

## FERVE F-814

# FERVE F-814 12V Battery Tester User Manual

Model: F-814 | Brand: FERVE

## INTRODUCTION

The FERVE F-814 is a professional 12V battery tester designed for comprehensive assessment of automotive batteries and charging systems. This device accurately measures battery charge level, starting capacity, and verifies the proper functioning of the alternator. It is suitable for lead-acid batteries with capacities between 32 Ah and 180 Ah. This manual provides essential information for safe and effective operation, maintenance, and troubleshooting.

## SAFETY INFORMATION

**WARNING: Working with batteries can be dangerous. Always follow these safety precautions.**

- Always wear appropriate personal protective equipment, including safety glasses and gloves, when working with batteries.
- Ensure adequate ventilation in the work area to prevent accumulation of explosive gases.
- Do not smoke or allow open flames near batteries.
- Avoid contact with battery acid. In case of contact, flush immediately with water and seek medical attention.
- Connect the tester correctly: positive (+) to positive, negative (-) to negative. Incorrect connection can damage the tester or battery.
- Do not use the tester on damaged or leaking batteries.
- Keep the tester away from moisture and extreme temperatures.

## PRODUCT OVERVIEW

The FERVE F-814 battery tester features a robust design with a clear digital display and heavy-duty clamps for reliable connection.



Image: The FERVE F-814 12V Battery Tester, showing its red and white casing, digital display, and the attached positive (red) and negative (black) clamps, along with a probe for testing.

Key Components

- **Digital Display:** Shows voltage readings and test results.
- **Positive Clamp (Red):** Connects to the positive terminal of the battery.
- **Negative Clamp (Black):** Connects to the negative terminal of the battery.
- **Load Switch/Button:** Initiates the discharge test.
- **Probe:** For specific testing points.

Specifications

Feature	Detail
Manufacturer	FERVE, S.A.
Brand	FERVE
Model Number	F-814
Product Dimensions	25 x 21 x 14.5 cm
Item Weight	3.3 Kilograms
Color	Red
Power Source	Battery Powered
Style	Digital
Minimum Operating Voltage	12 Volt

Feature	Detail
Measurement Type	Voltmeter
Discharge Capacity	250 A for 10 seconds
Battery Capacity Range	32 to 180 Ah (Lead-acid batteries)
Compliance	IEC 61010-1:2000-1

## SETUP

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1. Ensure the vehicle's ignition is off and all accessories are turned off.
2. Locate the vehicle's 12V battery.
3. Clean the battery terminals if they are corroded to ensure a good connection.
4. Connect the red positive (+) clamp of the F-814 tester to the positive (+) terminal of the battery.
5. Connect the black negative (-) clamp of the F-814 tester to the negative (-) terminal of the battery.
6. The digital display should illuminate, showing the current battery voltage.

## OPERATING INSTRUCTIONS

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### 1. Battery Charge Level Test

This test measures the open-circuit voltage of the battery to determine its state of charge.

1. Ensure the tester is correctly connected to the battery as described in the "Setup" section.
2. Read the voltage displayed on the digital screen.
3. Refer to the following table for approximate charge levels:

Voltage (12V Battery)	Approximate Charge
12.70 V or higher	100%
12.40 V	75%
12.20 V	50%
12.00 V	25%
Below 12.00 V	Discharged

### 2. Battery Starting Capacity (Load) Test

This test simulates the load on the battery during engine cranking to assess its ability to deliver high current.

1. Ensure the tester is connected to the battery.
2. Press and hold the "STOP" button (or equivalent load switch) for approximately 10 seconds. The tester will apply a 250A discharge.
3. Observe the voltage reading on the digital display during the load test.
4. A healthy battery should maintain a voltage above 9.6V during the 10-second load test. If the voltage

drops significantly below this, the battery's starting capacity is weak and may need replacement.

5. Release the button after 10 seconds. Allow the battery to rest for a few minutes before retesting or performing other tests.

### 3. Alternator Function Test

This test verifies if the vehicle's alternator is properly charging the battery.

1. With the F-814 connected to the battery, start the vehicle's engine.
2. Let the engine idle. The voltage reading on the tester should be between 13.8V and 14.7V.
3. Turn on various electrical loads (headlights, fan, radio, etc.) and observe the voltage. The voltage should remain within the healthy range.
4. If the voltage is consistently below 13.8V (undercharging) or above 14.7V (overcharging), there may be an issue with the alternator or voltage regulator.

## MAINTENANCE

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The FERVE F-814 battery tester requires minimal maintenance.

- After each use, wipe the tester and clamps with a clean, dry cloth to remove any dirt, grease, or battery acid residue.
- Store the tester in a dry, cool place, away from direct sunlight and corrosive materials.
- Inspect the cables and clamps regularly for any signs of damage, fraying, or corrosion. Replace if necessary.
- Do not attempt to open the tester casing or perform internal repairs. Refer to qualified service personnel for any malfunctions.

## TROUBLESHOOTING

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Problem	Possible Cause	Solution
Tester display does not light up.	Incorrect connection; Battery completely discharged; Damaged cables/clamps.	Ensure correct polarity (+ to +, - to -). Check battery voltage with a multimeter (if possible). Inspect cables for damage.
Inaccurate voltage readings.	Poor connection to battery terminals; Corroded battery terminals.	Ensure clamps are securely attached. Clean battery terminals thoroughly.
Voltage drops too quickly during load test.	Weak or failing battery.	Battery may need charging or replacement. Consult a professional if unsure.
Alternator test shows incorrect voltage.	Faulty alternator or voltage regulator; Loose alternator belt.	Have the vehicle's charging system inspected by a qualified mechanic.

## WARRANTY AND SUPPORT

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For warranty information and technical support, please refer to the official FERVE website or contact your local authorized dealer. Keep your purchase receipt as proof of purchase.

*Note: This manual provides general operating instructions. Specific warranty terms and conditions may vary by region and retailer.*

## OTHER FERVE TESTING EQUIPMENT

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FERVE offers a range of testing and charging equipment for automotive applications.



Image: A selection of FERVE testing devices, including the F-814 battery tester, various multimeters, and clamp meters, demonstrating the brand's comprehensive range of diagnostic tools.