# Digital Discharger Instructions

## Characteristics

- Discharges 6-7 cells 500 to 3300 mAh (designed for fast discharge).
- LCD displays battery capacity in mAh.
- Fully reverse polarity protected
- Built-in cooling fan
- 3 diffrent discharge currents: 20A, 25A, 30A
- Input 11V to 15V

## Operation

1. Connect the DC input wires (big crocodile clips), red wire = positive (+), black wire = negative (-) to the power supply.

2. Check that the fan is working and that the air inlet is not obstructed

3. Connect the output connectors to the battery, red = positive (+), black = negative (-).

4. The mAh display will reset to zero.

5. Select discharge current.

6. Press the "Start" button.

7. The "Discharging" LED will turn red and the display starts counting. The battery is beeing discharged.

8. When the battery is discharged, the LED goes off.

9. The LCD now displays the battery capacity in mAh.

**22601 La Palma Ave., Suite 103, Yorba Linda, CA 92887 Ph: (714) 694-2812 Fax: (714) 694-2815**

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## *Possibilities of utilization*

1. Comparison and analyse of your batteries in order to establish a hierarchy (hobby, practice, race).

2. Adjust your gear ratio depending on the mAh remaining in the battery.

## *Analysing your batteries*

In order to know exactly the current state of your batteries, you must measure their capacity in mAh. To achieve this, you must first charge your batteries and then discharge them with the digital discharger and write down their relative capacities. Hierarchizing your batteries depending on these capacities will then be easy, as will the choice of your car's gear ratio.

*Utilization example*

At the end of a race the residual capacity should not exceed about 10% of the battery's total measured capacity.

If you have about 20% or more of the battery's capacity remaining, consider using a bigger pinion. Start with one extra tooth and add another one for each extra 10% of residual capacity.

*Calculation example*

Measured capacity: 1960 mAh
Residual capacity: 221 mAh
Calculation: 221x100/1960 = 11.28% --> pinion is adequate

If the result had been 32%, you would use a pinion with two extra teeth.

This example shows you how to optimise the efficiency of your motor/battery during competitions.

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*Choosing the discharge rate*

5 minutes or more --> 20A
4-5 minutes --> 25A
4 minutes or less --> 30A

## *Warnings*

- The housing and the cells may become very hot while discharging
- Do not let the discharger without supervision.
- Do not expose the discharger to water or humidity.
- Discharge only Nicad or NiMH batteries with 6 or 7 cells.
- Do not obstruct the air intake with any foreign object.
- Do not short-circuit the discharger, and do not fit the pack backwards
- Any modification (replacing, shortening, lenthtening) to the battery connecting wires will result in uncorrect discharging and measurements.
- Allow the discharger to cool down.
- When the LCD display goes beyond 2000 mAh, it restarts from zero.
- The battery pack must never touch the discharger's case.
- Do not stand the unit on a heat-sensitive surface for discharging (the case gets quite warm during discharge process, and this could damage the surface beneath).

## *Warranty*

This discharger is warrantied to work when delivered. Any damage due to misuse by the user will be repaired at the user's cost. No liability will be taken for any damage to the pack or the environment.

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