



Deltran
BATTERY TENDER® JUNIOR
12 Volt or 6 Volt
Single Voltage Output Battery Chargers
DC Output Current: 0.750 Amp



Note: The economical Battery Tender Junior is designed to accommodate the demanding charging requirements of high quality lead-acid batteries and should safely charge all lead acid battery types. Always check with the battery manufacturer to get the most complete charging recommendations that are consistent with your application.

The best way to eliminate sulfation is to prevent it!
The Battery Tender® Junior will fully charge a battery and maintain it at the proper storage voltage without the damaging effects caused by most trickle chargers (especially sulfation). This trickle charger has a brain!

- ◆ **SUPERSMART™ Charging Technology**
- ◆ **4-STEP CHARGING (Initialization, Bulk, Absorption, Float)**
- ◆ **SPARK PROOF**
- ◆ **SHORT CIRCUIT PROTECTED**
- ◆ **REVERSE POLARITY PROTECTED**
- ◆ **5 YEAR WARRANTY !! (Material & Workmanship Only)**

ORDERING INFORMATION	
Deltran PART NO.	DESCRIPTION
021-0123	12 Volt 0.750 Amp Output
021-0127	6 Volt 0.750 Amp Output
081-0148-25	Optional 25 ft. 2-pin Output Extension Leads
MSRP \$39.95 U.S.D.	

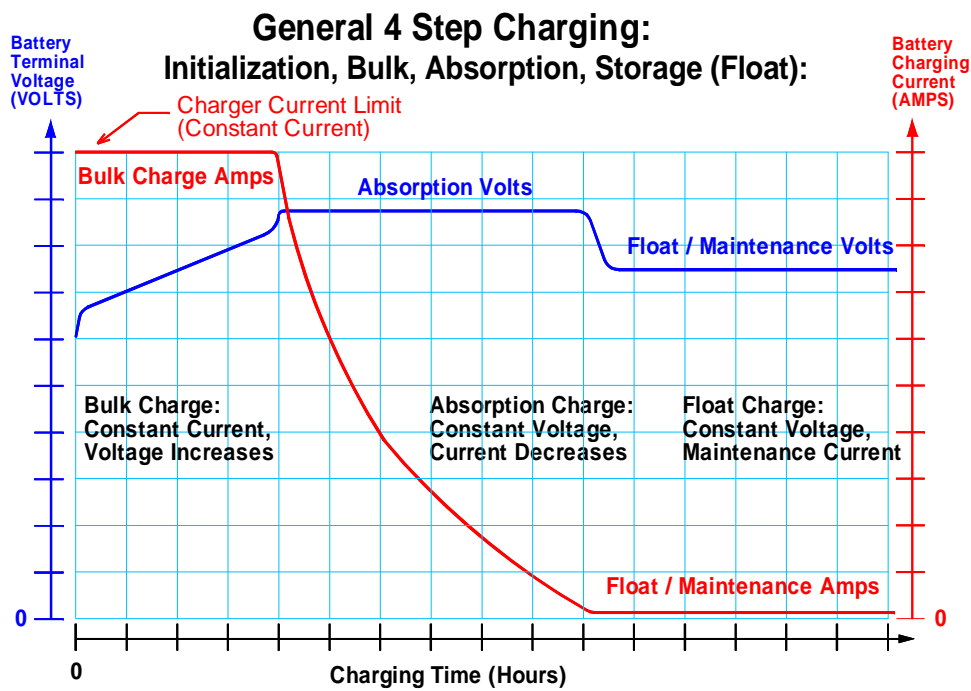
TECHNICAL SPECIFICATIONS SUMMARY	
Input Voltage & Frequency	120 VAC, 60 Hz
DC OUTPUT (Nominal voltage & current values)	
Output Current	0.750 Amps
Output Voltage	12 Volts or 6 Volts
Charger Output Voltage Amplitudes throughout the entire charge algorithm, including absorption and float maintenance, are consistent with the optimum charging recommendations of the major lead-acid battery manufacturers.	
Maximum Operating Temperature	50 °C Typical
Charger Case Dimensions	3.3 in (85 mm) L x 2.3 in (59 mm) W x 1.9 in (48 mm) H
Shipping Weight with Cable Accessories	2.0 lbs (0.9 kg)

Declaration of Conformity: These battery charger products are designed to meet or exceed the specific requirements for the following safety compliance standards: UL-1236 & CSA 22.2 These products are UL Listed in File E206016, Volume 2.

Design Conformance & Revision: All Deltran charger products are 100% inspected and electrically tested prior to shipment. **All Deltran battery charger designs are proprietary and subject to change without notice.** Deltran makes no specific claims nor does it either make or imply any specific guarantee or warranty with respect to either the physical configuration or performance of any of the battery charger products listed herein, including suitability for purpose or merchantability.

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INDICATOR LIGHT OPERATION

- **RED FLASHING** - When the red light is flashing, the AC power is applied to the charger and the microprocessor circuitry is functioning properly. There is no battery connected or there is a problem with the connections between the charger and the battery.
- **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 FLASHING** - When the green light is flashing, and the red light is on, the battery is greater than 80% charged and may be removed from the charger and used if necessary. Leave the battery on charge until the green light is solid whenever possible. Once the green light begins to flash, it will remain flashing until the battery charger output current drops below the optimum recharge threshold, or until the absorption timer expires.
- **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.
- **RED & GREEN ALTERNATING** - This will indicate either a **reverse polarity connection** where the charger output cables connect to the battery, a **sulfated battery**, a **corroded battery terminal**, or other **high resistance output connection**.

Step 1) Initialization: Red Light On or Red Light Flashing: Monitor Circuit verifies appropriate battery voltage levels and good electrical continuity between the battery and the charger DC output.

Step 2) Bulk Charge: Red Light On, Green Light Off: Constant Current at Full Power. Bulk Charge ends at approximately 75% to 80% of full battery recharge.

Step 3) Absorption Charge: Red Light On, Green Light Flashing: Constant Voltage at Absorption Level. This conditions the battery for optimum performance. Absorption charge ends when the battery charging current drops below the optimum recharge threshold or the absorption timer expires.

Step 4) Float Charge: Red Light Off, Green Light On. Constant Voltage at Float / Maintenance level. Keeps battery fully charged and maintains high specific gravity. Full charge reset monitor protects battery against excessive appliance current draw while charging. Float charge continues indefinitely.

APPLICATION INFORMATION

- ◆ Always operate the charger in a well ventilated area
- ◆ If neither indicator light comes on after you plug in the AC cord, then check the AC power receptacle.
- ◆ If the green indicator light comes on too soon, check the battery and the output connections from the charger.
- ◆ It may take a long time for the green light to come on when charging a large battery.



DELTRAN BATTERY TENDER® JUNIOR Installation & Mounting Instructions



The Battery Tender® Junior charger plugs directly into a residential AC receptacle. There no AC power cord. **There is no ON / OFF switch on the charger.**

The DC output cord is a 2-wire, insulated cable assembly with a black, molded, 2 pin quick-disconnect plug on the end. That plug connects to a number of DC output cable accessories. The approximate DC output cable length is 10.5 feet. The UL-1236 Standard requires a **total of 12 feet from the AC mains wall receptacle to the battery terminals.** The total cable lengths are **DC output cord 10.5 feet + DC Cable Assembly Accessory 1.5 feet (18 inches minimum).**

The common DC output cable assembly accessories are: (Approx cable lengths 18 inch min, 24 inch max.) Shown in order from left to right:

- 081-0069-6: Fused Ring Terminal Cable Assembly
- 081-0069-4: Fused Alligator Clip Cable Assembly
- 081-0069-5: Fused Cigarette Adapter Cable Assembly



Extension cables have the same cord configuration as the DC output cable connected to the charger body. Each end of the cable extension has a black, molded, 2 pin quick-disconnect plug.

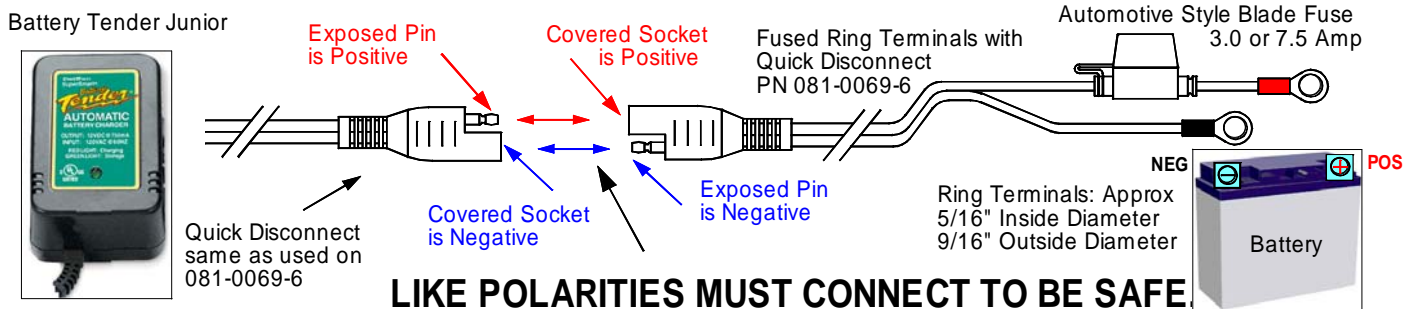
- 081-0148-25 Extension Cable, 25 ft long.
- 081-0148-12 Extension Cable, 12 ft long.



The following connection rule applies for DC cable assemblies and the black, molded, 2 pin quick-disconnect plug.

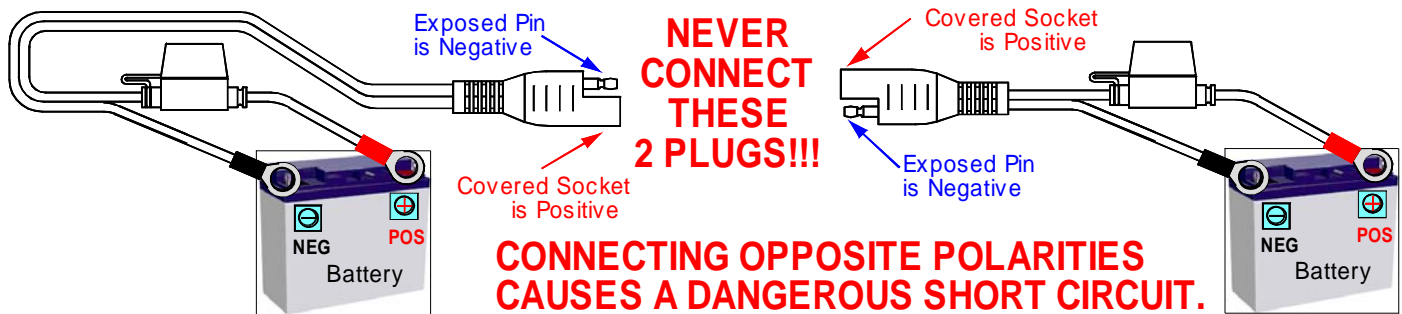
If the DC cable is directly connected to the body of a charger, then the exposed pin is connected to POSITIVE voltage at the charger output. The same will be true for the exposed pin on the end of an extension cable when the other end of the extension cable is connected to the charger DC output cable.

DC cable assembly accessories are designed so that the rings, clips, or the cigarette adapter connect to a battery. **The exposed pin on a DC cable assembly accessory is connected to NEGATIVE OR REFERENCE voltage at the battery.** Again, the same will be true for the exposed pin on the end of an extension cable when the other end of the extension cable is connected to a DC cable assembly accessory.





⚠ DANGER: NEVER CONNECT THE QUICK DISCONNECT PLUGS TOGETHER ON TWO (2) DC CABLE ASSEMBLY ACCESSORIES THAT ARE BOTH CONNECTED TO BATTERIES. THESE CABLES ARE NOT JUMPER CABLES!!



EVEN A RELATIVELY SMALL 18 TO 22 AMP HOUR MOTORCYCLE BATTERY CAN GENERATE **SEVERAL HUNDRED, MAYBE EVEN MORE THAN ONE THOUSAND AMPERES** WHEN THE TERMINALS ARE SHORT CIRCUITED!

Insulation will melt, and virtually vaporize. Conductors will turn bright orange and any combustible material that is nearby will very likely begin to burn. **THIS SITUATION IS EXTREMELY DANGEROUS.**



2009
DELTRAN BATTERY CHARGER
Manufacturer's Notes & Special Information

Deltran

In 2009, Deltran continues its unwavering commitment to excellence. Deltran's strategic initiatives focus primarily on customer satisfaction and innovation.

At Deltran, performance is a way of life. For some companies, performance may be just a word they like to use. Our performance and service continues well after the sale!

We constantly improve our processes and leverage new technologies in virtually all aspects of battery charger system engineering, manufacturing, and quality system management to achieve the most cost effective configurations in our product lines. **We save you money by making our products better!**

The Deltran technical and sales staff will use these pages to provide our customers with updated product information that is not normally available from other documentation sources. These items may include design upgrades, alternate configurations, new packaging and shipping options, and product delivery schedules.

When we look back to review how it is that we achieved and continue to maintain our position as an industry leader, we will not forget that our past success is a testament to the fact that we have always strived to exceed our customer's needs.

We will continue to strive to exceed our customer's needs. So please send us your comments and suggestions.

Battery Tender® JUNIOR &
Battery Tender® PLUS
Battery Chargers

12 & 6 Volt Models:
750 Milliamp & 1.25 Amp
&
8 Volt Model 1.25 Amp

IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS: This manual contains important safety and operating instructions for Battery Tender® Chargers, both the 12 & 6 Volt 750 Milliamp BT Junior and 12, 6, & 8 Volt 1.25 Amp BT Plus models. **CAREFULLY READ THESE INSTRUCTIONS BEFORE USING THE BATTERY CHARGER.**

WARNING AND CAUTION LABEL DEFINITIONS:

⚠ WARNING

WARNING indicates a potentially hazardous situation, which, if not avoided, could result in serious injury or death.

⚠ CAUTION

CAUTION indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.

CAUTION

CAUTION used without the safety alert symbol indicates a potentially hazardous situation that if not avoided, may result in property damage.

GENERAL PRECAUTIONS

⚠ WARNING

Battery posts, terminals and related accessories contain lead and lead components, and other chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Always wash your hands after handling these devices.

⚠ WARNING

Do not operate the battery charger with damaged AC power cords or plugs or DC output cords or accessories - Replace accessories immediately. Since neither the AC power cord nor the DC output cord can be replaced, if either cord is damaged the battery charger should be scrapped. The limited warranty does not cover AC power cords or DC output cords that are damaged in use.

CAUTION

WORKING WITH LEAD ACID BATTERIES AND BATTERY CHARGERS:

All lead acid batteries have the potential to emit gasses that may combine into a combustible or explosive mixture. In many cases, it is possible that lead acid batteries will emit these gasses during normal discharge and charging operations. Because of this potential danger, it is important that you follow the precautions recommended by both the battery and battery charger manufacturers before using either one. For example, do not exceed the recommended maximum recharge rate (charger output current limit), or remove cell caps while charging flooded batteries.

⚠ CAUTION

CHARGER VOLTAGE COMPATIBILITY: NEVER use a battery charger unless the battery voltage matches the output voltage rating of the charger. For example, do not use a 12-volt charger with a 6-volt battery and vice-versa.

CHARGER LOCATION: LOCATE the charger as far away from the battery as is allowed by the length of the output cable harness. NEVER set the charger above the battery. NEVER set the charger on a surface constructed from combustible material. NEVER place the battery, the charger, or any of the electrical connections between them in an area that is likely to become wet.

EXCESSIVE MOISTURE: Do not expose the battery charger or any of its electrical connections (either AC or DC) to rain, snow, or extremely high, condensing humidity.

CHARGER ATTACHMENTS: Do not use attachments that are not recommended or sold by the charger manufacturer. To do otherwise may result in the risk of electric shock, fire, or possibly some other unforeseen potential personal injury situations.

HANDLING POWER CORDS: When handling electric power cords, always pull by the plug rather than by the cord. This will reduce the risk of damage to both the plug and cord, and it will minimize the likelihood of electric shock resulting from that damage.

LOCATION OF POWER CORDS: Make sure all electric power cords are located so that they cannot be stepped on, tripped over, or otherwise subjected to damage or stress.

MONITORING SEALED & NON-SEALED BATTERIES: When leaving a battery charger connected to either a sealed (AGM or GEL) or non-sealed (flooded battery) for extended periods of time (weeks, months, etc.), periodically check the battery to see if it is unusually warm. This is an indication that the battery may have a weak cell and that it could go into a thermal runaway condition. If the battery releases an excessive amount of gas or if the battery gets hotter than 130°F (55°C) during charging, disconnect the charger and allow the battery to cool. Overheating may result in plate distortion, internal shorting, drying out or other damage. For flooded batteries, also check individual cell fluid levels against manufacturer's recommendations for safe operation.

⚠ WARNING

ELECTRIC SPARK & OPEN FLAME: NEVER smoke or allow a source of electric spark or open flame in the vicinity of the battery or engine. (For example: Don't charge the battery next to a gas water heater.)

VENTILATION: Do not operate the charger where ventilation is restricted. The intent here is to allow sufficient airflow to minimize and dissipate the heat generated by the charger and to diffuse the gasses that may be emitted by the battery.

CHARGER MAINTENANCE: NEVER disassemble the charger or attempt to do internal repairs. Take it to a qualified service technician. Assembling the charger incorrectly may result in the risk of electric shock or create a fire hazard.

⚠ WARNING

EXTENSION CORDS: An extension cord should not be used unless absolutely necessary. Using improper extension cord could result in a risk of fire and electric shock. If extension cord must be used, make sure that:

- The pins on the extension cord plug have the same number, size, and shape as those of the AC power cord plug on the charger;
- The extension cord is properly wired and is in good electrical condition; and
- The wire size is as specified in Table 1 below.

TABLE 1: EXTENSION CORD LENGTH & MINIMUM SAFE CONDUCTOR SIZE		
<i>Note: The smaller the AWG number, the larger the conductor diameter.</i>		
Length of Cord (feet)	6 to 100	101 to 150
Length of Cord (meters)	1.8 to 30.5	30.8 to 45.6
Size of Conductor (AWG)	18	16
Conductor Diameter (mm)	1.25	1.5

PERSONAL PRECAUTIONS

⚠ WARNING

WHEN YOU WORK NEAR LEAD-ACID BATTERIES:

1. Someone should be within range of your voice or close enough to come to your aid if you have an accident;
2. Have plenty of fresh water and soap nearby in case battery acid contacts skin, clothing, or eyes;
3. Wear complete eye protection and protective clothing. Avoid touching your eyes while working near a battery. If battery acid contacts your skin or clothing, wash immediately with soap and water. If acid enters an eye, immediately flood the eye with running cold water for at least 10 minutes and get medical attention as soon as possible;
4. Be extra cautious when handling metal tools around a battery. If you drop

a metal tool near a battery it might spark or create a short circuit between the battery terminals and some other metal part. Either event may cause a dangerous electrical shock hazard, a fire, or even an explosion;

5. Remove all personal metal items such as rings, bracelets, necklaces, and watches when working with a lead-acid battery. A lead-acid battery can produce a short-circuited current high enough to weld a metal ring or other piece of jewelry, causing a severe burn;
6. **Use Battery Tender® Junior and Plus Chargers for charging lead-acid batteries only.** They are not intended to supply power to an extra low-voltage electrical system or to charge dry-cell batteries. Charging dry-cell batteries may cause them to burst and cause injury to persons and damage to property;

INFORMATION NOTE ABOUT DRY-CELL BATTERIES:

There are some wet, non-spillable, lead acid batteries on the market whose manufacturers' make the claim that they are dry-cell batteries. These batteries are sealed, gas-recombinant, starved electrolyte, possibly with AGM (Absorbed Glass Mat) type construction. It is perfectly safe to use Battery Tender® Junior and Plus Chargers to charge these types of batteries. The dry-cell battery warning is intended for rechargeable or non-rechargeable alkaline and other similar types of batteries. If you have any doubt about the type of battery that you have, please contact the battery manufacturer before attempting to charge the battery.

7. **NEVER** charge a visibly damaged or frozen battery.

PREPARING TO CHARGE: First, follow all General & Personal Precautions as previously explained, and then continue.

⚠ WARNING

IF THE BATTERY MUST BE REMOVED FROM THE VEHICLE:

1. To avoid an electric arc (or spark), turn off or disconnect all of the accessories in the vehicle. Then always remove the cable that is connected to grounded terminal from battery first;
2. If necessary, clean the battery terminals. Be careful to keep the corrosion and other debris from coming in contact with your eyes;
3. If the battery is not a sealed battery, then if necessary, add distilled water to each cell until the battery acid solution reaches the level specified by battery manufacturer. Do not overfill;
4. Before inserting the charger AC power plug into the electrical outlet, check the polarity of the battery posts, and attach at least a 24 inch long 6 (AWG) insulated, battery extension cable to the negative battery post. Then connect the appropriate charger DC output connectors to the battery and the extension cable, positive to positive and negative to negative. Never allow the alligator clips or terminal rings to touch each other after they are connected to the battery charger.
5. Connect the AC power plug to the electrical outlet.

⚠ WARNING

IF THE BATTERY REMAINS INSTALLED IN THE VEHICLE:

1. DO NOT CONNECT THE CHARGER AC POWER PLUG TO THE ELECTRICAL OUTLET UNTIL ALL OTHER CONNECTIONS ARE MADE!
2. Place both the AC and DC power cords in the best position to avoid accidental damage by movable vehicle parts, i.e. hoods, doors, or moving engine parts (fan blades, belts, or pulleys).
3. Check the polarity of the battery posts. If the positive (pos, p, +) post is connected to the vehicle chassis, then the vehicle has a positive ground system. If the negative (neg, n, -) post is connected to the vehicle chassis, then the vehicle has a negative ground system. Negative ground systems are the most common.
4. For negative ground systems, connect the positive (red) alligator clip, or ring terminal to the positive battery post. Then connect the negative (black) alligator clip, or ring terminal to the vehicle chassis. Do not make the negative charger clip or ring connection to the carburetor, fuel lines, or thin, sheet metal parts. Make that connection to the engine block or a heavy gauge metal part of the frame.
5. For positive ground systems, connect the negative (black) alligator clip, or ring terminal to the negative battery post. Then connect the positive (red) alligator clip, or ring terminal to the vehicle chassis. Do not make the positive charger clip or ring connection to the carburetor, fuel lines, or thin, sheet metal parts. Make that connection to the engine block or a heavy gauge metal part of the frame.
6. Connect the AC power plug to the electrical outlet.

ADDITIONAL CHARGER INFORMATION

AUTOMATIC CHARGING AND BATTERY STATUS

MONITORING: The Battery Tender® Junior and Plus Chargers are completely automatic and may be left connected to both AC power and to the battery that it is charging for long periods of time. However, it is prudent to periodically check both the battery and the charger for normal operation during these extended charging periods.

The charger output power, voltage, and current all depend on the condition of the battery that is being charged. Battery Tender® Junior and Plus Chargers have status lights that indicate the operating mode of the charger, and the condition of the battery that is connected to the charger.

The chargers operate in one of the 3 primary charge modes: the bulk mode (full charge power, constant current, increasing battery voltage, battery is 0% to 75% or 80% charged), the absorption mode (high constant voltage, decreasing current, battery is 75% to 100% charged), or the storage/float maintenance mode (low constant voltage, minimal charge current, battery is fully charged, typically 100% to 103%).

When the battery is fully charged, the green status indicator light will turn on and the charger will switch to a storage/maintenance charge mode. Battery Tender® Junior and Plus Chargers will automatically monitor and maintain the battery at full charge.

SPECIAL FEATURES: The Battery Tender ® Junior and Plus Chargers have the following special features:

SPARKPROOF: The battery charger DC output leads, either ring terminals or alligator clips must be connected to a battery before an output voltage is developed by the battery charger.

SHORT CIRCUIT PROTECTION: The battery charger can sustain a short circuit connection directly across its DC output terminals indefinitely without any risk of either electric shock or excessive heat.

REVERSE POLARITY PROTECTION: The battery charger is protected internally against any damage due to the DC output leads being connected to the opposite polarity battery post. No damage will result to either the battery or the battery charger.

TEMPERATURE COMPENSATION (BT PLUS Only): The output voltage is compensated at -3.5mV/ °C/Cell. This increases the output voltage in cold climates to keep the battery from being undercharged and, more importantly, reduces the voltage in high temperature climates to protect the battery from overcharge.

TIME REQUIRED TO CHARGE A BATTERY:

The Battery Tender® Junior charges at a rate of 0.75 Amps (0.75 Amp-Hours per hour). The Battery Tender® Plus charges at a rate of 1.25 Amps (1.25 Amp-Hours per hour). Therefore, a fully discharged 15 Amp-Hour battery will take approximately 16 hours or 9.6 hours respectively, to recharge to 80% capacity with a Battery Tender® Junior or a Plus. Some large automotive or marine, deep cycle type batteries may take several days to fully recharge.

WORKING WITH A DEAD BATTERY OR A BATTERY WITH A VERY LOW VOLTAGE:

If you try to charge a dead battery having a voltage below 3 Volts, the BATTERY TENDER® CHARGERS will not start to charge because an internal safety circuit prevents the battery chargers from generating any DC output voltage.

NOTE:

If a 12 Volt, Lead-Acid battery has an output voltage of less than 9 volts when it is at rest, when it is neither being charged nor supplying electrical current to an external load, there is a good chance that the battery is defective. As a frame of reference, a fully charged 12-Volt, Lead-Acid battery will have a rest-state, no-load voltage of approximately 12.9 volts. A fully discharged 12-Volt, Lead-Acid battery will have a rest-state, no-load voltage of approximately 11.4 volts. That means that a voltage change of only 1.5 volts represents the full range of charge 0% to 100% on a 12-Volt, Lead-Acid battery. Depending on the manufacturer, and the age of the battery, the specific voltages will vary by a few tenths of a volt, but the 1.5-volt range will still be a good indicator of the battery charge %.

STATUS INDICATOR LIGHTS: The following describes the indicator light operation: Note that the BT JUNIOR has a single light that will shine either RED or GREEN, while the BT PLUS has two separate lights, one RED and one GREEN.

- **NEITHER THE RED OR GREEN LIGHT TURN ON** – This is an abnormal condition and most likely indicates that the charger is not properly connected to the AC power.
- **RED LIGHT FLASHING** – The red light flashing indicates that the battery charger has AC power available and that the microprocessor is functioning properly. If the red light continues to flash, then either the battery voltage is too low (less than 3 volts) or the output alligator clips or accessory ring terminals are not connected correctly.
- **RED LIGHT ON STEADY** – Whenever the red light is on steady, a battery is connected properly and the charger is charging the battery. The red light will remain on until the charger completes the charging stage.
- **GREEN LIGHT FLASHING** – When the green light is flashing, the battery is greater than 80% charged. For BT Plus models the red light will also be on steady. (Note: Does not apply to the 8V Plus or the 6V Junior).
- **GREEN LIGHT ON STEADY** – When the green light stops flashing and burns steady, the charge is complete and the battery can be returned to service if necessary.
- **ALTERNATING RED & GREEN LIGHTS FLASHING (PLUS) or SINGLE LIGHT ORANGE (JUNIOR)** – This is abnormal and most likely indicates either that the battery is sulfated or that there is a poor electrical connection between the charger DC output and the battery posts. For the BT Plus models it may indicate a reverse polarity connection on the DC output cables (the battery is hooked up backwards).

TROUBLESHOOTING CHECK LIST:

1. **NEITHER OF THE CHARGER LIGHTS TURN ON AFTER THE AC POWER PLUG IS CONNECTED TO THE AC ELECTRICAL OUTLET:** Check the charger AC power plug connection at the AC electrical outlet. Verify that the AC electrical outlet is functioning properly by plugging in another appliance or a voltmeter.
2. **THE CHARGER GREEN LIGHT GOES ON IMMEDIATELY WHEN AC POWER IS APPLIED TO THE CHARGER:** The charger connections at the battery may be intermittent, the battery may be defective, or the battery might already be fully charged.
3. **CHARGER IS CHARGING BUT THE GREEN LIGHT DOES NOT TURN ON IN A REASONABLE AMOUNT OF TIME:** The battery may be large and requires more time to fully charge than originally expected, there may be another appliance drawing electric power from the battery while it is charging, or the battery may be defective. Also, a newly purchased battery may not be fully charged and may take longer to charge initially.
4. **THE RED LIGHT COMES ON AGAIN AFTER THE GREEN LIGHT CAME ON.** There may be another appliance drawing electric power from the battery causing its voltage to drop below the reset level. The battery charger then goes back into full charge mode. Also, the charger connections at the battery may be intermittent or the battery may be defective.

SPECIFICATION SUMMARY:

Technical Specifications (BT Plus & BTJR Models)	
AC Input Voltage, Frequency	120 VAC, 60 Hz
AC Input Current (Maximum)	0.5 or 0.4 Amps
DC Output Voltage (Nominal) 12 , 8, & 6 or 12 & 6 Volts	
DC Output Current (Maximum)	1.25 or 0.75 Amps
Specific Charger Output Voltage & Current Amplitudes throughout the entire charge algorithm, including absorption and float maintenance, are consistent with the optimum charging recommendations of major lead-acid battery manufacturers.	
Maximum Operating Temperature	50 °C Typical
Charger Case Dimensions: BT Junior: 3.313 in (85 mm) L x 2.313 in (59 mm) W x 1.875 in (48 mm) H. BT Plus: 4.875 in (124 mm) L x 3.25(83 mm) W x 2.875 in (73 mm) H. Note: When sizing the space available for the 1.25 Amp battery charger, do not forget to allow additional length for safe bending of the strain relief on AC or DC power cords, typically 2 in (50.8 mm).	
Shipping Weight: with Accessories: BT Junior: Approx. 2.3 lbs (1.1 kg) BT Plus: Approx. 3.0 lbs (1.4 kg)	

Declaration of Conformity: These battery charger products are designed to meet or exceed the specific requirements of UL-1236. See UL File E206016.

Design Conformance & Revision: All charger products are 100% inspected and electrically tested prior to shipment. All battery charger designs are proprietary and subject to change without notice. Manufacturer makes no specific claims nor does it either make or imply any specific guarantee or warranty with respect to either the physical configuration or performance of any of the battery charger products listed herein, including suitability for purpose or merchantability.

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BATTERY TENDER JR TROUBLESHOOTING CHECKLIST

SYMPTOM	POSSIBLE CAUSE	REMEDY
No Indicator lights are lit. NOTE: The BTJR must be connected correctly to both the AC power outlet and the battery before the single LED will come on and turn RED indicating that a normal charge cycle has begun.	1 No AC power available.	Insure AC power is available.
	2 Battery Tender JR clamps or rings are hooked up incorrectly.	Reverse polarity of clamps.
	3 The fuse is blown in the ring terminal or alligator clip harness.	Replacement fuse: Bussman Blade Type: ATC-3 to ATC-7.5. (3A to 7.5A)
	4 Poor electrical contact.	See notes on cleaning electrical contacts.
	5 Battery voltage is less than 3 volts. (A 12 volt battery may not recover from a discharge this deep.)	Disconnect all loads from battery (or battery from vehicle), then reattach Battery Tender JR. Wait no more than 3 seconds for solid red light .
The single LED turns GREEN quickly at the beginning of the charge cycle.	1 Battery is already fully charged.	Disconnect the charger from the battery and check the battery voltage with a voltmeter. It battery voltage is at least 12.7 Volts, then it is fully charged.
	2 Battery may be defective.	Have battery load tested.
	3 Poor electrical contact.	See notes on cleaning electrical contacts.
Battery Tender JR will not switch to storage charge. The Red light seems to stay on too long. The green light "never" comes on.	1 The battery is large and takes a long time to recharge.	Allow sufficient time for charge. See note below.
	2 Battery may be defective.	Have battery load tested.
	3 Excessive load is present on battery during charge cycle.	Remove load from battery or battery from vehicle.
The charger light is on, but not red or green.	1 Poor electrical contact.	See notes on cleaning electrical contacts.
	2 Battery may be defective.	Have battery load tested.
Note: Cleaning Electrical Contacts:	If the charger ring terminals, alligator clips, or quick-connect terminals are corroded or damaged or not making full electrical contact, or the battery posts are corroded, then: Disconnect charger cables from battery and clean the battery posts and the charger ring terminals, alligator clips, and/or quick-connect terminals. A number of non-acidic chemical products are available. One of the simplest to use is baking soda and water. Use needle-nose pliers to widen the quick-connect male pin contact area.	
Remember that the charger, the battery, and the vehicle electrical system must all be connected and functioning properly.		
	<p>Note: After the battery voltage reaches 14.4 volts, the Battery Tender JR will go into the float / maintenance, storage mode.</p>	
<p>If your charger still has abnormal symptoms after trying the recommended remedies listed above, call or email Deltran Customer Service or Technical Support. Most of the troubles encountered when recharging batteries are due to poor quality or improper electrical connections between the battery and the charger.</p>		



**Battery Tender®
Chargers**



GENERAL LIMITED WARRANTY:

DELTRAN CORPORATION, 801 INTERNATIONAL SPEEDWAY BLVD., DELAND, FLORIDA 32724 MAKES THIS LIMITED WARRANTY TO THE ORIGINAL PURCHASER. THIS WARRANTY IS NOT TRANSFERABLE.

Deltran warrants its battery charger products for a period of up to 10 years, depending upon the charger model, from the date of purchase against defective material or workmanship only. If Deltran qualified service technicians determine that the likely cause of the battery charger product malfunction is due to either defective material or workmanship, then the battery charger product will be repaired or replaced at the discretion of Deltran.

It is the obligation of the original purchaser to forward the battery charger product, with the proof of purchase, prepaid, to either Deltran or one of its authorized factory representatives.

The costs of transporting products to Deltran for warranty service is the responsibility of the purchaser.

THIS LIMITED WARRANTY IS VOID under the following conditions:

- 1) The product is misused, subjected to careless handling, or operated under conditions of extreme temperature, shock, or vibration beyond Deltran's recommendations for safe and effective use.
- 2) The product is disassembled or repaired by anyone who is not a Deltran factory authorized service representative.
- 3) The electrical connections to either the AC input or the DC output of the charger are modified without the express written consent of the Deltran engineering department.

The manufacturer makes no warranty other than this limited warranty and expressly excludes any implied warranty including any warranty for consequential damages.

THIS IS THE ONLY EXPRESS LIMITED WARRANTY AND THE MANUFACTURER NEITHER ASSUMES NOR AUTHORIZES ANYONE TO ASSUME OR MAKE ANY OTHER OBLIGATION TOWARDS THE PRODUCT OTHER THAN THIS EXPRESS LIMITED WARRANTY.

THE MANUFACTURER MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR PURPOSE OF THIS PRODUCT AND EXPRESSLY EXCLUDES SUCH FROM THIS LIMITED WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages or length of an implied warranty so the above limitations or exclusions may not apply to you.

Deltran Battery Tender® Charger Product Warranty Periods

BT PLUS	10 Yrs.	BT JUNIOR	5 Yrs.
AAA BT PLUS	12 Yrs.	AAA BT JUNIOR	7 Yrs.
5 & 10 Bank Shop Chargers	3 Yrs.	Waterproof 800	3 Yrs.
BT-TWIN 800	3 Yrs.	1, 2 & 4 Bank International	3 Yrs.
Power Tenders: Original Lightweight On Board, Potted Vibration Resistant Waterproof (Power Tender PLUS), & Portable International			2 Yrs.
High Frequency SUPER SMART® Chargers: Emergency Vehicle & Golf Cart Style			2 Yrs.
High Power Portable Chargers: DVS Single Output, DVD Dual Output, 10A & 20A			2 Yrs.

Warranty Evaluation, Shipping & Handling (WESH) Fees

THESE FEES ONLY APPLY TO UNITS IN WARRANTY. WARRANTY IS VOID EITHER BY ELAPSED TIME FROM DATE OF PURCHASE OR FROM THE CONDITIONS LISTED EARLIER IN THIS DOCUMENT.

WESH Fee Amounts Depend upon the time from the date of purchase and whether or not you have a receipt.	WITH Receipt		NO Receipt
	< 90 DAYS	> 90 Days	Any Time
Battery Tender® JUNIOR	\$0.00	\$7.95	\$11.95
Waterproof 800	\$0.00	\$9.95	\$13.95
Battery Tender® Plus	\$0.00	\$12.95	\$17.95
Battery Tender® International	\$0.00	\$15.95	\$25.00
Power Tender Plus	\$0.00	\$15.95	\$25.00
2 Bank International	\$0.00	\$15.95	\$25.00 + Parts
4 Bank International	\$0.00	\$25.00	\$25.00 + Parts
5 & 10 Bank Shop Chargers	\$0.00	\$25.00 + Parts	\$25.00 + Parts
HF SuperSmart, EM Veh & Golf Car	\$0.00	\$25.00 + Parts	\$25.00 + Parts
High Power Portable DVS, DVD	\$0.00	\$25.00 + Parts	\$25.00 + Parts

Deltran will honor a special warranty without a receipt with a 1 year grace period from the date code for a nominal charge. This charge will be determined on a case by case basis.

Customers may upgrade to a new replacement charger with the exact same part number as the one returned for a special price that is discounted 20% from the MSRP. The exact upgrade price must be approved by a sales manager.

Return the charger to the address below with a check for the appropriate amount made payable to: Deltran Corporation

DELTRAN CORPORATION

801 International Speedway Blvd.

DeLand, Florida 32724



Phone 386-736-7900 FAX 386-736-0379

Email: service@batterytender.com

