

# Fluke ST120+ GFCI Socket Tester Instruction Manual

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## Fluke ST120+ GFCI Socket Tester

### Introduction

Before you use the Fluke ST120/ST120+ Socket Tester (the Product), see Safety Information.

### Safety Information

Warning identifies conditions and procedures that are dangerous to the user.

### Warning

To prevent possible electrical shock, fire, or personal injury:

- Read all safety information before you use the Product.
- Do not alter the Product and use only as specified, or the protection supplied by the Product can be compromised.
- Do not use the Product if it is altered or damaged.
- Carefully read all instructions.

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- Do not use the Product if it operates incorrectly.
- Do not touch voltages >30 V ac rms, 42 V ac peak, or 60 V dc.

- Use this Product indoors only.
- Examine the case before you use the Product. Look for cracks or missing plastic. Carefully look at the insulation around the terminals.
- Do not apply more than the rated voltage, between the terminals or between each terminal and earth ground.
- All appliances or equipment on the circuit being tested should be unplugged to help avoid erroneous readings.
- Do not use this product as a comprehensive diagnostic instrument. Use it as a simple instrument to detect nearly all probable common improper wiring conditions.
- Refer all indicated problems to a qualified electrician.
- Do not use the Product to indicate the quality of the ground.
- Do not use the Product to detect 2 hot wires in the circuit.
- Do not use the Product to detect a combination of defects.
- Do not use the Product to indicate reversal of grounded and grounding conductors.
- Consult the GFCI manufacturer's installation instructions to determine that the GFCI is installed in accordance with the manufacturer's specifications.
- Check for correct wiring of receptacles and all remotely connected receptacles on the branch circuit.
- Operate the test button on the GFCI installed in the circuit. The GFCI must trip. If it does not – do not use the circuit – consult an electrician. If the GFCI does trip, reset the GFCI. Then, insert the Product into the receptacle to be tested.
- Push the GFCI button on the Product for a minimum of 6 seconds to test the GFCI condition. An audible or visible indication on the Product must cease when tripped. If the Product fails to trip the GFCI, the GFCI may be faulty or mis-wired. Consult an electrician.
- When testing a GFCI installed in 2-wire systems (no ground wire available), the Product may give a false indication that the GFCI is not functioning properly. If this occurs, recheck the operation of the GFCI using its test and reset buttons. The GFCI button test function demonstrates proper operation.
- On the ST120+, the beeper only makes a sound if voltage is present and the beeper is turned on. Do not rely on the beeper to indicate the presence of voltage.

## Symbols

Table 1 explains the symbols used on the Product and in these instructions.

**Table 1.** Symbols

Symbol	Description
	WARNING. RISK OF DANGER.
	WARNING. HAZARDOUS VOLTAGE. Risk of electric shock.
	Consult user documentation.
	Earth
	This product complies with the WEEE Directive marking requirements. The affixed label indicates that you must not discard this electrical/electronic product in domestic household waste. Product Category: With reference to the equipment types in the WEEE Directive Annex I, this product is classed as a category 9 "Monitoring and Control Instrumentation" product. Do not dispose of this product as unsorted municipal waste.

## Product Use

### To use the Product:

1. For best results, unplug all appliances and equipment on the circuit under test.
2. Plug the Product into the socket and note which indicators light.
3. To determine the wiring, see the diagram on the ST120+ shown for reference in Figure 1.

Figure 1. The Product

## GFCI Test

### To test a GFCI:

1. Before you plug the Product into a GFCI socket, push the GFCI test button to trip the GFCI socket. If the GFCI does not trip, the socket is faulty and should be replaced.
2. After the GFCI trips, push the RESET button on the outlet.
3. Plug in the Product and push the blue GFCI test button on the Product for a minimum of 6 seconds. As you push the Product GFCI button, but before the GFCI trips, the LED to the left of the Product GFCI button briefly turns on. Once the GFCI trips, all of the LEDs on the Product go out. If the GFCI does not trip, or if any of the LEDs on the Product remain on, there is a problem with the wiring of the socket, the socket itself, or the Product. Consult an electrician to determine the problem.

## Beeper (ST120+ only)

The ST120+ includes a switchable beeper that emits a tone when voltage is present on the Product and the beeper is switched on. To switch off the beeper, slide the beeper switch to the left position.

## WARRANTY

### LIMITED WARRANTY AND LIMITATION OF LIABILITY

This Fluke product will be free from defects in material and workmanship for two years from the date of purchase. This warranty does not cover fuses, disposable batteries, or damage from accident, neglect, misuse, alteration, contamination, or abnormal conditions of operation or handling. Resellers are not authorized to extend any other warranty on Fluke's behalf. To obtain service during the warranty period, contact your nearest Fluke-authorized service center to obtain return authorization information, then send the product to that Service Center with a description of the problem.

THIS WARRANTY IS YOUR ONLY REMEDY. NO OTHER WARRANTIES, SUCH AS FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSED OR IMPLIED. FLUKE IS NOT LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OR LOSSES, ARISING FROM ANY CAUSE OR THEORY. Since some states or countries do not allow the exclusion or limitation of an implied warranty or of incidental or consequential damages, this limitation of liability may not apply to you.

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## FREQUENTLY ASKED QUESTIONS

What is the primary function of the Fluke ST120+ GFCI Socket Tester?

The primary function of the Fluke ST120+ GFCI Socket Tester is to verify the wiring of electrical outlets and test the functionality of GFCI outlets.

How does the Fluke ST120+ indicate correct wiring?

The Fluke ST120+ uses bright LED indicators to show correct wiring, lighting up specific patterns based on the outlet's condition.

What should I do if the Fluke ST120+ shows a reversed hot and neutral condition?

If the Fluke ST120+ indicates a reversed hot and neutral condition, it means the hot and neutral wires are swapped. This should be corrected by a qualified electrician.

What does it mean if all LEDs on the Fluke ST120+ are off?

If all LEDs on the Fluke ST120+ are off, it indicates an open hot condition, meaning there is no power to the outlet being tested.

How many wiring conditions can the Fluke ST120+ identify?

The Fluke ST120+ can identify six common wiring conditions, including open ground and reversed phase.

Is there an audible alert feature in the Fluke ST120+?

Fluke ST120+ includes a switchable beeper that emits a sound when voltage is present, enhancing safety during testing.

Can I use the Fluke ST120+ in wet locations?

The Fluke ST120+ is designed for indoor use only; avoid using it in wet or damp locations to prevent damage and ensure safety.

What voltage range does the Fluke ST120+ operate within?

The Fluke ST120+ operates within a voltage range of 110 to 125 V AC.

How do I reset a GFCI outlet after testing with the Fluke ST120+?

To reset a GFCI outlet after testing with the Fluke ST120+, simply press the reset button on the GFCI outlet itself.

How can I ensure my Fluke ST120+ is functioning correctly before use?

To ensure proper functionality, test your Fluke ST120+ on a known working outlet before using it on other

outlets.

What should I do if my Fluke ST120+ indicates an open ground condition?

If your Fluke ST120+ indicates an open ground condition, it suggests that there is no ground connection present at that outlet, which should be inspected by an electrician.

Does the Fluke ST120+ provide visual indicators for all test results?

Fluke ST120+ provides visual indicators through its LED lights for various wiring conditions, making it easy to interpret results quickly.

Is there a warranty associated with the purchase of a Fluke ST120+?

Fluke ST120+ typically comes with a limited warranty against defects in material and workmanship.

What is indicated by a red LED on my Fluke ST120+ during testing?

A red LED on your Fluke ST120+ indicates a wiring issue such as reversed wires or an open circuit that needs attention.

How portable is the Fluke ST120+, and can I easily carry it for fieldwork?

The compact design of the Fluke ST120+ makes it highly portable and easy to carry for fieldwork or home inspections.

## VIDEO – PRODUCT OVERVIEW

**DOWNLOAD THE PDF LINK:**

**REFERENCE:** [Fluke ST120+ GFCI Socket Tester Instruction Manual -Device.Report](#)

## References

- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)

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