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FOXWELL BC521

FOXWELL BC521 5A 12V Battery Charger & Tester User Manual

Model: BC521 | Brand: FOXWELL

1. SAFETY INFORMATION

Always read and understand the entire instruction manual before using the FOXWELL BC521. Failure to follow safety instructions may result in electric shock, fire, or serious injury. Keep the manual for future reference.

- Wear eye protection and protective clothing when working with batteries.
- Ensure adequate ventilation during charging to prevent gas accumulation.
- Avoid sparks or flames near the battery during charging.
- Connect the charger to the correct battery voltage (12V only).
- Do not charge frozen batteries.
- The BC521 features built-in protections against sparks, overcharging, overheating, reverse polarity, and short circuits.

2. PRODUCT OVERVIEW

The FOXWELL BC521 is a versatile 4-in-1 device designed for 12V lead-acid batteries, including AGM, GEL, EFB, and Flooded types. It combines smart battery charging, testing, maintenance, and desulfation functions in a single unit.

What's in the Box:

- BC521 Host Unit
- User Manual
- Storage Case

RIGHT CHARGE, ANY WEATHER

Smart Temp Control Adjusts Voltage

158°F
70°C

-4°F
-20°C



AVOID OVERCHARGE
IN HEAT

GET FULL CHARGE
IN COLD

Figure 2.1: FOXWELL BC521 Battery Charger & Tester with included cables.

3. SETUP

Follow these steps to set up your FOXWELL BC521 for operation:

1. **Connect Clamps to Battery:** Attach the red positive (+) clamp to the positive battery terminal and the black negative (-) clamp to the negative battery terminal. Ensure a secure connection.
2. **Plug into AC Power:** Connect the charger's AC power cord to a standard 100-240V AC outlet. The device will power on automatically.
3. **Initial Display:** The LCD screen will display the main menu, allowing you to select desired functions.

DO MORE WITH ONE DEVICE

12V-1A-3A-5A



Figure 3.1: Correct connection of the BC521 clamps to a 12V battery.

4. OPERATING MODES

The BC521 offers multiple operating modes for comprehensive battery care.

4.1 Smart 8-Stage Charging

The device intelligently adjusts charging through an 8-stage process, automatically selecting the appropriate current (1A-5A) based on battery condition. This prevents over- or under-charging and includes temperature compensation.

ZERO DRAIN ON YOUR BATTERY

Lower Ripple Higher Safety

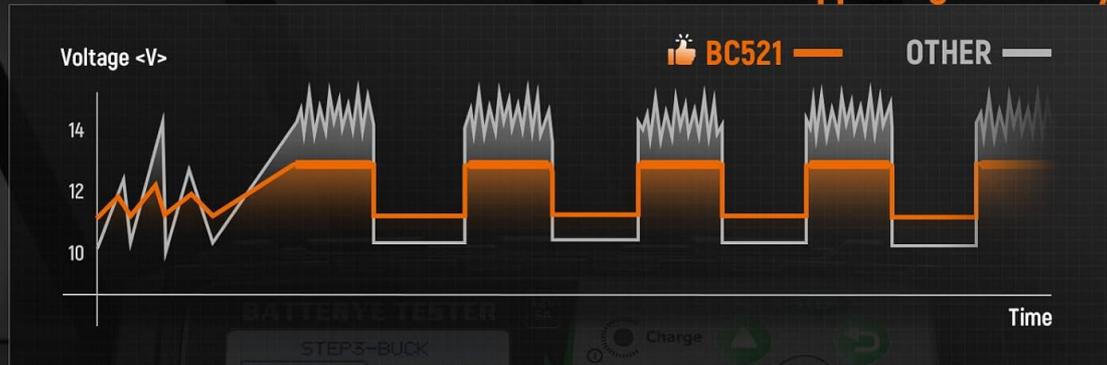


Figure 4.1: Visual representation of the 8-stage smart charging system.

4.2 Quick Charging & Standard Charging

Select 'Quick Charging' for a faster charge or 'Standard Charging' for a regular charging cycle. The device will automatically detect the battery type and condition to optimize the charge.

4.3 Maintainer Mode & Unattended Mode

For long-term storage, activate 'Maintainer Mode'. Once fully charged, the charger automatically enters 'Unattended Mode' to maintain optimal voltage without overcharging, keeping batteries ready for use.

DUAL DISPLAY. INSTANT CLARITY.



Figure 4.2: The BC521 display indicating Unattended Mode and various safety protections.

5. BATTERY TESTING

The BC521 functions as a comprehensive battery tester, providing accurate data on your battery's condition.

5.1 Battery Test

From the main menu, select 'Battery Test'. The device will analyze and display key data including voltage, State of Charge (SoC), State of Health (SoH), and internal resistance. This helps determine if the battery needs charging, maintenance, or replacement.

5.2 Cranking Test

Select 'Cranking Test' to evaluate the battery's ability to start the engine. Follow the on-screen prompts to start the vehicle. The tester will measure cranking performance.

5.3 Alternator Test

Choose 'Alternator Test' to check the vehicle's charging system. The device will assess the alternator's output under various load conditions.

RESTORE YOUR BATTERY LIFE



Figure 5.1: Example of battery test results displayed on the BC521 screen.

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Video 5.1: Demonstrates the various functions of the FOXWELL BC521, including testing, charging, and repair capabilities.

6. MAINTENANCE & PULSE REPAIR

The BC521 includes features to extend battery life and revive older batteries.

6.1 Pulse Repair

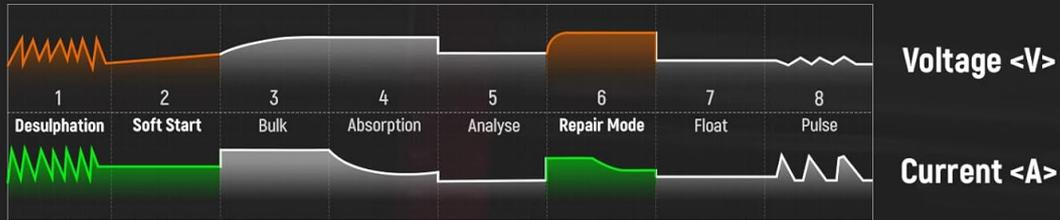
The Pulse Repair function helps reduce sulfation and slow battery aging, especially for batteries that have been deeply discharged or unused for long periods. This mode can help restore battery health.

6.2 Unattended Mode

As described in Section 4.3, the Unattended Mode automatically maintains optimal battery voltage for long-term storage, preventing self-discharge and ensuring the battery is ready when needed.

DEAD BATTERY? REVIVED AUTOMATICALLY

8-STAGE CHARGING SYSTEM



DESULPHATION

Desulfation Revives
Weak Batteries

SOFT START

Safely Begin Charging

REPAIR MODE

0.8amp Pulse Current To Restore
Battery Health, Extend Lifespan



Figure 6.1: Illustrates the improvement in battery health after using the repair functions.

7. TROUBLESHOOTING

If you encounter issues with your BC521, refer to the following common problems and solutions:

- **Charger Not Powering On:** Ensure the AC power cord is securely plugged into a live outlet and the battery clamps are correctly connected.
- **Fault Indicator:** If the fault indicator lights up, check for reverse polarity connection, short circuit, or an incompatible battery type. Disconnect and reconnect the clamps carefully.
- **Battery Not Charging:** Verify that the selected charging mode is appropriate for your battery type. Ensure the battery is not severely damaged or frozen.
- **Inaccurate Test Results:** Ensure battery terminals are clean and connections are secure. Select the correct battery type and CCA rating for accurate testing.

For further assistance, please contact FOXWELL customer support.

8. SPECIFICATIONS

Feature	Specification
Product Dimensions	7.09 x 11.22 x 3.54 inches

Item Weight	2.38 pounds
Item Model Number	BC521
Brand	FOXWELL
Color	Black
Output Voltage	12 Volts (DC)
Input Voltage	12 Volts (DC)
Specification Met	UL, CE, FCC, IEC

9. WARRANTY & SUPPORT

The FOXWELL BC521 comes with a 1-year quality backup. FOXWELL provides lifetime technical support for this product. Additionally, a 30-day return/replace policy is available.

For any inquiries or support, please visit the official FOXWELL website or contact their customer service.