

## FOVAL BC-1A

# FOVAL BC-1A 12V 1000mA Automatic Battery Charger & Maintainer

Instruction Manual

## 1. PRODUCT OVERVIEW

The FOVAL BC-1A is a fully automatic 12V 1000mA smart battery charger and maintainer designed for various lead-acid batteries, including SLA, VRLA, GEL CELL, AGM, and WET types. It features a 4-step charging program to ensure optimal battery health and longevity.

- **Automatic Charging & Maintaining:** Provides a 1A 12V charge, functioning as a battery maintainer, trickle charger, float charger, and battery desulfator.
- **Compact Design:** Ultra-compact and lightweight for easy storage and portability.
- **Wide Compatibility:** Suitable for cars, motorcycles, lawn mowers, ATVs, UTVs, tractors, trucks, SUVs, RVs, boats, PWCs, jet skis, snowmobiles, classic cars, and children's toys.
- **Intuitive LED Indicators:** Visual feedback on charge status and diagnostics.
- **Multi-Safety Protections:** Built-in circuit protection against reverse polarity, over-current, overload, over-voltage, and over-temperature.

## 2. PACKAGE CONTENTS

The package includes:

- FOVAL BC-1A Automatic Battery Charger (2 units if purchased as a 2-pack)
- DC Output Cable with Alligator Clips
- DC Output Cable with Ring Terminals
- AC Power Cord

# Smart Charger & Maintain Battery

## Applicable Battery Capacity 2Ah - 120Ah



Lawn Mower



Motorcycle



Electric toy car



Car



SUV



Motorboat



Boat



Golf car

Image: The FOVAL Automatic Battery Charger with its included alligator clip and ring terminal connectors.

### 3. SAFETY INFORMATION

**CAUTION: Read warnings in the instruction manual before opening or operating the device.**

- Always ensure proper ventilation when charging batteries.
- Avoid sparks or flames near the battery during charging.
- Wear eye protection and gloves when handling batteries.
- Do not charge frozen batteries.
- Ensure the charger is disconnected from the AC power outlet before making or breaking connections to the battery.
- The charger is designed for 12V lead-acid batteries only. Do not use with lithium batteries.
- Built-in protections include reverse polarity, over-current, overload, over-voltage, over-temperature, and short circuit protection.

### 4. SETUP AND CONNECTION

Connecting the FOVAL battery charger is a simple three-step process:

**1. Step 1: Connect the DC Output Cable to the Charger.**

Connect the desired DC output cable (either alligator clips or ring terminals) to the charger's output port. Ensure the connection is secure.



Image: A diagram illustrating the connection of the DC output cable to the main charger unit.

**2. Step 2: Connect to the Battery.**

Connect the alligator clips or ring terminals to the battery terminals. Ensure correct polarity: red to positive (+), black to negative (-).

- **Using Alligator Clips:** Attach the red clip to the positive (+) battery terminal and the black clip to the negative (-) battery terminal.
- **Using Ring Terminals:** Secure the red ring terminal to the positive (+) battery post and the black ring terminal to the negative (-) battery post. These can be left permanently connected for convenience.

# Automatic Battery Charger & Maintainer

## 12V/1000mA

Perfect for Lead Acid, SLA, VRLA,  
Gel Cell, AGM, WET Batteries.

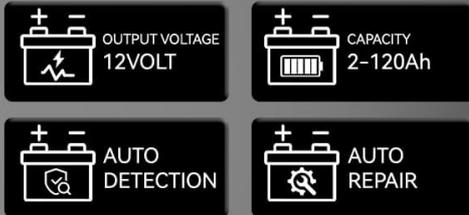


Image: The FOVAL charger connected to a lead-acid battery using alligator clips, with the charger plugged into a wall outlet.

# FULLY AUTOMATICALLY BATTERY CHARGER

Plug and Charge, Connect It and Forget It.



Image: Two FOVAL chargers demonstrating connections to different battery types: one with alligator clips for normal charging and another with ring terminals for long-term charging.

### 3. Step 3: Connect to AC Power.

Plug the charger's AC power cord into a standard 120V AC wall outlet. The charger will automatically begin the charging process.

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Video: A user demonstrating the FOVAL battery charger, highlighting its compact size and the quick-connect feature for both alligator clips and ring terminals, ideal for maintaining idle batteries in seasonal equipment.

## 5. OPERATING INSTRUCTIONS

The FOVAL BC-1A charger operates automatically with a 4-step charging program:

1. **Initialization:** Checks battery status.
2. **Bulk Charge:** Charges the battery at a constant current until approximately 80% capacity.
3. **Absorption Mode:** Charges at a constant voltage to bring the battery to full capacity.
4. **Float Mode:** Automatically switches to a low-current maintenance voltage to keep the battery fully charged without overcharging.

The charger's LED indicators provide visual feedback on the charging status:

- **Green Light (Power):** Indicates the charger is connected to AC power.
- **Green with Red (Charging):** Indicates the battery is actively being charged.
- **Green with Yellow (Fully Charged):** Indicates the battery is fully charged and the charger is in float mode.
- **Twinkle (Error):** Indicates an error condition (e.g., reverse polarity, short circuit).



Image: The FOVAL charger displaying its LED indicators, showing the progression from constant current charging to constant voltage charging and finally to floating charge.

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Video: A user demonstrating the FOVAL battery charger connected to an ATV, explaining the LED indicators for power, charging, and charge complete, and emphasizing its reliability for maintaining various vehicle batteries.

## 6. MAINTENANCE

The FOVAL BC-1A is designed to maintain your battery's charge, extending its lifespan. For optimal performance and battery longevity:

- Regularly inspect the charger and cables for any signs of damage.
- Keep the charger clean and dry.
- For vehicles or equipment stored for extended periods, connect the charger to keep the battery in float mode. This prevents self-discharge and sulfation.
- Ensure the quick-connect cap is used when the charger is disconnected from the battery to protect the terminals.

## 7. TROUBLESHOOTING

If the charger is not functioning as expected, refer to the LED indicators for diagnostic information:

LED Indicator	Status	Possible Cause / Solution
Green Light On	Power On	Charger is connected to AC power.
Green with Red Light On	Charging	Battery is actively being charged.
Green with Yellow Light On	Charge Complete / Float Mode	Battery is fully charged and maintained.
Twinkling Red Light	Error	<ul style="list-style-type: none"> <li>◦ Check for reverse polarity (red clip to negative, black to positive). Correct connections.</li> <li>◦ Check for short circuit.</li> <li>◦ Battery may be severely discharged or damaged.</li> <li>◦ Ensure connections are secure.</li> </ul>

## 8. SPECIFICATIONS

- **Model:** BC-1A
- **Input Voltage:** 100-240V AC, 50/60Hz
- **Output Voltage:** 12V DC
- **Output Current:** 1000mA (1A)
- **Battery Capacity:** 2Ah - 120Ah
- **Compatible Battery Types:** SLA, VRLA, GEL CELL, AGM, WET Lead Acid Batteries
- **Charging Stages:** 4-step (Initialization, Bulk Charge, Absorption Mode, Float Mode)
- **Product Dimensions:** 3.9 x 2.4 x 1.2 inches (1.25"D x 2.4"W x 3.9"H)
- **Item Weight:** 10.6 ounces (300 Grams)
- **Cable Length:** AC cable + DC cable total 102 inches (approx. 2.6 meters)
- **Safety Certifications:** ETL Listed



Image: A diagram illustrating the compact dimensions and net weight of the FOVAL Automatic Battery Charger.

## 9. WARRANTY AND SUPPORT

FOVAL provides an 18-month warranty and dedicated after-sale customer service support. If you encounter any issues or have questions regarding your product, please contact FOVAL customer service for assistance. For further information or support, please visit the official FOVAL store: [FOVAL Store on Amazon](#).