

Veepeak 1220

Veepeak 1220 12V Car Battery Tester User Manual

Model: 1220

1. INTRODUCTION

The Veepeak 1220 12V Car Battery Tester is a versatile diagnostic tool designed to assess the health of 12V lead-acid batteries and their associated charging and cranking systems. It provides quick and accurate readings for various battery types, helping users determine if a battery is in good condition, needs recharging, or requires replacement. This manual provides detailed instructions for the proper use and maintenance of your Veepeak 1220 Battery Tester.

2. PRODUCT OVERVIEW



Figure 1: Veepeak 1220 12V Car Battery Tester. This image shows the compact red device with its display screen, navigation buttons (ESC, OK, up, down), and attached red and black battery clamps.

2.1 What's in the Box

- Battery tester with clamps and cord
- User Manual (this document)

2.2 Key Features

- **Battery Health Check:** Scans and displays the overall status of a 12V auto battery, including State of Charge (SOC), State of Health (SOH), voltage, internal resistance, and Cold Cranking Amps (CCA).
- **Alternator & Starting System Tester:** Reads ripple, loaded, and unloaded voltage to assess alternator performance and checks cranking voltage and time for starting capability.
- **Plug and Play & High Accuracy:** Tests batteries (even dead ones) in-vehicle or out-of-vehicle with high accuracy (close to 0.01V with overall accuracy close to 99.9%).
- **Broad Compatibility:** Compatible with all 12V lead-acid batteries from 100 to 2000 CCA (Regular Flooded, AGM Flat Plate, AGM Spiral, GEL, EFB).
- **Safety Features:** Includes polarity reverse protection and is spark-proof with no heat connection.

3. SETUP

Before using the Veepeak 1220 Battery Tester, ensure the battery terminals are clean and free of corrosion for accurate readings.

1. Identify the positive (+) and negative (-) terminals on the 12V battery.
2. Connect the red clamp of the tester to the positive (+) battery terminal.
3. Connect the black clamp of the tester to the negative (-) battery terminal.
4. The tester will automatically power on once connected. The main menu will appear on the screen.

Note: The device features polarity reverse protection, meaning it will not be damaged if the clamps are connected incorrectly. However, always strive for correct connection for safety and proper operation.

4. OPERATING INSTRUCTIONS

Navigate the menu using the Up/Down arrow buttons and confirm selections with the OK button. Use the ESC button to go back to the previous screen.

4.1 Battery Test

This test assesses the overall health of your battery.



Figure 2: Multi-Functional 12V Battery Analyzer. The screen displays options for Battery Test, Cranking Test, and Charging Test.

1. From the Main Menu, select "1. Battery Test" and press OK.
2. Select the appropriate battery type (e.g., Regular Flooded, AGM Flat Plate, AGM Spiral, GEL, EFB) and press OK.

Fast, Accurate & Easy to Use

High-performance ARM MCU chip, along with immersion gold PCB, pure copper wire and copper-coated clamps ensure fast and accurate reading*. Can be used on in-vehicle or out-of-vehicle batteries.



*Internal tests show an overall 99.9% accuracy.

Figure 3: Compatible Battery Types selection screen.

3. Input the Cold Cranking Amps (CCA) rating of your battery. This information is usually found on the battery label. Use the Up/Down arrows to adjust the value and OK to confirm.
4. The tester will perform the test and display the results, including SOH, SOC, internal resistance, and voltage. It will also indicate if the battery is "GOOD BATTERY", "RECHARGE", or "REPLACE".

4.2 Cranking Test

This test evaluates the battery's ability to start the engine.



Figure 4: Cranking Test in progress. The screen shows cranking time and voltage.

1. From the Main Menu, select "2. Cranking Test" and press OK.
2. The screen will prompt "Start Engine".
3. Start the vehicle's engine.
4. The tester will automatically detect the cranking event and display the cranking time and voltage. It will indicate if the cranking is "GOOD" or "LOW".

4.3 Charging System Test

This test checks the alternator and the vehicle's charging system.



Figure 5: Charging System Test screen showing loaded, unloaded voltage, and ripple.

1. From the Main Menu, select "3. Charging Test" and press OK.
2. The screen will prompt for a "Ripple Test". Press OK.
3. The screen will then prompt "Increase RPM to 2500 R/min and keep it 5 seconds. Press OK to continue."
4. With the engine running, increase the engine RPM to approximately 2500 for 5 seconds. It is recommended to have a second person assist with this step.
5. Press OK. The tester will display the loaded voltage, unloaded voltage, and ripple. It will indicate if the charging is "HIGH", "NORMAL", or "LOW".

5. MAINTENANCE

- Keep the tester clean and dry. Wipe it with a soft, damp cloth if necessary.
- Store the tester in a cool, dry place away from direct sunlight and extreme temperatures.
- Regularly inspect the cables and clamps for any signs of damage or wear. Replace if necessary.
- Ensure the battery terminals are clean before testing to prevent inaccurate readings.

6. TROUBLESHOOTING

Problem	Possible Cause	Solution
Tester does not power on.	Poor connection to battery terminals; Battery voltage too low.	Ensure clamps are securely connected. Check battery voltage with a voltmeter; if below 9V, charge the battery before testing.
Inaccurate readings.	Corroded battery terminals; Incorrect CCA input.	Clean battery terminals. Verify the correct CCA rating for your battery.
"LOW" cranking result.	Weak battery; Issues with starter motor.	Recharge or replace the battery. Consult a professional mechanic if the issue persists.
"LOW" or "HIGH" charging result.	Alternator malfunction; Loose or corroded connections in charging system.	Inspect alternator and charging system connections. Consult a professional mechanic for diagnosis and repair.

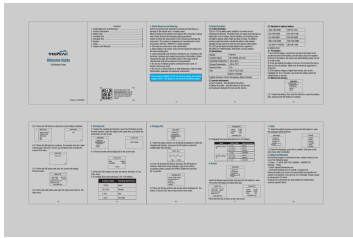
7. SPECIFICATIONS

- **Product Dimensions:** 5.06 x 2.85 x 0.87 inches
- **Item Weight:** 10.23 ounces
- **Power Source:** Battery Powered (from tested battery)
- **Min. Operating Voltage:** 12 Volts
- **CCA Range:** 100-2000 CCA
- **Compatible Battery Types:** Regular Flooded, AGM Flat Plate, AGM Spiral, GEL, EFB
- **Manufacturer:** Veepeak

8. WARRANTY & SUPPORT

The Veepeak 1220 12V Car Battery Tester comes with a **one-year hassle-free replacement warranty**. For technical support, troubleshooting assistance, or warranty claims, please contact Veepeak customer service through their official website or the retailer where the product was purchased.

Please retain your proof of purchase for warranty purposes.

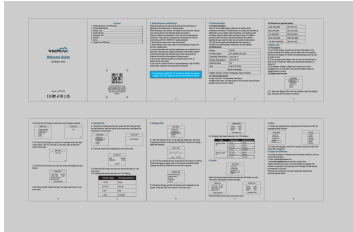


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