D-67 Charger

Congratulations on your choice of the Team Orion D67, a microprocessor-controlled, high-tech battery charger. This device delivers optimal user-friendliness and maximum reliability. Its built-in multifunction digital display provides you with sufficient information about the charging process and the state of the batteries. This battery charger was designed especially for charging NiCad and NiMH batteries. A supply voltage of 13.8VDC allows charging batteries with 6 to 7 cells (4-5 cells with max. 1A).

Warning

Charging NiCad or NiMH batteries with high current produces a large amount of gas and thus strong gas pressure within the cells. With old or defective batteries, this can cause an explosion of the battery cells. Therefore always maintain a safe distance from the charging and never charge batteries in the vicinity of small children. Charging batteries with less than 6 cells or with higher supply voltage causes greater heating of the charger. Here you should reduce the charging current since it could cause overheating or damage to the final stage of the device. When charging from an automobile battery, avoid short circuiting the charging terminals with the automobile chassis. In the battery charger the positive terminal of the supply voltage is connected directly to the positive terminal of the charging terminal; on contact with the automobile chassis, this would cause a short circuit of the automobile battery.

Specifications

CHARGE NiMH & NiCD

Input voltage: 12-13.8 volts
Charging current: 0-10 amperes
Trickle current: 0-10 amperes pulse
Number of cells: 6-7 cells (4-5 cells max. 1 A)
Temperature probe range: 0 - 50° C
Charging mode: linear
Cut-Off: delta peak, battery temperature
Multifunction digital display: Charging current, battery voltage, capacity, charging time, temperature
Additional features: timer function, alarm for power failure, pole reversal / short-circuit protection:
Dimensions (W x D x H): 135 x 90 x 58 mm

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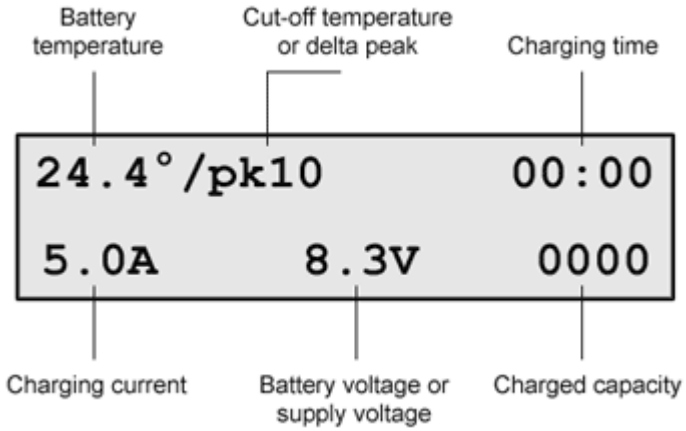
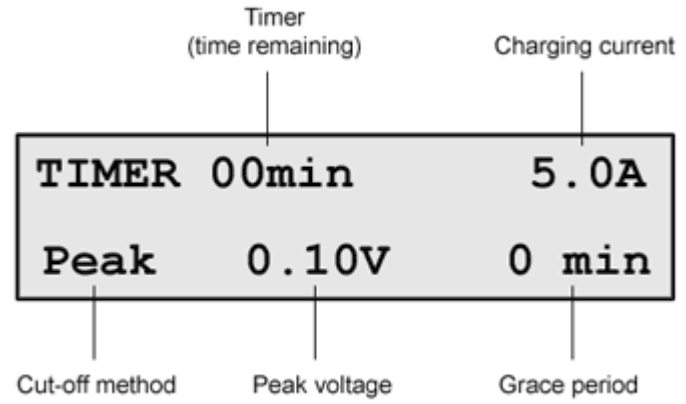
Charging Mode



Start key: start or stop charging, start the timer countdown
Mode key: toggle between charging mode and setup mode
Plus key: (disabled in charging mode)
Minus key: (disabled in charging mode)

Setup Mode

Delta Peak Cut-off:



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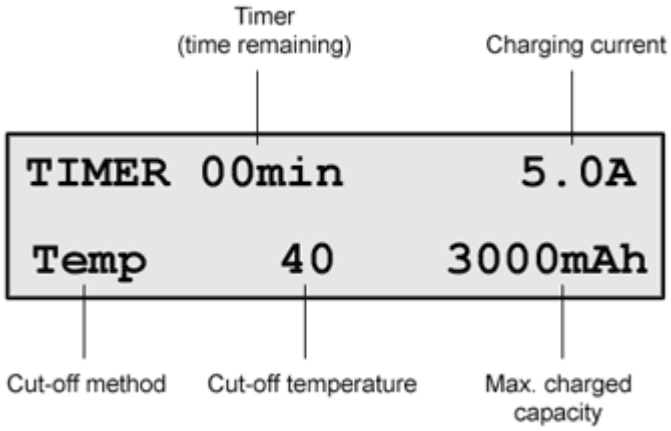
Temperature Cut-off:



Start key: leads from Setup mode to charging mode
Mode key: select charging parameter, cursor indicated selected parameter
Plus key: increase value of selected parameter
Minus key: decrease value of selected parameter

Setup

The supply voltage requires either an automobile battery or a stabilized power supply. When using a power supply, assure that it can supply the necessary current. The output voltage of the power supply should be set to 12V for charging 6 cells. Excessive supply voltage causes greater heating of the charging device. When charging batteries with 4 or 5 cells, the charging current must not exceed 1 ampere! The supply voltage is connected to the red cable (positive terminal) and the black cable (negative terminal) at the back of the charger. If the connections are reserved, the circuit is electronically broken within the charger. In this case you need not to change a fuse, but only correct the connections.

Connecting the battery

The battery to be charged is connected to the red cable (positive terminal) and the black cable (negative terminal) at the front of the charger. If the battery connections are reversed, a warning signal sounds.

Starting charging
If the battery has been connected correctly, the multifunctional digital display indicates the momentary battery voltage. Pressing the Start key begins charging. The LED signals that charging is in progress. The multifunctional digital display indicates charging current, battery voltage, temperature and momentary charging time.

Ending the charging operation
Depending on the charging mode, the charging operation terminates when the peak voltage or the battery temperature is achieved. Completion is reported by means of an acoustic signal. The charging operation can also be terminated by pressing the Start key again.

Trickle charging on completing the charging operation
After charging operation the battery continues to be charged with short current pulses (trickling). The average trickle current is 10% of the charging current. The charging operation can be resumed by pressing the Start key again.

Warning signal for supply voltage failure
If the supply voltage is interrupted while a battery is in the charger, a warning signal sounds. This proves especially helpful if a power supply is being used and the supply voltage is interrupted by a power failure. An already started charging procedure is continued automatically on restoration of the supply voltage.

Setup-setting charging parameters
Pressing the Mode key switches the charger from charging mode to setup mode; thereupon the charger displays the current settings for the charging parameters (setup display). Each additional pressing of the Mode key advances the cursor (a line under the character) to the next parameter. The Plzus and the Minus keys allow modification of the parameter selected by the cursor. To persistently save the charging parameters in the charger, keep Mode pressed and simultaneously press the Start key. The charger reports successful storage of the parameters with a signal tone. To avoid storing the charging parameters persistently, press only the Start key after setting the parameters.

Setting temperature charging mode

When the temperature charging mode Temp is shown at the bottom left of the setup display, the cut-off temperature abd the maximum charged capacity can be set. This means that charging terminates either when the set battery temperature or the set charged capacity has been reached. The maximum charging capacity option largely protects batteries against overcharging when the temperature probe is missing. The charging capacity must be set to the tyoe of battery used; several test charges can help determine this value, and the highest possible value is entered.

Setting the Delta Peak charging method

When delta peak charging mode Peak is shown at the bottom left of the setup display the level of the voltage bend can be set (default value: 0.1V). In addition, the grace period can be set; here the battery voltage is first tested for voltage drop after the set time; this allows using the delta peak method to charge even batteries with poor voltage characteristics. CAUTION: the grace period is not suited for repeaking batteries.

Setting the charging current

No general recommendations can be given for setting the charging current. This varies according to both the batteires used and their respective applications. In general, however, it holds that higher charging current produces higher voltage (=pressure) in the battery and lower charging current produces greater charged capacity (=life of the charge, driving time). However, the charging current for rapid-charging driving batteries must not fall below 3.0 amperes and must not exceed 6.0 amperes.

Timer

A timer can be activated in the setup display (top left of display). The timer value defines the time interval until the automatic start of charge. Particularly for competitions this allows charging batteries precisely to the minute; you will never again have to begin a race with a half-charged battery.
Pressign the Start key begins the countdown for the timer. The display signals countdown mode with a blinking colon on the time display. The timer value wis reset to zero when charging begins. The timer value cannot be stored persistently.