



## BATTERY TENDER® JUNIOR PRODUCT INFORMATION

### Battery Tender® Junior: Models:12V0.75A, 6V0.75A



### The Battery Tender® Junior

6 Volt, 0.750 Amp  
12 Volt, 0.750 Amp

**GENERAL DESCRIPTION:** The Battery Tender® Jr. battery charger is a wall mounted, linear power converter that has a true DC output at a

maximum power level of approximately 9 or 5.5 watts respectively for the 12V and 6V models. Both models have a maximum output charging current of 0.75 amps.

**OUTPUT CABLE CONNECTIONS:** The battery charger DC output cable has a molded, quick disconnect plug. The ring terminal, alligator clip, and cigarette adapter output cable accessories all contain the mating plug.

**STATUS INDICATOR LIGHTS:** The following describes the operation of the status indicator lights:

- **RED** - When the red light is on, the battery charger is in the process of fully charging the battery. In order to properly charge large capacity batteries, the charger may remain in this mode for several hours or even days.
- **GREEN** - When the green light is lit, the battery charger is in the storage mode of charge. In this mode the charger will maintain the battery at full charge.

### SPECIAL TROUBLESHOOTING INFORMATION:

- 1) **NEITHER OF THE CHARGER STATUS INDICATOR LIGHTS TURN ON:**
  - a) Disconnect the charger AC power plug from the AC outlet and recheck that the battery charger alligator clips or ring terminals are connected to the correct polarity battery terminals and that they are making a clean, tight connection.
  - b) Check to make sure that the AC outlet is supplying power by plugging in another appliance like a lamp, or check the outlet voltage with a voltmeter.
- 2) **THE STORAGE/FLOAT MAINTENANCE STATUS INDICATOR LIGHT (GREEN LIGHT) GOES ON IMMEDIATELY WHEN CHARGING A BATTERY KNOWN TO BE DISCHARGED:**



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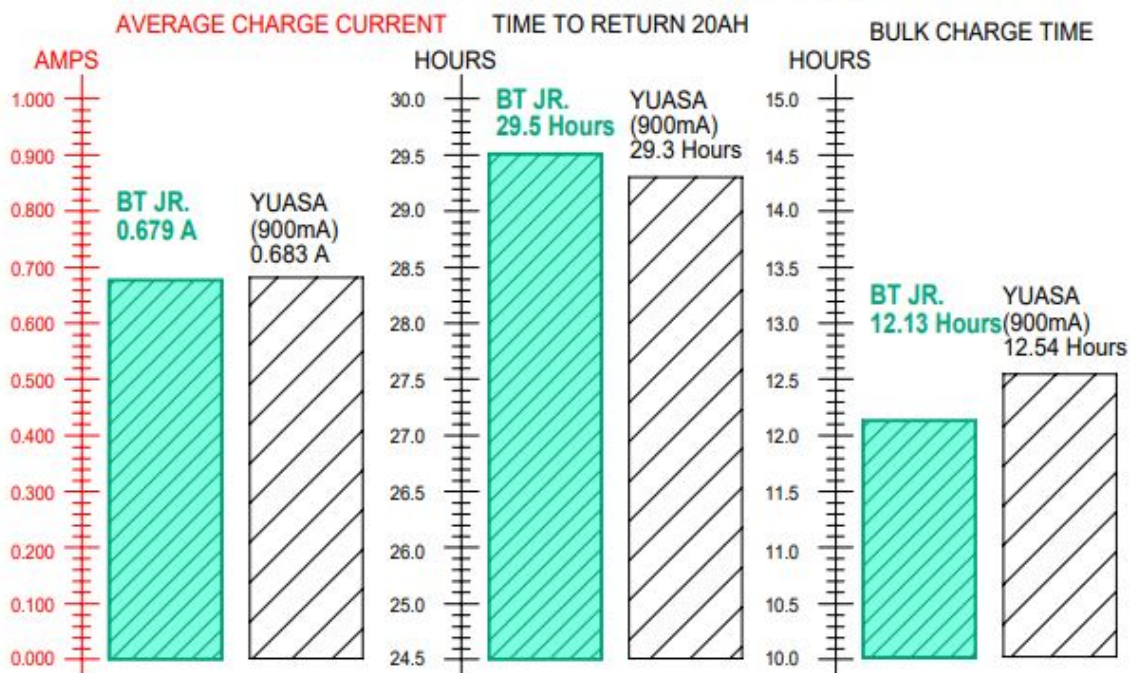
- a) The battery may be defective. Take the battery to the dealer to be tested.
- b) The electrical connections between the charger and the battery may not be completely secured.

### 3) AFTER THE STORAGE/FLOAT MAINTENANCE STATUS INDICATOR LIGHT (GREEN LIGHT) HAS BEEN ON, THE RED LIGHT COMES ON.

- a) This is NORMAL OPERATION for the Battery Tender® Junior.
- b) There has been a momentary AC power outage that reset the charge cycle.

There is some other load or appliance drawing power from the battery. When the battery voltage drops below 12.0V to 12.5V, the charge cycle resets

### Battery Tender Junior Battery Charger 12 V 0.750 Amp Performance Comparison



**Figure 1** Performance Comparison Chart



## BATTERY TENDER® JUNIOR PRODUCT INFORMATION

<b>Battery Tender® Junior (12 &amp; 6 Volt)</b>		
Charger Specification Summary		
<b>Deltran Part Number:</b>	<b>021-0123</b>	<b>021-0127</b>
<b>Nominal Output:</b>		
<b>Voltage:</b>	<b>12 Volts</b>	<b>6 Volts</b>
<b>Current:</b>	<b>0.75 Amps</b>	<b>0.75 Amps</b>
<b>Input Voltage:</b>	115 VAC	
<b>Input Frequency:</b>	60 Hz	
Maximum Input Current:	0.43 Arms	0.23 Arms
Nominal Efficiency:	60%	60%
Nominal Power Factor:	0.78	0.78
<b>Charger Output:</b>		
Maximum Power: (+/- 3%) @ 25 °C	9 Watts	5.5 Watts
Maximum Current: During Bulk Charge	0.75 Amps	0.75 Amps
Absorption Voltage:	14.4 VDC = (2.37 vpc)	7.2 VDC = (2.37 vpc)
Note: Since the Battery Tender® Junior is a 2-step charger; the absorption voltage is the switchover point from bulk charge to float charge.		
Equalization Voltage:	NA	
Float Voltage:	13.2 VDC = (2.2 vpc)	6.6 VDC = (2.2 vpc)
Charge Reset: Battery Voltage Threshold	12 to 12.5 VDC (2 to 2.08 vpc)	6 to 6.2 VDC (2 to 2.07 vpc)
<b>Electrical Isolation:</b>		
Input / Output:	1500 VAC	
Input / Chassis:	1500 VAC	
Output / Chassis:	500 VAC	
<b>Operating Temp:</b>	-20°C to 50°C	
<b>Dimensions:</b>	3.313 in(85 mm)L x 2.313 in(59 mm)W x 1.875 in(48 mm)H	
<b>Weight:</b>	1 lb.	
<b>Carton Size: (Plastic Clam Shell)</b>	7.5 in(191 mm)L x 3.75 in(96 mm)W x 9.25 in(235)H	
<b>Shipping Weight:</b>	2 lbs.	
<b>Enclosure:</b>	94V0 Flame Retardant Plastic	
<b>Special Features:</b>		
Short Circuit Protection:	YES	
Reverse Polarity Protection:	YES	
Spark Proof:	YES	
Temperature Compensation:	NO	
Agency Listings: UL, ETL, CSA, etc.	Designed to meet UL-1236 and CSA 22.2 Contact the office in DeLand, FL for information on agency listings. Phone: 386-736-7900	

**Table 1** Specification Sheet: Battery Tender® Junior



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### **Battery Tender® Junior 6V0.750A:**

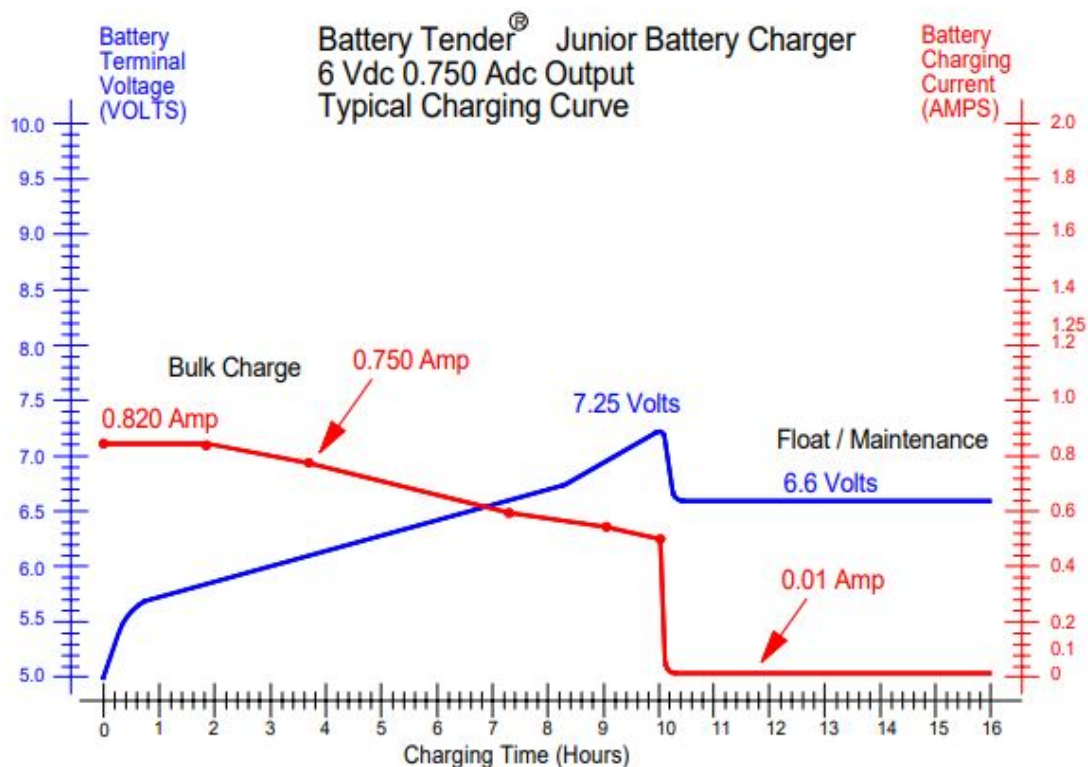
**Stage 1) Bulk Charge:** Red Light On, Green Light Off, Constant Current = 0.750 Amp, Transition to Stage 2, Absorption Charge when battery voltage reaches 7.2 VDC.

**Stage 2) Absorption Charge:** Technically, there is no clearly defined Absorption phase because there is no constant voltage period before the float / maintenance phase.

However in the region where the battery voltage increases above 7.0 VDC, the normal minimum absorption voltage for a GEL cell, one could argue that there that there is some absorption activity taking place in terms of the battery electro-chemical reaction to the higher voltage.

Stage 3) There is no Equalization Charge, Go directly to stage 4.

**Stage 4) Float Charge:** Red Light Off, Green Light On. Float Voltage = 6.6 VDC. If an external load is applied to the battery while the charger is in stage 4, Float Charge, and if the battery voltage drops below a range between 6.0 to 6.25 VDC, then the charge cycle restarts.



**Figure 2** Charging Graph: Battery Tender® Junior 6V0.750A



## BATTERY TENDER® JUNIOR PRODUCT INFORMATION

### **Battery Tender® Junior 12V0.750A:**

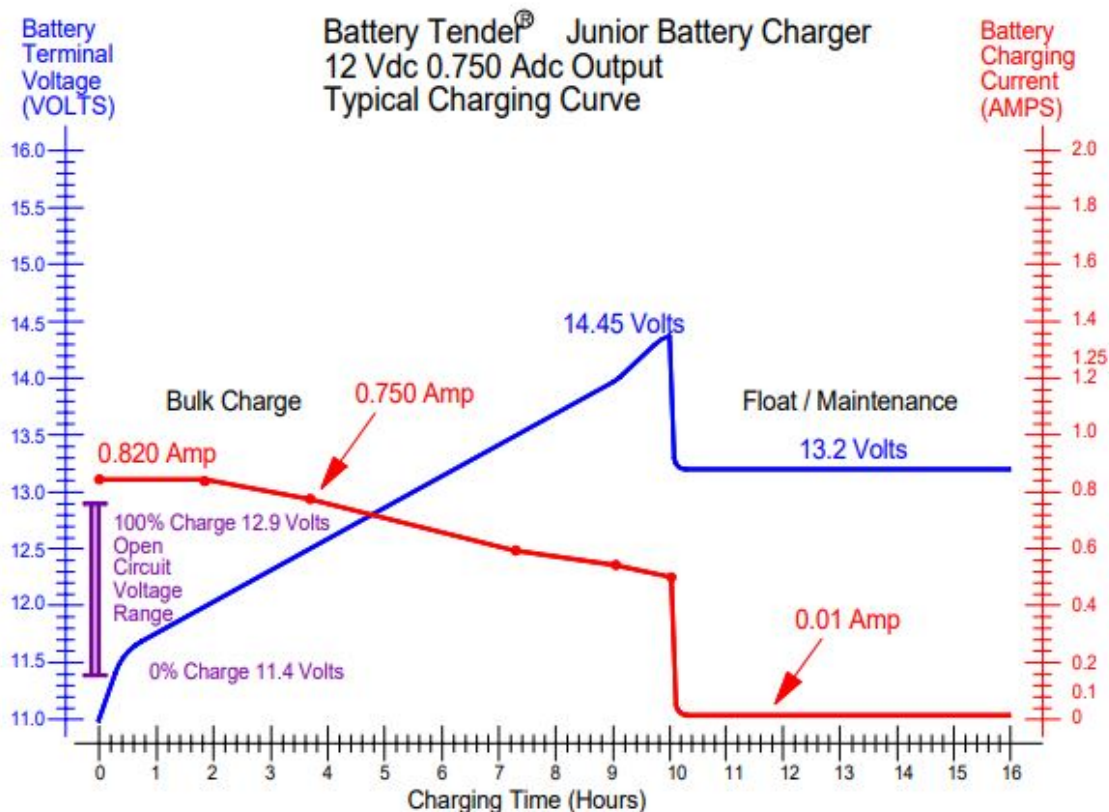
**Stage 1) Bulk Charge:** Red Light On, Green Light Off, Constant Current = 0.750 Amp, Transition to Stage 2, Absorption Charge when battery voltage reaches 14.4 VDC.

**Stage 2) Absorption Charge:** Technically, there is no clearly defined Absorption phase because there is no constant voltage period before the float / maintenance phase.

However in the region where the battery voltage increases above 14.1 VDC, the normal minimum absorption voltage for a GEL cell, one could argue that there that there is some absorption activity taking place in terms of the battery electro-chemical reaction to the higher voltage.

Stage 3) There is no Equalization Charge, Go directly to stage 4.

**Stage 4) Float Charge:** Red Light Off, Green Light On. Float Voltage = 13.2 VDC. If an external load is applied to the battery while the charger is in stage 4, Float Charge, and if the battery voltage drops below a range between 12.0 to 12.5 VDC, then the charge cycle restarts.



**Figure 3** Charging Graph: Battery Tender® Junior 12V0.750A