

# **INSTRUCTION MANUAL**

**Important! Read Instruction Before Use  
Torpedo Is Designed For Expert Users Only**

# ***Torpedo***

***Ni-Cd & Ni-MH Boosting System***

VEESC Pulse Boosting & Convenient AC input  
INDI Multitasking Full Charge Detection Algorithm  
Minus Delta Voltage Full Charge Termination Method  
Automatic Voltage Drop Threshold 0mV-70mV  
Pulse Count 16-Bit Analog to Digital Converter  
65536 Steps Ultra High Resolution Counter  
Up to 20 Amps Conditioning Discharging Current  
6.5 Amps Repeak Charging Current  
Auto Detect Smart Lockout Timer  
16-Bit Digital Signal Processing

***Just race,  
no games!***

***www.integy.com***

**MICROPROCESSOR BASED 16-BIT DIGITAL CHARGER**

## Operation

Thank you for purchasing the INDI Torpedo, it is the smallest and most accurate battery boosting system ever developed. The Ni-MH and Ni-Cd are considered high maintenance batteries that require regular discharge cycles to prevent voltage depression. Crystalline formation which causes capacity loss is mainly generated by the nickel plate in both Ni-Cd & Ni-MH. The INDI Torpedo is a complete battery repeak boosting system designed to get the best performance out of your battery packs. Torpedo is equipped with VESC Pulse CHARGE for all Ni-Cd and Ni-MH cells, the boosting operation is completely automatic. The INDI Torpedo will operate from any 110-120V AC outlet with a minimum of 3 amps capacity. It will operate with less amperage, but the boosting current will be limited to the maximum capacity of the supply. If the power source is not rated for at least 3 amps, the boosting may terminate early.

**CAUTION:** Never operating an electrical machine using AC outlet near water and never attempt to open the unit. This unit does not require replaceable fuse and contains no user replaceable part(s). If you suspect the unit is malfunctioning, unplug the unit immediately and send the unit to a qualified service center for repair.

If an overload occurs or improper connection is made, the fuse will blow. In this case, disconnect the power and send the unit to a service center for repair. NEVER attempt to repair or open the charging unit, the unit contains no user replaceable part.

The INDI Torpedo is equipped with one automatic discharge & charge cycle profile. You can upgrade the firmware in the future. When battery technology change, this unit is easily user upgradable. Please follow the following procedure closely for the best possible performance.

## Operating Procedure

**1. Charge your racing pack using your regular charger, it is important that your battery pack is fully charged. Certain charger or battery pack may false peak and require additional repeak.**

**2. Let your battery pack cool down for at least 15 minutes**

**3. Place your fully charged battery pack in your r/c car**

**4. Your battery pack should be close to "room" ambient temperature**

**5. Torpedo require at least 5 minutes to complete it's boosting algorithm. Insufficient boosting time can drastically reduce boosting effectiveness**

**6. Connect the Torpedo to your battery pack's battery terminal. Red to the + terminal and black to the - terminal**

**7. Press the start button 5 to 7 minutes before your race is up**

**8. Now, the PROCESSING LED and ANALYZING LED would light up for about 10 to 20 seconds**

**9. After battery analyzing completed, the BOOSTING LED would light up. The actual boosting begins and usually would last about 4 to 5 minutes.**

**10. At this point, it is critical that you monitor your battery pack temperature closely. Unplug the unit from your battery pack if any overheating occurs**

**11. During the boosting operation, the beep tone repeat every few seconds.**

**12. When the boosting completes, the unit will shut off automatically and the beeping tone stops. You can now ready to race.**

**\*\*\* This unit is not a charger. Never connect an empty pack to the INDI Torpedo. The cooling fan turns on and off automatically. Under normal operation, INDI Torpedo will boosting your pack without overcharging. A short VESC cycle will boosting battery performance by reducing battery internal resistance.**

## Safety Precautions

1. Do not leave the booster unattended while in use.

2. Do not operate the booster near water.

3. It is the users responsibility to follow battery mfg. suggested charging rate. Users must also closely monitor the pack temperature during fast charging. Overcharging may occur if the INDI Torpedo malfunction or, when user does not follow battery mfg. recommended charge rate.

4. Never connect the charger to a battery pack with less than 4 cell or more than 7 cell.

5. This unit is not intended for use by unsupervised children.

6. This booster is designed for R/C car high power Ni-Cd battery only.

7. When boosting, also monitor the temperature of the unit. If the unit becomes too hot, disconnect the unit.

## Warranty and Repair

Your INDI booster is guaranteed against workmanship and manufacturing defects for a period of 30 days from the original date of purchase. This warranty is limited to the original purchaser of the charger and is not transferable. Warranty repair will not cover units which have been modified or serviced by an unauthorized service center.

Include your complete name and address information inside the box, and write address on the outer label/return address area. Also, include a brief summary of the difficulty. Also, include a phone number where you can be reached during the day time. Send the unit to: Integy Inc. 1140 Centre Dr #E, City of Industry CA 91789.

To receive warranty service, include your original dated sales receipt to verify your proof-of-purchase date. Providing that warranty conditions have been met, your booster will be repaired free of charge. Any return freight for non-warranty repairs will be charged to the customer. For non-warranty repairs, please advise us of the payment method you prefer to use. Specify Visa or MasterCard, or we can return C.O.D. with extra \$6 cod fee. If you prefer to use a credit card, include your card number and expiration date.

In no case shall our liability exceed the product's original cost. We reserve the right to modify the provisions of this warranty without notice.

Because Integy Inc. has no control over the use of the charger, no liability may be assumed nor will liability be accepted for any damage resulting from using this product. Every INDI charger is thoroughly tested and cycled before leaving our distribution facility and is, therefore, considered operational. By the act of operating this charger, the user accepts all resulting liability.