

User Manual for No-12 Charger

(12/24/2016)

This report describes the use of No-12 Charger for survival use. It is light enough to carry in a back pack. It will run off any source of DC of less than 24 volts. It will charge smaller cells such as AA, AAA cells for flash lights, head lamps, charge a USB device or can be used to produce survival light.



In a pinch the USB unit can be used to measure and adjust the voltage between 3-7 volts (limited range), if one pre-checks the accuracy of the voltage measurements with a good reference DC volt meter. The LEDs are cool white 3 Watt beads 280LM from ebay. At 4AA or 5.85 volts the LEDs use .19 amp or a power of 1.1 watt. This is an efficient range of use of power to convert to light. Also one can turn down the amount of light by lowering the voltage of the supply. Thus one can produce light on as small amount of power as is needed.

Normal use is to adjust the voltage (with a 390 ohm resistor as the load across the circuit) to what is given in the table on the back side of the charger. Charging 4AA or 4AAA cells takes over night to 24hrs get to the float voltage of a full charge. The cells can be left on charge for days without harming the NiMH cells.

In a survival situation you may want to quick charge for about 4-8 hrs before reusing. The output voltage can be adjusted to anything less than input voltage by 2.3 volts. Then the unit will hold stably this output voltage until the input voltage drops below 2.3 volts of intended output voltage. When adjusting to 10.07 volts output (charging a 9v NiMH) one needs to have a minimum of 12.4 volts input.

When short circuited or drawing high currents, the Polly fuse will trigger at about 1.2-1.8 amp and limit the flow to about .09-.12 amp. Repeated slow triggering after the first trigger can be as low as 1.2 amp. Minimum voltage the output can be adjusted to is about 0.8 V. Single to multi cells NiMH can be recharged if needed by using approximately 1.46 V per cell for NiMH cells. Rechargeable Lithium, NiCD, NiZN, and other batteries can be charged using this charger as long as the float voltage is set to be equal to or less than the manufactures recommendation for the battery.

The useful current range for this power supply is 0 to about 1.1 amp at adjusted voltage.