

WAVLINK



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User Manual

350W Intelligent Battery Charger

Model: GS350C

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About This Guide

This guide serves as a companion to the Quick Installation Guide for your wired USB product. The Quick Installation Guide provides essential steps for immediate setup, while this document offers detailed explanations of product features and advanced configuration options.

Please note that product functionality may vary slightly depending on your specific model, software version, geographic region, language, and connected devices. Screenshots, parameters, and descriptions in this guide are for illustrative purposes only.

Conventions

In this guide the following conventions are used :

Convention	Description
<u>Underlined</u>	Underlined words or phrases are hyperlinks. You can click to redirect to a website or a specific section.
Teal	The content and text that needs to be emphasized on the web page is the theme color #1D428A , including menus, items, buttons, etc.
Note:	Critical reminders to prevent operational errors or functionality issues.
Tips:	Best practices or optimization suggestions for enhanced performance.

More Info

The latest driver, firmware and utilities are available from the Download Center at [WAVLINK SUPPORT](#) .

Included in your product packaging or available digitally via the link above.

If you encounter any issues, please don't hesitate to email contact@wavlink.com/techsupport@wavlink.com/postsales@wavlink.com to provide feedbacks or contact online customer service, thank you !

Performance Disclaimer

The maximum transfer speeds stated for this product are based on theoretical limits of USB specifications (e.g., USB 2.0/3.0/3.1 Gen 1/Gen 2). Actual performance may vary due to:

Device limitations: Host system performance, driver compatibility, and connected device capabilities.

Environmental factors: USB cable quality, length, electromagnetic interference, and port power delivery.

Network/software conditions: Operating system overhead, background processes, and concurrent data transfers.

Wired connections are generally more stable than wireless alternatives, but performance is not guaranteed and depends on the factors listed above.

Information in this document is subject to change without notice. The manufacturer does not make any representations or warranties (implied or otherwise) regarding the accuracy and completeness of this document and shall in no event be liable for any loss of profit or any commercial damage, including but not limited to special, incidental, consequential, or other damage.

Safety Instructions

Always read the safety instructions carefully.

Keep this Quick Start Guide for future reference.

Keep this equipment away from humidity.

If any of the following situation arises, get the equipment checked by a service technician:

☐ The equipment has been exposed to moisture.

☐ The equipment has been dropped and damaged.

☐ The equipment has an obvious sign of breakage.

☐ The equipment has not been working well or you cannot get it work according to Quick Start Guide.

Copyright Statement

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WEEE Directive & Product Disposal

At the end of its serviceable life, this product should not be treated as household or general waste. It should be handed over to the applicable collection point for the recycling of electrical and electronic equipment, or returned to the supplier for disposal.



Chapter 1 Important Safety Notes

Important Safety Notes

Before using the charger, please read the Quick Start Guide carefully and obey the battery manufacturer's specific precautions and recommended battery charging rate. Failure to follow rules may result in ELECTRICAL SHOCK, EXPLOSION, FIRE, which may result in SERIOUS INJURY, DEATH, or PROPERTY LOSS.

- Determine the voltage and chemistry of batteries before charging.
- Keep in mind the distance to batteries. The DC cable length of the charger, with either the battery clamp or eyelet terminal connectors, is approximately 1.2m.
- This product can expose you to chemicals including lead and exhaust fumes. Please always wash your hands after handling batteries and related materials.
- Prepare for clean water and soap nearby in the case of battery acid contamination.
- Do not handle or wear any metal objects when working with batteries including tools, watches, and jewelry.
- Do not leave children unattended with the product or any accessory.
- Do not use a damaged product or a damaged power cable.
- Store and use the product in dry locations. Do not use the product if it becomes wet. If the product becomes wet during use, disconnect it from batteries and stop using it immediately.
- Do not attempt to alter, modify, or repair any part of the product.
- If the product is damaged, malfunctions, or is exposed to liquid, stop using it and contact WAVLINK.
- This product is only approved for use with accompanying accessories.
- Prevent battery acid from coming in contact with the product.
- Do not operate the product in an enclosed area or an area with restricted ventilation.
- Do not set a battery on top of the product.
- Place cable in a safe position, which avoids accidental damage including moving vehicle parts, moving engine parts or what could become a hazard that may cause injury or death.

- This product is designed to work in ambient temperatures between -4°F and 104°F (-20°C ~ 40°C). Do not operate it outside of the temperature range. Stop using if the battery becomes excessively hot. The average storage temperature is -20°C ~ 40°C). Never exceed 70°C under any condition.
- Do not charge a battery if you are unsure of the battery's specific chemistry or voltage.
- The product contains magnetic components which may interfere with pacemakers, defibrillators, or other medical devices. Consult your physician before use if you have any medical devices including pacemakers.
- Use a soft, lint-free (microfiber) cloth when you clean the product.
- Do not operate the product in any area with a potentially explosive atmosphere, including fueling areas or areas that contain chemicals or particles such as grain, dust or metal powders.
- The product complies with regulations governing radio frequency emissions when designed, tested, and manufactured, but such emissions from the product can negatively affect the operation of other electronic equipment, causing them to malfunction.

NOTE: After tested, the product complies with the limits for a Class B digital device, according to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the product is operated in a commercial environment. The product can radiate radio frequency energy. If not installed and used following the Quick Start Guide, it may cause harmful interference to radio communications. Operation of this product in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Chapter 2 Overview

This chapter contains the following sections :

- [Introduction](#)
- [Specification](#)
- [Product Overview](#)

Overview

Introduction

This product is a 350W AC/DC intelligent battery charger, with 100-240Vac wide voltage input. It is designed for charging all types of 6V & 12V & 24V lead-acid batteries, including Lithium, LiFePO₄, Wet(Flooded), MF(Maintenance-Free), CA(Calcium), EFB(Enhanced Flooded Battery), and AGM(Absorption Glass Mat) batteries. It is suitable for charging battery capacity up to 300Amp-hours and maintains all battery sizes, providing short circuit protection, over-current protection and over-voltage protection.

Specification

- Input Voltage AC: 100-240V AC, 50/60Hz Max 390W
- Output Power: 350W Max
- Charging Voltage: Various
- Charging Current: 6A(6V), 12A(6V), 6A(12V), 12A(12V), 25A(12V), 6A(24V), 12A(24V), Auto(6V, 12V, 24V)
- Low-Voltage Detection: 1V(6V), 8V(12V), 16V(24V)
- Back Current Drain: < 0.5mA
- Ambient Temperature: -20°C to +40°C
- Type of Batteries: 6V, 12V, 24V
- Battery Capacity: Up to 300Ah, Maintains All Battery Sizes
- Cooling: Fan Convection
- Dimensions (L x W x H): 16.7x9.6x5.5cm/6.57x3.78x2.17in
- Battery Chemistries: Wet, MF, CA, EFB, AGM, Lithium, LiFePO₄

Product Overview



Button Illustration

Button	Operation	Graphic
Button 1	Battery Button: Press the button to choose battery type. The battery type indicator is on.	
Button 2	Voltage Button: Press the button to choose voltage. The voltage indicator is on.	
Button 3	Current Button: Press the button to choose current. The current indicator is on.	
Button 4	Charging and Maintain Mode: “Charging” indicator is on. When connecting well to the battery and power, the progress bar indicator is on according to charging mode.	
Button 4	If the battery is not used for a long time, press the button to select maintain mode. The battery is charging by a smaller current to maintain. “Maintain” indicator is on. The progress bar	

Button	Operation	Graphic
	cyclically flashes. ("Maintain" mode is only for Lead Acid Battery.)	
Button 5	Desulfation Mode (Lead Acid Battery Only): If the battery is used for a long time and the capacity is used up soon. Press the button and use "Desulfation" mode to charge the battery. "Desulfation" indicator is on. The progress bar cyclically flashes.	
Button 6	Supply Mode: When battery is connected well, but it can not be detected. Press the button and use "Supply" mode to charge the battery. The "Supply" indicator is on. The progress bar cyclically flashes.	
Button 7	Start and Pause Button: When set well, press the button. "Start" indicator is on, indicating the charger is working. Press the button under working condition. "Pause" indicator is on, indicating the charger does not work.	

Graphic Indication



S/N	Graphic	Indicator	Explanation
1		Show battery cell number	In professional mode, it displays battery cell number; In normal mode, nothing displayed.
2		On or flash	Warning Over current, Short circuit
3		On	Charging in “Desulfation”
4		On	The battery is connected reversely.
5		On	Battery not connected /Battery anomaly.
6		On	Ambient temperature for charging.

S/N	Graphic	Indicator	Explanation
7		On	Show battery capacity.
8		\	Show charging voltage.
9		\	Show charging current.
10		Display number	Description of error codes. Please find the below indication for error codes.

Failure Code

When the machine cannot be charged during use, the product screen will show error codes. Please find the description of them.

Error Code	Description
01.E	The battery's output electrode is reversed.
02.E	The charger output is short-circuited.
03.E	The internal temperature of the product is too high.
04.E	The output charging mode is selected incorrectly.
41.E	The output voltage is too high.
42.E	The output current is too high.

Error Code	Description
43.E	The battery is in abnormal condition.

Progress Bar Indication



- ① The battery is detected as a normal condition.
- ② Desulfation stage, only for lead acid battery.
- ③ Small current charging mode.
- ④ Bulk charging mode.
- ⑤ ABS mode.
- ⑥ Floating charging mode.
- ⑦ Full charged.

Chapter 3 How to Use

How to Use

Charging Mode

The product has fifteen charging modes: Standby, Charging (6V AGM, 12V AGM, 24V AGM, 12V Lithium, 24V Lithium, 12V LiFePO4, 24V LiFePO4), Maintain (6V AGM, 12V AGM, 24V AGM), Desulfation (6V AGM, 12V AGM) and Supply Mode (6V AGM, 12V AGM, 24V AGM). When Supply mode is selected, you can charge by selecting different currents with different voltages. Please select battery types after opening the switch. These modes are advanced charging modes that require your full attention before selecting. It is important to understand the differences and purpose of each charging mode. Do not operate the charger until you confirm the appropriate charging mode for your battery. Below is a brief description(Peak voltage measured at 25°C and rated amperage is bulk amperage when above 0°C.):

Standby Mode

In Standby mode, the charger does not charge or provide any power to the battery and energy save is activated, drawing microscopic power from the electrical outlet. CAN bus is enabled. When in Standby, the LCD will illuminate.

Charge Mode

Battery Type	Description
6V Lead	For charging 6-volt lead acid batteries. When selected, the 6V lights blue. 7.3V/6A: Up to 110Ah batteries 7.3V/12A: Up to 230Ah batteries

Battery Type	Description
12V Lead	For charging 12-volt lead acid batteries. When selected, the 12V lights blue. 14.6V/6A: Up to 110Ah batteries 14.6V/12A: Up to 230Ah batteries 14.6V/25A: Up to 300Ah batteries
24V Lead	For charging 24-volt lead acid batteries. When selected, the 24V lights blue. 29.2V/6A: Up to 110Ah batteries 29.2V/12A: Up to 230Ah batteries
12V LiFePo4	For charging 12-volt LiFePo4 batteries. When selected, the 12V lights blue. 14.6V/6A: Up to 110Ah batteries 14.6V/12A: Up to 230Ah batteries 14.6V/25A: Up to 300Ah batteries
24V LiFePo4	For charging 24-volt LiFePo4 batteries. When selected, the 24V lights blue. 29.2V/6A: Up to 110Ah batteries 29.2V/12A: Up to 230Ah batteries
12V Lithium	For charging 12-volt Lithium batteries. When selected, the 12V lights blue. 12.6V/6A: Up to 110Ah batteries 12.6V/12A: Up to 230Ah batteries 12.6V/25A: Up to 300Ah batteries
24V Lithium	For charging 24-volt Lithium batteries. When selected, the 24V lights blue. 25.2V/6A: Up to 110Ah batteries 25.2V/12A: Up to 230Ah batteries

Maintain Mode

Battery Type	Description
6V Lead	For charging 6-volt lead acid batteries. When selected, the 6V lights blue. 7.3V: Up to 230Ah batteries
12V Lead	For charging 12-volt lead acid batteries. When selected, the 12V lights blue. 14.6V: Up to 300Ah batteries
24V Lead	For charging 24-volt lead acid batteries. When selected, the 24V lights blue. 29.2V: Up to 230Ah batteries

Desulfation Mode

Battery Type	Description
6V Lead	For charging 6-volt lead acid batteries. When selected, the 6V lights blue. 7.3V: Up to 230Ah batteries
12V Lead	For charging 12-volt lead acid batteries. When selected, the 12V lights blue. 14.6V: Up to 300Ah batteries

Supply Mode

Battery Type	Description
6V Lead	For charging 6-volt lead acid batteries. When selected, the 6V lights blue. 7.3V/6A: Up to 110Ah batteries 7.3V/12A: Up to 230Ah batteries

Battery Type	Description
12V Lead	For charging 12-volt lead acid batteries. When selected, the 12V lights blue. 14.6V/6A: Up to 110Ah batteries 14.6V/12A: Up to 230Ah batteries 14.6V/25A: Up to 300Ah batteries
24V Lead	For charging 24-volt lead acid batteries. When selected, the 24V lights blue. 29.2V/6A: Up to 110Ah batteries 29.2V/12A: Up to 230Ah batteries

Tips

Lead Acid Battery Charging.

1. Firstly, press Battery Type button to select Lead, then press Start button to charge.
2. Firstly, press Battery Type button to select Lead. Secondly, press Voltage button (6V, 12V, 24V), then press Start button to charge.
3. Firstly, press Battery Type button to select Lead. Secondly, press Voltage button (6V, 12V, 24V), then press Current button, at last press Start button to charge.

CAUTION: Before selecting this mode, please make sure your charger is lead acid battery and your battery voltage is suitable with the selected voltage. Otherwise, the charging will fail. When the battery voltage is unknown, please select Auto for voltage.

LiFePo4 Battery Charging.

1. Firstly, press Battery Type button to select LiFePo4, then press Voltage button (12V, 24V), at last, press Start button to charge.
2. Firstly, press Battery Type button to select LiFePo4. Secondly, press Voltage button (12V, 24V), then press Current button, at last, press Start button to charge.

CAUTION: Before selecting this mode, please make sure your charger is LiFePo4 battery and your battery voltage is suitable with the selected voltage. Otherwise, the charging will fail.

Lithium Battery Charging

1. Firstly, press Battery Type button to select Lithium, then press Voltage button (12V, 24V), at last, press Start button to charge.
2. Firstly, press Battery Type button to select Lithium. Secondly, press Voltage button (12V, 24V), then press Current button, at last, press Start button to charge.

CAUTION: Before selecting this mode, please make sure your charger is Lithium battery and your battery voltage is suitable with the selected voltage. Otherwise, the charging will fail.

Maintain

Firstly, press Battery Type button to select lead. Secondly, press Maintain button, then press Voltage button to select suitable voltage and at last press Start button to charge. The charger will be charged by light current to make sure full current state and this mode will not damage your battery.

Desulfation

Firstly, press Battery Type button to select lead. Secondly, press Desulfation button, then press Voltage button (6V, 12V), at last press the Start button to charge.

CAUTION: This mode can be selected for reconditioning when the battery is seriously aged and has low capacity. Please note that batteries can only be reconditioned one by one.

Supply Mode

Firstly, press the Battery Type button to select lead. Secondly, press Voltage button. Thirdly, press Current button, at last press Start button.

CAUTION: This mode can be selected when it is used as a power supply or battery voltage is undetected.

Professional Mode

Firstly, press Battery Type button, then open the power to enter the professional mode.

When entering professional mode, please select different batteries with different steps:

1. Firstly, press Battery Type button to select LiFePo4. Secondly, press Voltage button to select voltage and bat cells (11V when 3 cells are fully charged, 14.6V when 4 cells are fully charged, 21.9V when 6 cells are fully charged, 29.2V when 8 cells are fully charged.), and the current is selected as the same with non-professional mode.
2. Firstly, press Battery Type button to select Lithium. Secondly, press Voltage button to select voltage and bat cells (12.6V when 3 cells are fully charged, 16.8V when 4 cells are fully charged, 25.2V when 6 cells are fully charged, 33.6V when 8 cells are fully charged.), and the current is selected as the same with non-professional mode.

CAUTION: In the mode of LiFePo4 and Lithium, hidden bat cells will be shown. Please notice that non-professionals don't select this mode. If this mode is selected, please contact the battery supplier, otherwise, it could be dangerous. This mode can't be memorized. After being put off, the charger will back to the state of non-professional.

Starting Charging at 0V

In Maintain, Desulfation and Force modes, the charger activates 0V charging when it detects the connected battery is nearly at 0V, and delivers continuous pulse charging to the battery. If the battery voltage fails to rise to 1V within one hour, the charger will identify a battery anomaly and stop charging. If the voltage rises above 1V within one hour, the charger will proceed automatically into the selected working mode.

Connecting to the Battery

Do not connect the AC power plug until all other connections are made. Identify the correct polarity of terminals on the battery. Do not make any connections to the carburetor, fuel lines, or thin, sheet metal parts. The below instructions are for a negative ground system (most common). If your vehicle is a positive ground system (very uncommon), follow the below instructions in reverse order.

1. Connect the positive (red) eyelet terminal connector to the positive (POS, P, +) battery terminal.
2. Connect the negative (black) eyelet terminal connector to the negative (NEG, N, -) battery terminal.
3. Connect the battery charger into a suitable electrical outlet. Do not face the battery when making this connection.
4. When disconnecting, disconnect it in the reverse order. Remove the negative first (or positive first for positive ground systems).

Begin Charging

1. Verify the voltage and chemistry of the battery.
2. Confirm that you have connected the battery clamps or eyelet terminal connectors properly and the AC power plug is plugged into an electrical outlet.
3. [First time use] The charger will begin in Standby Mode, and Pause indicator is on.
4. Firstly, press the Battery Type button to select batteries. Secondly, press Voltage button, then press Current button.
5. After pressing the Start button, the button will light blue, then the battery will be detected. If the battery level is normal, no battery indicator will disappear and the charger will work normally, otherwise the opposite.
6. The charger can be connected to the battery at all times to provide maintenance charging.

Auto-Memory

The charger has built-in auto-memory and will return to the last charging mode when connected. Select suitable mode and press Start button, then the charger will save new working mode.

CAUTION: Professional mode does not apply to auto-memory.

Chapter 4 Charging Time

Charging Time

The estimated time to charge a battery is shown below. The size of the battery (Ah) and its depth of discharge (DOD) greatly affect its charging time. The charging time is based on an average depth of discharge to a fully charged battery. Temperature will also impact charging times. GS350C features thermal compensation that automatically adjusts charging profiles to maximize charging performance. The table below is for reference purposes only. Actual data may vary depending on battery conditions.

Battery Size Ah (Amp hour)	Approximate Time to Charge in Hours	
	6V	24V
20	1.5	1.5
40	3.0	3.0
80	6.0	6.0
100	7.0	7.0
230	17.3	17.3

Battery Size Ah (Amp hour)	Approximate Time to Charge in Hours
	12V
40	1.5
80	3.0
160	6.0
200	7.0
300	15

Chapter 5 After-sales Service

After-sales Service

Need help?

We're here for you!



Online support: wavlink.com

Available Mon-Fri 8:30 am-5:30pm (UTC+8)



support@wavlink.com

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+1 8889730883

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www.wavlink.com



**Thank you for purchasing
WAVLINK product!**

Chapter 6 FCC

FCC Requirement

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.