the Display mode button (figure 3) until the correct LED is flashing.

WARNING: Under no circumstances should a Li-Po battery be charged in the Ni-MH or Ni-Cd modes. The charge will not terminate fast charge, personal injury and extreme damage may occur.

The LED will automatically start flashing faster at this point and the LCD display will automatically switch to the “Amps” mode (figure 4). Press the Current Adjustment buttons (figure 5) to increase or decrease the charge rate.

Lower capacity radio batteries should be charged at no more than 1 amp. Higher capacity radio batteries (over 100mAh) may be charged at 2 amps. Large sub-C cell sport packs may be charged at up to 3.5 amps, and the higher quality (matched cell) performance packs may be charged at higher rates. Consider that the higher charge rates may lower charge times but may not be as efficient as lower charge rates.

Press the Start/Select button (figure 6) to begin fast charging the pack. The Vision LCD (figure 7) will begin to flash while the charger analyzes the battery condition and automatically determines the cell count.

NOTICE: If the charger notices a problem with the battery pack, such as shorted or weak cells, fast charge will not begin and the beeper will sound multiple times. Discard the battery pack.

As the battery becomes charged, the segments on the Vision LCD will increase. Once the pack is fully charged, the LCD will be fully illuminated. The charger will beep indicating the charger has entered a safe trickle mode. (See Trickle Charge selection). Press and release the Display Mode switch to view the real-time charge voltage, peak voltage, charge current and charge time displays.

NOTICE: Always connect the positive red lead (+) and negative black lead (-) terminals of the battery to the charger terminals correctly. Never reverse the positive and negative terminals. Wrong connection will damage the battery and may cause damage to the charger.

CONNECTINg ThE INpuT pOWEr SOURCe
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CAUTION: If you choose to power your charger with an automobile battery, never do so with the automobile running as fluctuation in power can cause product malfunction and possibly injury.

NOTICE: Always consult 12V battery collateral materials or Horizon Hobby before using with sources other than standard AC wall outlet.
ADJUSTING CHARGE CURRENT DURING THE FAST CHARGE PERIOD

Once the fast charge period has begun, the charge current is locked in. To change the charge current:

- Press the Start/Select button and the LED will begin to flash.
- Press the Display Mode Switch until the amps are displayed on the LCD.
- Press the Current Adjustment buttons to adjust the charge current.
- Press the Start/Select Button to resume fast charge.

VOLTS

The voltmeter function (figure 8) allows you to monitor the real-time charge voltage of the battery to determine the battery's charge state. The voltage increases as the battery becomes charged.

Figure 8

PEAK VOLTS

The Peak Volts (figure 9) records the highest voltage the pack has reached during the charge period. The higher the battery's average voltage, the more power it can deliver. Fully charging and discharging the battery pack (cycling) can increase the Peak Voltage, translating into longer and faster run times.

Figure 9

TRICKLE CHARGE

When the LED is flashing, a lower current pulsed trickle charge is being applied to the battery. Trickle charging safely maintains the charge capacity until you are ready to use the battery and helps equalize the cell voltage. The trickle charge current rate is 1/16 the fast charge rate.

Figure 10

BOOST (RE-PEAK) MODE

After the battery has peaked and enters the Trickle Charge mode, you may enter the Boost mode by pressing the Start/Select button. The word “Boost” will be displayed on the LCD (figure 10). This mode allows you to fast charge the battery at 1-minute intervals after the battery has peaked to “top-off” the pack.

NOTICE: Check with the battery manufacturer to ensure peaking is possible. Failure to follow correct peaking procedure could cause damage to both the charger and battery packs.

CHARGE TIMER

The Charge Timer records the fast charge time in minutes (figure 11). To determine the charge capacity applied to the battery, multiply the charge time in hours by the charge current in amps.

Example: 4.00 amps x (18 minutes/60) 0.3 hours = 1.2 amps/hours (X1000 = 1200mA/h)

Figure 11

FUSES

This charger is protected by a 2-amp glass fuse. If you need to replace the fuse, always replace it with the same fuse. Failure to do so may cause damage to the product. Replacement fuses are available from Dynamite.

NOTICE: Always replace your fuses with the same fuse type/model as supplied by the manufacturer.

WARRANTY

Warranty Period

Exclusive Warranty- Horizon Hobby, Inc., (Horizon) warranties that the Products purchased (the “Product”) will be free from defects in materials and workmanship for a period of 5 years from the date of purchase by the Purchaser.

5-Year Limited Warranty

Horizon reserves the right to change or modify this warranty without notice and disclaims all other warranties, express or implied.

(a) This warranty is limited to the original Purchaser (“Purchaser”) and is not transferable. REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE PURCHASER. This warranty covers only those Products purchased from an authorized Horizon dealer. Third party transactions are not covered by this warranty. Proof of purchase is required for warranty claims. Further, Horizon reserves the right to change or modify this warranty without notice and disclaims all other warranties, express or implied.

(b) Limitations- HORIZON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT NONINFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCT. THE PURCHASER ACKNOWLEDGES THAT THEY ALONE HAVE DETERMINED THAT THE PRODUCT WILL SUITABLY MEET THE REQUIREMENTS OF THE PURCHASER’S INTENDED USE.

(c) Purchaser Remedy- Horizon’s sole obligation hereunder shall be that Horizon will, at its option, (i) repair or (ii) replace, any Product determined by Horizon to be defective. In the event of a defect, these are the Purchaser’s exclusive remedies. Horizon reserves the right to inspect any and all equipment involved in a warranty claim. Repair or replacement decisions are at the sole discretion of Horizon. This warranty does not cover cosmetic damage or damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or modification of or to any part of the Product. This warranty does not cover damage due to improper installation, operation, maintenance, or attempted repair by anyone other than Horizon. Return of any goods by Purchaser must be approved in writing by Horizon before shipment.

Damage Limits

HORIZON SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCT, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE, OR STRICT LIABILITY. Further, in no event shall the liability of Horizon exceed the individual price of the Product on which liability is asserted. As Horizon
has no control over use, setup, final assembly, modification or misuse, no liability shall be assumed nor
accepted for any resulting damage or injury. By the act of use, setup or assembly, the user accepts all
resulting liability.

If you as the Purchaser or user are not prepared to accept the liability associated with the use of this
Product, you are advised to return this Product immediately in new and unused condition to the place of
purchase.

Law: These Terms are governed by Illinois law (without regard to conflict of law principals).

Safety Precautions
This is a sophisticated hobby Product and not a toy. It must be operated with caution and common sense
and requires some basic mechanical ability. Failure to operate this Product in a safe and responsible man-
ner could result in injury or damage to the Product or other property. This Product is not intended for use
by children without direct adult supervision. The Product manual contains instructions for safety, operation
and maintenance. It is essential to read and follow all the instructions and warnings in the manual, prior to
assembly, setup or use, in order to operate correctly and avoid damage or injury.

Questions, Assistance, and Repairs
Your local hobby store and/or place of purchase cannot provide warranty support or repair. Once assembly,
setup or use of the Product has been started, you must contact Horizon directly. This will enable Horizon to
better answer your questions and service you in the event that you may need any assistance. For questions
or assistance, please direct your email to productsupport@horizonhobby.com or call 877.504.0233 toll free
to speak to a Product Support representative.

Inspection or Repairs
If this Product needs to be inspected or repaired, please call for a Return Merchandise Authorization (RMA).
Pack the Product securely using a shipping carton. Please note that original boxes may be included, but
are not designed to withstand the rigors of shipping without additional protection. Ship via a carrier that
provides tracking and insurance for lost or damaged parcels, as Horizon is not responsible for merchandise
until it arrives and is accepted at our facility. A Service Repair Request is available at www.horizonhobby.
com on the “Support” tab. If you do not have internet access, please include a letter with your complete
name, street address, email address and phone number where you can be reached during business days,
your RMA number, a list of the included items, method of payment for any non-warranty expenses and a
brief summary of the problem. Your original sales receipt must also be included for warranty consideration.
Be sure your name, address, and RMA number are clearly written on the outside of the shipping carton.

Warranty Inspection and Repairs
To receive warranty service, you must include your original sales receipt verifying the proof-of-purchase
date. Provided warranty conditions have been met, your Product will be repaired or replaced free of charge.
Repair or replacement decisions are at the sole discretion of Horizon Hobby.

Non-Warranty Repairs
Should your repair not be covered by warranty the repair will be completed and payment will be required
without notification or estimate of the expense unless the expense exceeds 50% of the retail purchase cost.
By submitting the item for repair you are agreeing to payment of the repair without notification. Repair
estimates are available upon request. You must include this request with your repair. Non-warranty repair
estimates will be billed a minimum of $25 per labor hour. In addition you will be billed for return freight. Please
advise us of your preferred method of payment. Horizon accepts money orders and cashiers checks, as
well as Visa, MasterCard, American Express, and Discover cards. If you choose to pay by credit card, please
include your credit card number and expiration date. Any repair left unpaid or unclaimed after 90 days will
be considered abandoned and will be disposed of accordingly. Please note: non-warranty repair is only
available on electronics and model engines.

United States
Electronics and engines requiring inspection or repair should be shipped to the following address:
Horizon Service Center
4105 Fieldstone Road
Champaign, Illinois 61822
USA

All other Products requiring warranty inspection or repair should be shipped to the following address:
Horizon Product Support
4105 Fieldstone Road
Champaign, Illinois 61822
USA

Please call 877-504-0233 or e-mail us at productsupport@horizonhobby.com with any questions
or concerns regarding this product or warranty.