

Thank you for purchasing the DX-102 LEVEL.

Read this manual thoroughly since misoperation can damage Ni-cd batteries.

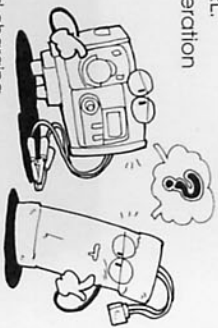
Store this manual with the LEVEL for the future reference.

How to use the discharger.

A Ni-cd battery is like a tank storing electricity.

When electricity flows into the tank, this is called charging.

On the other hand, when electricity is released from the tank, this is called discharging. It is natural that the Ni-cd will be discharged when running the model. So, why do you need a discharger? The uses are as follows:



① **Capacity Measurement** [Measure it after full charging.] This unit measures how much energy the Ni-cd can store.

② **Remaining Current Measurement** [Measure it after running.] This unit measures the remaining current in Ni-cd which is then used for adjusting gear ratios, motor, etc.

③ **Refresh Charging** [Measure it after running.] Discharge the remaining current in Ni-cd before recharging in order to prevent "memory effect".

④ **Cycling** [Recharge Ni-cd after discharging with the LEVEL.] Reactivate Ni-cd batteries stored for a long time.

[Discharge and charge several times.]

Features

■ The LEVEL is a powerful discharger that can be used with a wide variety of Ni-cd battery packs, from power-source Ni-cd to transmitter Ni-cd.

■ This unit can be used for a Ni-cd battery pack of 1 to 10 cells with 200mAh or higher.

■ The discharging current can be switched, 1A or 5A.

■ It measures the capacity(mAh) and time (sec.) of discharging from the start to finish.

■ The power of Ni-cd is shown by the Average Voltage Function (AVE.VOLT) which indicates voltage during discharging.

■ Discharging Cutoff voltage can be set every 0.05V in the range of 0.80-1.15V per cell.

■ This unit can be linked with the BX-212 Charger, which makes it possible to charge after discharging (or, to discharge after charging) automatically.

■ If the thermostat senses an increased temperature of the Heat Sink inside the LEVEL, This unit takes a pause in discharging until the temperature goes down.

■ The Charger Stand II and Charger Plier can be used with this unit.

■ Since the discharger converts the energy of Ni-cd batteries into heat energy, it will usually get extremely hot. However, the case of the LEVEL will NOT become so hot like conventional dischargers due to the application of the floating heat sink.

For the Safe Usage of this Unit.

Mis-operation may cause dangerous situation due to the nature of R/C model. Read this manual thoroughly to use this unit safely.

Explanation of Warnings and Signs

In this manual, warnings are classified at three levels, depending on the severity of the danger posed by failure to observe the proper procedure in question. They are as follows.

! Danger

Failure to observe the matter discussed in such an item poses a serious threat of death or severe injury.

! Warning

Failure to observe the matter discussed in such an item poses a possibility of injury or damage to the equipment or property.

! Caution

Failure to observe the matter discussed in such an item poses a possibility of injury or damage to the equipment or property.

! Danger

● When using a car battery as the power supply, place the discharger at a distance from the car. ※ If the discharger is placed in the engine compartment or in the car itself, a short circuit could occur.

● Do not put your face near a battery that is being discharged. ※ It may cause serious injury.

● If a battery leaks during discharging, do not let the liquid come into contact with your eyes. Blindness could result. ※ If you do get the liquid in your eyes, flush with your eyes with a large amount of water and then contact a doctor immediately.

● Do not store or transport this equipment together with batteries. ※ There is a risk of causing a fire when a short circuit occurs.

● Disconnect the power supply and any batteries before cleaning this unit. Use non-flammable solution for cleaning. ※ Failure to do so could cause a fire.

● Do not connect the terminals to more than one Ni-cd battery pack. ※ It is dangerous because a short circuit could occur between batteries.

● Do not use a household power outlet (AC mains).

! Warning

● Be sure to keep this unit out of the reach of children.

● Do not disassemble this unit.

● The supply voltage of this unit is 11-16V(DC). Use either a 1A or higher stabilized power supply, or a 12V battery with above 5Ah that meets the regulation.

! Caution

● Do not discharge battery other than hydropack and Ni-cd for R/C model. ● Do not put this unit on a fusible object. ● If the power supply cord is frayed or damaged, do not use this unit until the cord is replaced or repaired. ● Do not use this unit if it becomes wet. Send it to the repair service center. ● Do not use the unit if a foreign object (especially a metal object) is inserted through the slots on the side of this unit until the object is removed. ● Be sure to use a designated fuse. Other fuses will not provide the proper protection. ● Do not set up this unit near water or in a very humid location. ● Be sure to discharge at 1A in case of thin lead wires. The wires become extremely hot when they are forced to carry a large amount of current. ● Do not connect or disconnect the lead wire between this unit and power outlet when a Ni-cd is connected to the unit. Doing so will damage the unit. Shorting the terminals of the source power supply with the output terminals while discharging will damage the unit. ● Do not put an object or finger into the fan while the unit is in use. Doing so will cause damage to the fan and may cause injury. ● Be sure to remove the Ni-cd after the completion of discharge.

Warranty Limitations

● The display on this unit is not intended for use as a measuring tool.

● The accuracy of the values displayed is not guaranteed.

● This unit is not made to improve the basic performance of a Ni-cd battery. Deterioration in Ni-cd performance resulting from the use of this discharger is not covered by our company's warranty.