

Casio fx-991ES PLUS-2

Casio fx-991ES Plus 2 Scientific Calculator User Manual

MODEL: FX-991ES PLUS-2

1. Introduction

The Casio fx-991ES Plus 2 is an advanced scientific calculator designed for a wide range of mathematical and scientific applications, suitable for secondary school and university-level studies. It features a 'Natural Textbook Display' that presents mathematical expressions and results exactly as they appear in textbooks, enhancing clarity and ease of use. With 417 built-in functions, this calculator is a powerful tool for complex calculations.



Figure 1.1: Front view of the Casio fx-991ES Plus 2 Scientific Calculator, showcasing its natural display and key layout.

2. Safety Information

To ensure safe and proper use of your calculator, please observe the following precautions:

- Do not expose the calculator to extreme temperatures, direct sunlight, or high humidity.
- Avoid dropping or subjecting the calculator to strong impacts.
- Do not attempt to disassemble or modify the calculator.
- Keep the calculator out of reach of small children.
- Use only the specified battery type (LR-44) for replacement.

3. Product Features

The Casio fx-991ES Plus 2 offers a comprehensive set of features to support various academic and professional needs:

- **Natural Textbook Display:** Displays formulas and results as they appear in textbooks.
- **417 Functions:** A wide array of functions for diverse calculations.
- **Equation Resolution:** Solve linear and polynomial equations.

- **Matrix and Vector Calculation:** Perform operations with matrices and vectors.
- **Complex Numbers:** Handle calculations involving complex numbers.
- **Integral and Differential Calculus:** Execute definite integral and differential calculations.
- **40 Physical Constants:** Access commonly used physical constants.
- **Combined Power Supply:** Operates on both solar power and an LR-44 alkaline button cell.
- **Regression and Correlation Coefficients:** Statistical analysis capabilities.
- **24 Levels of Brackets:** Supports complex nested expressions.

4. Setup

4.1 Power Source

The calculator utilizes a dual power system:

- **Solar Power:** The calculator is primarily powered by solar energy when sufficient light is available.
- **Battery Power:** An LR-44 alkaline button cell battery (included) provides power in low-light conditions or when solar power is insufficient. The calculator automatically switches between power sources.

4.2 Initial Power On

To turn on the calculator, press the **[ON]** button. The display will show the initial screen. If the calculator does not turn on, ensure it is exposed to adequate light or check the battery.

5. Operating Instructions

5.1 Basic Operations

Perform standard arithmetic operations using the numeric keys and operators **[+]**, **[-]**, **[x]**, **[/]**. Press **[=]** to get the result.

5.2 Advanced Functions

Access advanced functions using the **[SHIFT]** and **[ALPHA]** keys, which activate the secondary and tertiary functions printed above the keys, respectively. Refer to the markings on the calculator keys for specific functions.

- **Equation Solver:** Use the **[MODE]** button to select the EQN mode for solving equations.
- **Matrix/Vector Calculations:** Select the MATRIX or VECTOR mode via **[MODE]** to define and perform operations on matrices and vectors.
- **Calculus:** Use the integral and differential symbols to perform definite integral and differential calculations.
- **Physical Constants:** Access the built-in physical constants by pressing **[SHIFT]** then **[7]** (CONST).

5.3 Natural Textbook Display

The Natural Textbook Display allows you to input and view fractions, roots, and other mathematical expressions in the same way they appear in textbooks. For example, to input a fraction, use the fraction key **[a b/c]**. To input a square root, press **[√]**.

6. Maintenance

- **Cleaning:** Wipe the calculator with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Battery Replacement:** When the display becomes dim or calculations are slow, it may be time to replace the LR-44 battery. Carefully open the battery compartment on the back of the calculator,

replace the old battery with a new one, ensuring correct polarity, and close the compartment securely.

- **Storage:** When not in use for extended periods, store the calculator in its protective slide-on hard case in a cool, dry place away from direct sunlight.

7. Troubleshooting

Problem	Possible Cause	Solution
Calculator does not turn on.	Insufficient light for solar panel, or dead battery.	Move to a brighter area or replace the LR-44 battery.
Incorrect calculation results.	Incorrect mode setting, input error, or memory issue.	Check the current mode ([MODE]), re-enter the calculation, or clear all memory ([SHIFT] [CLR]).
Display is dim or flickering.	Low battery power.	Replace the LR-44 battery.

8. Specifications

Attribute	Detail
Product Dimensions	6.38 x 2.95 x 0.1 inches (16.2 x 7.5 x 0.25 cm)
Item Weight	3.35 ounces (95 grams)
Model Number	fx-991ES PLUS-2
Batteries	1 A batteries required (LR-44, included)
Power Source	Solar Powered and Battery
Screen Size	4 inches / 10 cm (diagonal)
Calculator Type	Engineering/Scientific
Manufacturer	CASIO

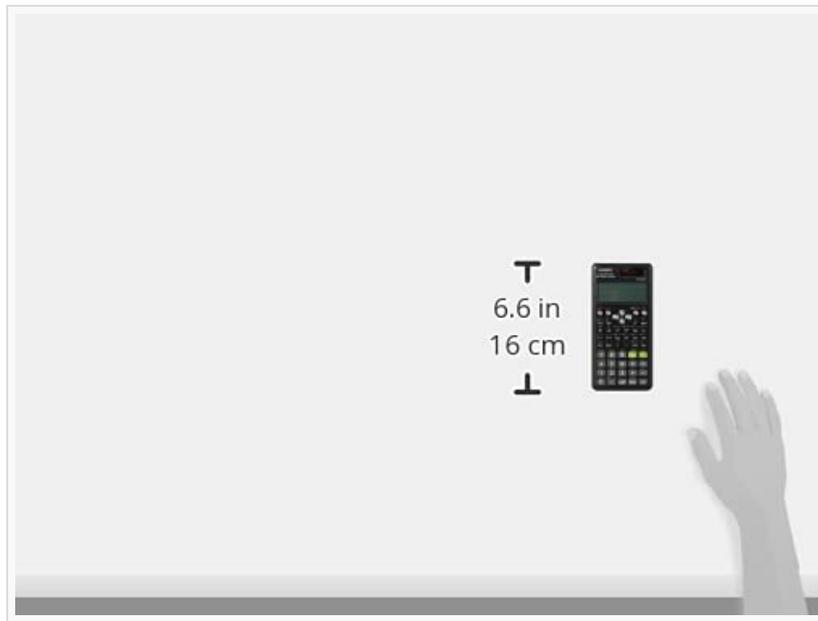


Figure 8.1: The Casio fx-991ES Plus 2 Scientific Calculator shown with approximate dimensions for scale.

9. Warranty and Support

Casio products are manufactured to high-quality standards. For information regarding warranty coverage, technical support, or service, please refer to the warranty card included with your product or visit the official Casio website. Keep your purchase receipt as proof of purchase for warranty claims.

© 2024 Casio Computer Co., Ltd. All rights reserved.

Related Documents - fx-991ES PLUS-2

	<p>CASIO fx-570ES PLUS, fx-991ES PLUS, fx-9910NG PLUS User's Guide</p> <p>Comprehensive user's guide for CASIO fx-570ES PLUS, fx-991ES PLUS, and fx-9910NG PLUS scientific calculators, covering setup, functions, calculations, and troubleshooting.</p>
	<p>Casio fx-10F/fx-50F Scientific Calculator User Manual</p> <p>Comprehensive user manual for the Casio fx-10F and fx-50F scientific calculators, detailing functions, operations, formulas, statistical calculations, programming, and technical specifications.</p>

