

MSD **IGNITION** **INSTALLATION INSTRUCTIONS**

MSD Pro-Battery Pack, PN 8162 MSD Smart Charger, PN 8161

Parts Included with Pro-Battery Pack, PN 8162:

- | | |
|------------------|------------------------------------|
| 1 - Battery Pack | 4 - Vibration Mounts with Hardware |
| 1 - 6' Harness | |

Parts Included with Smart Charger, PN 8161:

- 1 - Charger

Notes: The MSD Pro Battery Pack cannot be used with an alternator. An On/Off switch is required, such as MSD PN 8111 (sealed) or PN 8806 (not sealed). Must be used with Smart Charger, PN 8161.

WARNING: READ FOR PROPER GROUNDING AND AC POWER CONNECTION.

Review these steps to prevent electrical hazard risk when using the MSD Smart Charger.

The Charger must be grounded to reduce risk of electric shock. The MSD Smart Charger, PN 8161, is equipped with a 3-prong, grounding-type plug provided with a third (grounding) pin. This plug will only fit into a grounding-type outlet and must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances. This is a safety feature. If you are unable to insert the plug into your outlet, contact an electrician to replace the outlet. **Do not defeat the safety purpose of the grounding-type plug by breaking off the third prong or using a 3-to-2 adapter.**

To reduce risk of electric shock, connect the battery before plugging in the Charger. When charging is complete, unplug the Charger from outlet before disconnecting the battery.

- **DO NOT** disassemble charger. Send charger to Autotronic Controls Corp. (ACC) repair department if maintenance or repair is required.
- **DO NOT** expose charger to water, gas, oil, etc. This charger is intended for indoor use only.
- **DO NOT** operate the charger if it has been dropped or otherwise damaged in any way, send it to ACC's qualified service department for any repairs.
- **DO NOT** block air holes in top or side of charger, operate in enclosed area or place battery on top of charger.
- **DO NOT** operate with damaged connectors. The polarity of the charger and battery must always match to avoid damage to the battery and charger.

SMART CHARGER, PN 8161

The MSD Smart Charger is designed with Nickel Metal Hydride charging capabilities and can only be used to charge the MSD Pro Mag Battery Pack. It plugs into a 110 outlet and has a matching Deutsch connector that plugs into the MSD Battery Pack. The plug of the Charger is a 3-prong grounding type and must be used with an outlet that is properly installed and grounded. Do not break off the ground prong or bypass it with a 3-to-2 adapter.

The Charger will charge the battery to full power within three and a half hours or less. Once the battery reaches full charge the Smart Charger will automatically switch to a trickle charge mode. There is a Green LED on the side of the charger that will be On solid while charging. It will begin flashing when it is fully charged and in trickle charge mode (Figure 1).

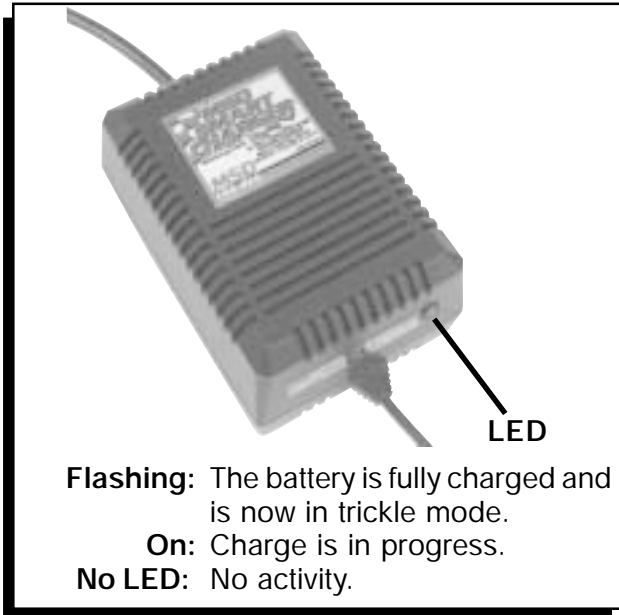


Figure 1 The MSD Smart Charger.

WARNING: Review precautions listed with the Charger for safety.

PRO BATTERY PACK, PN 8162

The MSD Pro Mag Battery Pack is designed with Nickel Metal Hydride technology. This system produces up to three times the energy density of a NiCad style battery pack. The battery is engineered to handle extreme vibrations for racing applications. The outer housing can be replaced if damage occurs by contacting MSD.

1. Find a suitable mounting location. The battery can be mounted in any position. Make sure the harness reaches any connections. The harness can be lengthened if necessary.
2. Position the battery in place and mark the mounting hole location. (The bolt pattern is 5" x 1.75".) Use a 0.266" (H) bit to drill the holes.
3. Mount the battery pack using the supplied vibration mounts.

OPERATION

The charge time of the MSD Pro-Battery Pack is governed by the load being powered. To determine the approximate length of the Battery's charge cycle add up the current demands of the components that draw power from the Battery. Figure 2 shows the current draw of common MSD accessories. Some components are not activated during the entire run but MSD recommends adding their current draw as if they were on during the whole run to give you a safe approximation of the total load.

Once your total battery load is established you can figure out approximately how long the battery charge will last and how long it will take to charge. Figure 3 illustrates the charge and discharge time.

PRODUCT	CURRENT DRAW
RETARD CONTROL, PN 8168	.160 AMP
SIX SHOOTER, PN 8158	.068 AMP PER STAGE 6 ACTIVE STAGES=.408 AMP
TACH CONVERTOR, PN 8132	.088 AMP
RPM ACVITATED SWITCH, PN 8950	.030 AMP PLUS THE LOAD BEING ACTIVATED
MODULE SELECTORS, PN 8737, PN 8739	.255 AMP PER STEP
SHIFT LIGHT, PN 8952	.016 AMP - NOT ACTIVE .110 AMP - ACTIVE

Figure 2 Current Draws of Common Accessories.

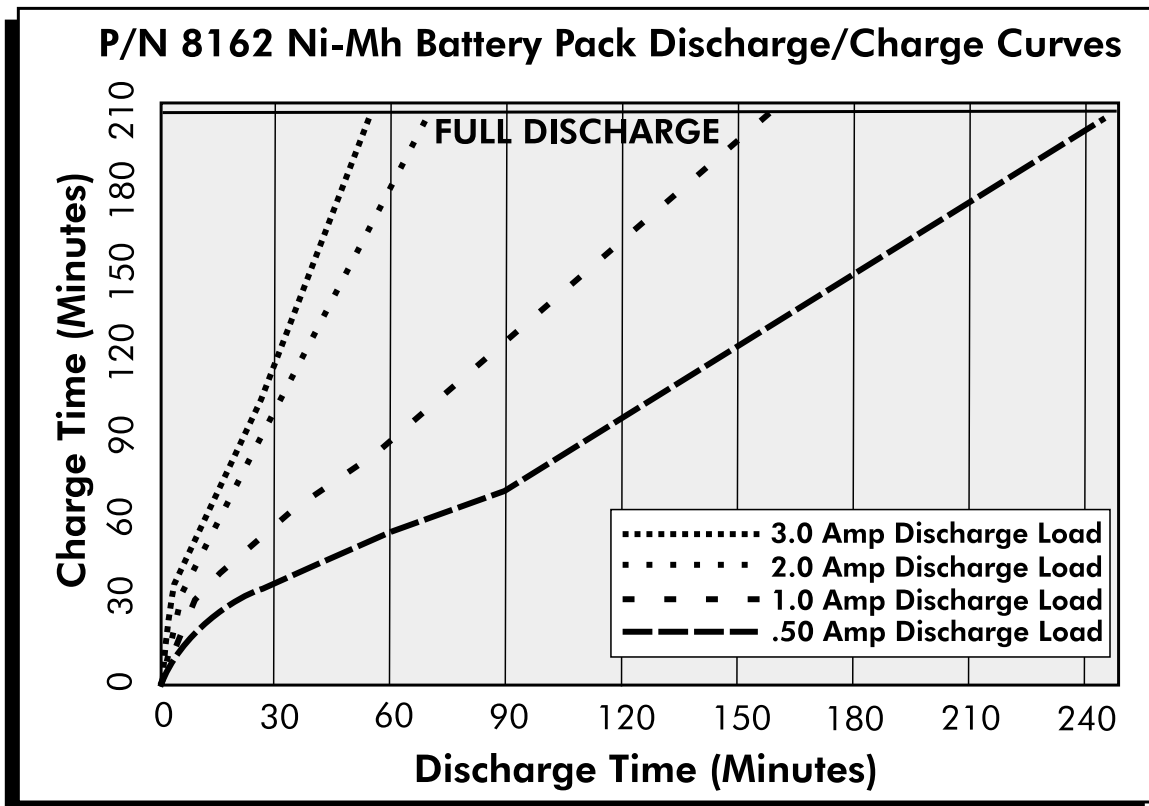


Figure 3 Battery Discharge and Charge Curves.

