

TurboStart[®] BATTERIES



16V BATTERY INSTRUCTIONS

Congratulations! You've made the right choice with your purchase of a quality TurboStart[®] Performance Product for your vehicle. You have joined thousands of other satisfied performance enthusiasts, engine builders, chassis builders and professional race drivers that rely on the TurboStart[®] brand name.

TurboStart[®] is committed to bringing you the highest quality battery systems available, but we also stand behind our product. Customer service is just as important as performance at TurboStart[®], which is why we have an excellent core of technicians ready to help you with any product recommendations, installation questions or any other questions you may have about your TurboStart[®] product.

S16V/S16VL Specifications

Part Number	Length	Width	*Height	Weight	CA @ 32 ° F	CCA @ 0° F	RC @ 25 amps	Ah	Max Charge Voltage	Cells Per Battery	Terminals
S16V	10.30"	6.75"	7.25"	42lbs.	675	595	85	50	19	8	M10 Bolt-in
S16VL	10.30"	6.75"	6"	32lbs.	550	450	50	30	19	8	M10 Bolt-in

The 16 Volt Concept

The simple fact of the matter is that 16 volts provides a 4 volt cushion to the electrical system over a 12 volt system. Instead of a full charge open circuit of 12.6 (2.1 volts per cell times 6), the 16 volt battery offers a full charge voltage of 16.8 (2.1 volts per cell times 8). A discharged battery with a specific gravity of 1.175 produces around 1.75 volts per cell. This means that even when totally discharged, a 16 volt battery will produce 14 volts as opposed to a 12 volt discharged battery producing only 10.5 volts. The voltage of a 16 volt battery will exceed the minimum recommended voltages of a racing ignition even when totally discharged!

Mounting Position

AGM Series batteries can be mounted either parallel or perpendicular to the frame rails. If you are running a dual battery set-up, make sure that the batteries are connected in PARALLEL (positive post to positive post and negative post to negative post). The AGM Series battery does not require the use of a vent outlet tube.

NOTE: All TurboStart[®] 16 VOLT RACING BATTERIES are designed to bolt into a group 24, group 74, group 34, group 78, group 27, or group 31 battery tray set-ups. The bolt-in design on the AGM Series allows the user to bolt the battery cable lugs directly down onto the battery with the serrated shoulder bolts supplied with the AGM Series battery.

CAUTION!!! TAKE ALL POSSIBLE PRECAUTIONS TO NOT ARC THE TERMINALS OR TOUCH THE 16 VOLT POSITIVE POST AT THE SAME TIME WITH ANY METAL OBJECT AS THIS COULD CAUSE INTERNAL BATTERY DAMAGE AND, POSSIBLY, A VIOLENT EXPLOSION! ALWAYS WEAR SAFETY GLASSES, GLOVES, AND PROTECTIVE CLOTHING WHEN SERVICING OR INSTALLING A BATTERY!



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"Bolt-In" Terminal Design

The TurboStart® AGM Series 16 volt battery features a Bolt-in terminal design, allowing the use of a low profile eyelet style lug terminal at the battery connection. Also available are positive and negative brass SAE top-post adaptors, or stud adaptors that can be threaded into the bolt-in terminals on the top of the battery when using standard SAE, or other style battery terminals. Whether using the stud adaptors or the brass top post adaptors, the tightening torque should never exceed 8 ft-lbs max!

IMPORTANT: Observe polarity carefully when connecting the battery cables

Charging the AGM Series 16 volt battery

The TurboStart® AGM Series battery must be charged with a TurboStart® 16 volt charger that does not exceed 19.0 volts. If you presently use our flooded design TurboStart® 16 volt batteries, you will need to adjust the voltage down to 19.0 volts on your existing 16 volt charger to properly charge the AGM Series design. Charging the AGM Series battery with our conventional 16 volt charger for flooded batteries (which puts out 21.0 volts) will cause immediate damage and drastically shorten the life of the AGM Series battery. When an AGM Series battery is charged at a finish charge of 21.0 volts, the higher voltage will rapidly dry out the Absorbent Glass Mat separator and eventually lead to a thermal runaway condition in the battery resulting in rapid failure.

All TurboStart® 16 volt chargers produced prior to 9/03 which put out 21.0 volts can be easily adjusted down to 19.0 volts for charging the AGM Series battery. Our NEW SMART CHARGER 16V charger (PT#CHG15A16V) is preset at the factory and no adjustment is necessary or our NEW fully adjustable SMART CHARGER 12V/14V/16V multi-stage charger (PT#CHG25A) with built in SMARTprocessor which will help eliminate over charging issues.

To adjust the voltage on your existing TurboStart® 16 volt charger, Please refer to the CHARGER VOLTAGE ADJUSTMENTS section of the Instruction Manual or visit the website at www.turbostart.com and click on "16 volt charger information".

AGM Series "Off Season" Battery Care

The shelf life of a AGM battery is similar to that of a standard wet battery and, like a wet battery, we recommend that you give your battery(s) an overnight charge with the TurboStart® charger every 60 days of non use and prior to storing. The automatic feature built into the TurboStart® 16 volt charger will prevent overcharging the battery. The TurboStart® 16 volt SMART CHARGER is also a battery maintainer and can be left on the battery indefinitely during non use periods.

16 Volt Precautions

To eliminate the chance of electrical component failure when using TurboStart® batteries, the following precautions should be followed:

1. **ALWAYS THROW THE KILL SWITCH WHEN CHARGING THE BATTERY.** A 16 volt battery requires in excess of 19 volts to charge and, if subjected to this excess voltage, certain electrical components could be damaged.
2. **NEVER START OR WARM UP THE CAR WITH THE CHARGER PLUGGED IN.** Here again, the excess voltage which is produced by the charger will feed through the system and could damage components such as electronics, etc.
3. **NEVER TRY TO PRINT OUT COMPUTER INFO WITH THE CHARGER PLUGGED IN.**
4. **WIRING THROUGHOUT THE CAR SHOULD NOT BE LIGHTER THAN 16 GAUGE.** Any wiring in the car lighter than 16 gauge should be replaced when running 16 volts.
5. **CHECK WITH ELECTRICAL COMPONENT MANUFACTURERS AS TO 16 VOLT COMPATIBILITY.**
6. **MAKE SURE YOU ARE USING THE CORRECT TURBOSTART® 16 VOLT CHARGER.**

The AGM Series TurboStart® battery (type 16V) must not be charged with a charger which puts out in excess of 19.0 volts. Standard TurboStart® 16 volt chargers produced before 9/03 produce 21.0 volts final charge and must have the voltage adjusted down to 19.0 volts before using with the S16V/S16VL battery.

IMPORTANT: Verify with the manufacturers of all electronic devices being used that they are compatible with 16V. If not a TurboStart voltage STEP DOWN module will be required. The STEP DOWN module is wired IN-LINE on the hot wire of the component(s) that require a reduction in voltage.

Race Support

Tech Team and dealers will be attending NHRA, IHRA, Dirt Track other racing and specialty events. Call our Race Tech Department at 865.394.6535 for a schedule of events or like our Facebook page at www.facebook.com/turbostart for updates on events, promotions and new products.

Disclaimer

The TurboStart® 16 VOLT RACING BATTERY is designed for specialty and racing applications only and is not recommended for standard passenger car use. The purchaser of a TurboStart® 16 VOLT RACING BATTERY understands that this product is intended for racing and specialty applications only and releases TurboStart from any and all liabilities when using this product.

Technical Assistance

If you have any additional questions, please call our Tech Department at 865.394.6535 M-F 8:30AM - 5:30PM EST or visit www.turbostart.com

Thank You!

We hope you enjoy the performance your new TurboStart® battery brings to your vehicle and again, thank you for choosing TurboStart®.