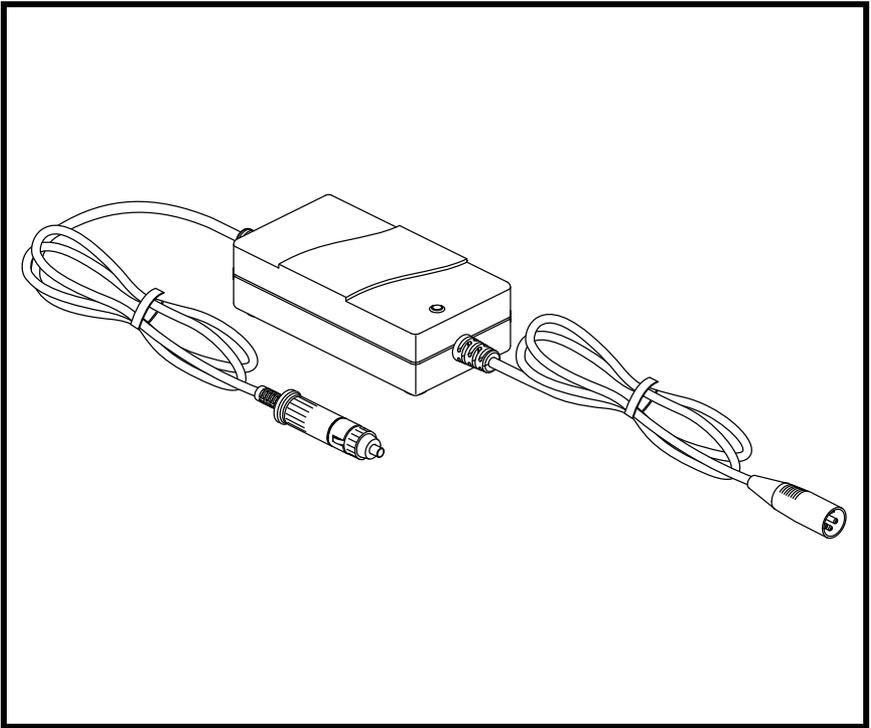


BASIC OPERATION INSTRUCTIONS

In-Car Charger



Silver Star[®]
Lifts & Ramps 

SAFETY GUIDELINES



WARNING! A Silver Star Provider or a qualified technician must perform the initial setup of this product and must perform all of the instructions in this manual.

The symbols below are used throughout this owner's manual and on the product to identify warnings and important information. It is very important for you to read them and understand them completely.



WARNING! Indicates a potentially hazardous condition/situation. Failure to follow designated procedures can cause either personal injury, component damage, or malfunction. On the product, this icon is represented as a black symbol on a yellow triangle with a black border.



MANDATORY! These actions should be performed as specified. Failure to perform mandatory actions can cause personal injury and/or equipment damage. On the product, this icon is represented as a white symbol on a blue dot with a white border.



PROHIBITED! These actions are prohibited. These actions should not be performed at any time or in any circumstances. Performing a prohibited action can cause personal injury and/or equipment damage. On the product, this icon is represented as a black symbol with a red circle and a red slash.

***NOTE:** These instructions are compiled from the latest specifications and product information available at the time of publication. We reserve the right to make changes as they become necessary. Any changes to our products may cause slight variations between the illustrations and explanations in this manual and the product you have purchased. The latest/current version of this manual is available on our website.*



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Pride Mobility Products Corporation
INFMANU3803/RevB/January 2009

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LABEL INFORMATION

PRODUCT SAFETY SYMBOLS

The symbols below are used on the product to identify warnings, mandatory actions, and prohibited actions. It is very important for you to read and understand them completely.



Read and follow the information in the owner's manual.



Avoid exposure to rain, snow, ice, salt, or standing water whenever possible. Maintain and store in a clean and dry condition.



Keep tools and other metal objects away from battery terminals. Contact with tools can cause electrical shock.



Do not allow unsupervised children to play near the mobility product while the batteries are charging.



Do not expose to open flame.



Explosive conditions exist!



Corrosive chemicals contained in battery.



Contains Lead.



Wear safety goggles.



Always replace the battery with the exact same type, chemistry, and amp-hour (Ah) capacity. Refer to the specifications table in this manual for recommended type and capacities.



LABEL INFORMATION



Disposal and recycling-Contact your authorized Silver Star Provider for information on proper disposal of your Silver Star product and its packaging.



Battery charger for indoor use only.

INTRODUCTION

WELCOME to Silver Star, a division of Pride Mobility Products Corporation (Pride). The product you have purchased combines state-of-the-art components with **safety**, comfort, and styling in mind. We are confident that the design features will provide you with the conveniences you expect during your daily activities. Understanding how to **safely** operate and care for this product should bring you years of trouble free operations and service.

Read and follow all instructions, warnings, and notes in this manual before attempting to operate your product for the first time. Your safety depends upon you, as well as your provider, caretaker, or healthcare professional in using good judgement.

This manual is to be used in addition to the mobility device owner's manual that came with your mobility device. If there is any information in this manual which you do not understand, or if you require additional assistance for setup or operation, please contact your Silver Star Provider. **Failure to follow the instructions, warnings, and notes in this manual and those located on your Silver Star product can result in personal injury and/or product damage and will void Silver Star's product warranty.**

PURCHASER'S AGREEMENT

By accepting delivery of this product, you promise that you will not change, alter, or modify this product or remove or render inoperable or unsafe any guards, shields, or other safety features of this product; fail, refuse, or neglect to install any retrofit kits from time to time provided by Silver Star to enhance or preserve the safe use of this product.

INFORMATION EXCHANGE

We want to hear your questions, comments, and suggestions about this manual. We would also like to hear about the safety and reliability of your new Silver Star product, and about the service you received from your Silver Star provider. Please notify us of any change of address, so we can keep you apprised of important information about safety, new products, and new options that can increase your ability to use and enjoy your Silver Star product.

NOTE: If you ever lose or misplace your product registration card or your copy of this manual, contact us and we will be glad to send you a new one immediately.

My Silver Star Provider Is:

Name: _____

Address: _____

Phone Number: _____

Purchase Date: _____

IN-CAR CHARGER OPERATION

The Silver Star In-Car Charger provides customers with the ability to top off the battery charge of a mobility device, such as a scooter or power chair equipped with an XLR-style 3-pin connector socket, while traveling. Please note that this charger is not intended for fully charging the batteries of a mobility device. The charger monitors your car battery and senses whether your car is running or not. When the car is running, the full charging rate is provided. Maximum charging time is 16 hours when the car is running continuously. When the car is off, the “Car off timer” will be engaged, and charging will continue for 2.5 hours maximum, or until the car battery is too low for charging to continue.

To operate the in-car charger:

1. Make sure the output voltage of the charger is compliant to the battery voltage of the mobility device.
2. Connect the charger output to the charger port on the mobility device.
3. Insert the cigarette lighter plug into the car cigarette socket. Under normal conditions, the orange LED on the charger will flash continually.
4. Charging will now begin. Please refer to “LED Indicators” for charging information.



MANDATORY! Before using the in-car charger, read all instructions for the charger, batteries, or other connected devices.

WARNING! Only charge batteries in well-ventilated areas. When charging inside the car, make sure there is sufficient ventilation, or the charger may become overheated, resulting in low charging performance.



WARNING! Charge only properly maintained and rechargeable **SEALED LEAD-ACID BATTERIES** of the same voltage that is printed on the charger label. Make sure the output voltage of the charger is compliant to the battery voltage of the mobility device to prevent damage to the electrical system and battery.

WARNING! Do not attempt to open the in-car charger case. If the in-car charger does not appear to be working correctly, contact your authorized Silver Star Provider.



MANDATORY! Be sure the in-car charger connector and pins match those of the mobility device’s charger port. Insert the cigarette lighter plug into the car cigarette socket firmly. The car cigarette socket must be rated for 10 Amps or less.



WARNING! Explosive gases may be generated while charging the batteries. Keep the in-car charger away from the sources of ignition such as flames or sparks and provide adequate ventilation when charging the batteries.

WARNING! You must recharge the batteries with the charger supplied as original equipment or the in-car charger. Do not use an automotive-type battery charger.



WARNING! Inspect the in-car charger, wiring, and connectors for damage before each use. Contact your authorized Silver Star Provider if damage is found.

WARNING! If the in-car charger is equipped with cooling slots, then do not attempt to insert objects through these slots.

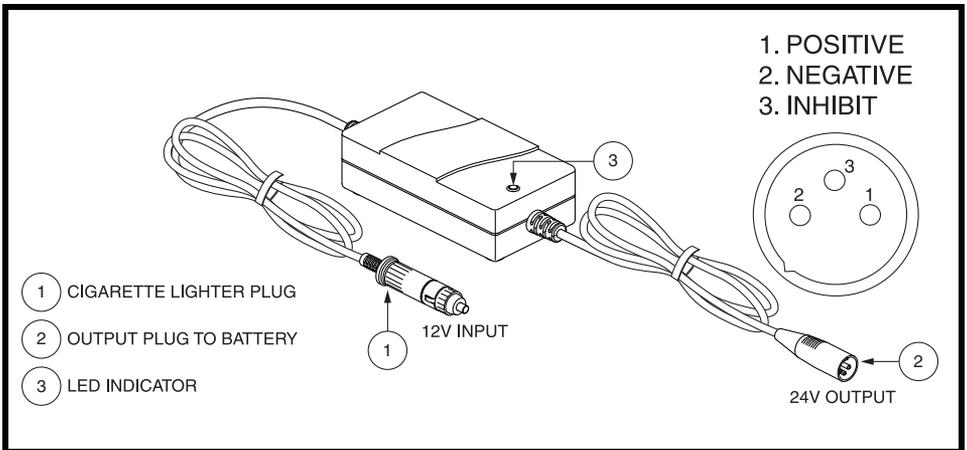


Figure 1. Silver Star In-Car Charger

TECHNICAL SPECIFICATIONS

ITEM	SILVER STAR IN-CAR CHARGER
Model Number	DD24025
Output Current (DC)	2.5A (Max)
Charging Voltage (DC)	28.8V
Floating Voltage (DC)	27.6V
Input Current (DC)	6A (Max)
Input Voltage (DC)	12-16V
Input Fuse*	10A/250V
Efficiency	85% (Min)
Operating Temperature	0°C-40°C
Switching Method	Electric Switching Mode
Charging Method	Pulsed Constant Current, Two Stage Constant Voltage
Battery Application	24V Lead-Acid Rechargeable Battery (7 Ah - 30 Ah)
Output Detection	1. Short Circuit Protection 2. Reverse Power Protection 3. Overheat Protection
Operating Humidity	20%-85%
Dimensions	110mm (length) x 60mm (width) x 36mm (height)
Weight	0.64lbs/0.29kg
Color	Black

** NOTE: Replacement fuses are available from your authorized Silver Star Provider.*



WARNING! The replacement fuse must exactly match the rating of the old fuse. Failure to use properly rated fuses may cause damage to the electrical system.

LED INDICATORS

LED CONDITION	DESCRIPTION
GREEN flashing	No battery is connected to the charger output.
ORANGE flashing	Pulse Charging and Testing the Battery. (May last up to 10 minutes)
ORANGE solid ON	Fast Charging. The battery is being charged at the maximum speed.
GREEN solid ON	The battery is charged to near full capacity. The charger is now “float charging” and maintaining the battery. (May last up to 16 hours)
Alternating between RED and GREEN	Not Charging. Car battery is low (less than 12 volts)
RED flashing twice every 2 seconds	In Charging. Car battery is low (less than 10.5 volts)
RED flashing 3 times every 2 seconds	The battery is not completely charged. The 2.5 hour “Car Off timer” has timed out, or the car battery is low.
RED flashing 4 times every 2 seconds	The battery is charged to near full capacity. The 2.5 hour “Car Off timer” has timed out, or the car battery is low.
RED flashing 5 times every 2 seconds	The battery connection is reversed, or the Output connection is short.
RED flashing 6 times every 2 seconds	“Bad” battery detected, or the car battery is low (less than 8 volts).
RED flashing 7 times every 2 seconds	Pulse Charging and Testing the Battery for over 10 minutes, and “Bad” battery detected. The battery cannot be recovered and charged.
RED flashing 8 times every 2 seconds	Maximum charge time exceeded (16 hours).
RED flashing 9 times every 2 seconds	Internal Over-temperature shutdown. The charger should turn itself back on after cooling.

TROUBLESHOOTING

Any electromechanical device occasionally requires some troubleshooting. However, most of the problems that may arise can usually be solved with a bit of thought and common sense. Many of these problems occur because the battery is not fully charged or because the battery is worn down and can no longer hold a charge.

What if no LEDs are lit on the charger?

- The cigarette lighter socket on your car does not function when the vehicle is off. Turn the ignition key ON.
- Make sure the charger plug is fully inserted into the car cigarette lighter socket.
- Check if the fuse or the charger's cigarette lighter plug or any fuse in the car's fuse box has blown. If so, replace the blown fuse.
- Check if the mobility device battery is below 7 volts. If so, the battery's voltage is too low to be charged. Contact your authorized Silver Star Provider.
- If none of the above conditions apply, the charger is likely defective. Contact your authorized Silver Star Provider for service or replacement.

What if the GREEN LED is flashing, but the battery is not charged?

- Check to see if the batteries are connected correctly, or if the output wiring is shorted out or open. If not, the charger is likely defective. Contact your authorized Silver Star Provider for service or replacement.

What if the LEDs are alternating between RED and GREEN?

- The car is not started. Start the engine.

What if the RED LED is flashing?

- This condition can have several causes depending on the number of times the RED FLASH flashes. Please refer to "LED Indicators" for more information.

What if the ORANGE LED abruptly changes to GREEN?

- Check to see if the mobility device batteries are near full capacity. If not, the batteries are likely defective and should be replaced. Contact your authorized Silver Star Provider.



WARNING! Do not mix old and new batteries. Always replace both batteries at the same time.

LABEL LOCATION AND APPLICATION

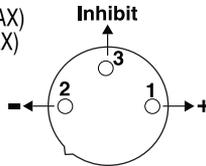


CTE TECH CORP. In-Car Battery Charger

MODEL: DD24025
 INPUT: 12VDC (12V-16V), 6A (MAX)
 DC OUTPUT: 28.8VDC; 2.5A (MAX)

LED INDICATOR:
 GREEN FLASH: No Battery
 ORANGE FLASH: Pre-charging
 ORANGE LIT: Charging
 ALTERNATING: Car Battery Low
 RED FLASH: See Owner's Manual

INPUT FUSE: 10A/250V



WARNING



PRODUCT NOT INTENDED FOR FULLY CHARGING
 DEPLETED BATTERIES.

- READ OWNER'S MANUAL BEFORE USE.
- DO NOT OPEN CHARGER CASE.
- CHARGE BATTERIES IN A WELL-VENTILATED AREA.
- CHARGE ONLY 24V LEAD-ACID BATTERIES RATED ABOVE 7 AH. OTHER BATTERIES MAY BURST CAUSING PERSONAL INJURY AND DAMAGE.
- PREVENT FLAMES AND SPARKS. DO NOT EXPOSE TO WATER. RISK OF ELECTRIC SHOCK OR BURNS.

Serial No:

Made in Taiwan

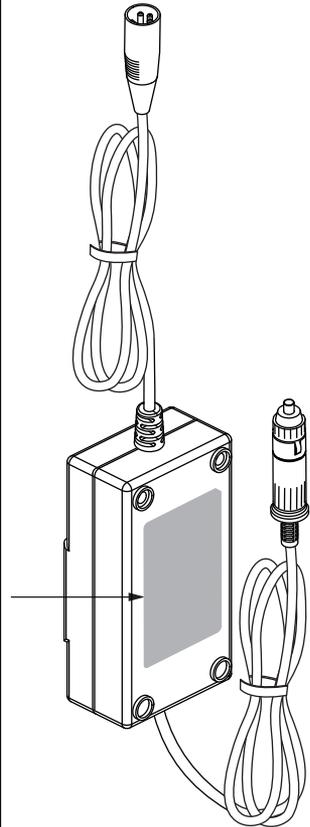


Figure 2. Label Location and Application

CARE AND MAINTENANCE

- Inspect the in-car battery charger, wiring, wiring insulation, and connectors for damage before each use. Contact your authorized Silver Star provider if damage is found.
- Avoid exposing the in-car charger to rain, snow, ice, salt, or standing water. If the charger or charger wires come in contact with moisture, allow the unit to dry thoroughly before using.
- When not in use, store the in-car charger in a clean, dry location.
- Use a damp cloth and mild, non-abrasive cleanser to clean the plastic and metal parts of your in-car charger. Avoid using products that may scratch the surface of the unit.

WARRANTY

For two (2) years from the date of purchase, Silver Star will repair or replace at our option to the original purchaser, free of charge, the in-car charger or any of its components found upon examination by an authorized representative of Silver Star to be defective in material and/or workmanship.

NOTES

Silver Star[®] **Lifts & Ramps**

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Pride
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