CASIO fx-JP900CW-N

CASIO fx-JP900CW-N Scientific Calculator User Manual

Model: fx-JP900CW-N

INTRODUCTION

This manual provides detailed instructions for the CASIO fx-JP900CW-N scientific calculator, a professional model within the CLASSWIZ series. Designed for ease of use, it features a high-resolution full-dot LCD with Japanese display support and over 700 functions, making it suitable for a wide range of academic and professional applications.

使いやすさを徹底追求した
カシオの新世代関数電卓

CASIO
fx-JP900CW

基本計算　統計　確率分布
表計算　数表作成　方程式

CLASSWIZ

CLASSWIZ
CWシリーズ

iF DESIGN AWARD 2023

Image: The CASIO fx-JP900CW-N calculator, highlighting its modern design and CLASSWIZ series affiliation, recognized with the iF DESIGN AWARD 2023.

SETUP

Power Source

The fx-JP900CW-N calculator utilizes a two-way power system, operating on both solar power and a single LR44 button cell battery. Ensure the battery is correctly installed for reliable operation in low-light conditions.

Initial Power On

1. Press the **[ON]** key to turn on the calculator.
2. If the display is dim or blank, ensure sufficient light for solar power or check the LR44 battery.

Basic Settings

Upon first use or after a battery change, you may need to adjust basic settings such as language and display contrast. Refer to the on-screen menu for these adjustments.

Key Layout and Basic Operation Flow

The calculator features an intuitive key layout designed for efficient operation. Keys are color-coded to distinguish between operation keys and input keys, and sub-functions are clearly indicated.

Image: Key layout illustrating the operational sequence: 1. Power On, 2. Access HOME menu, 3. Navigate with cursor, 4. Select function, 5. Input values, 6. Execute.
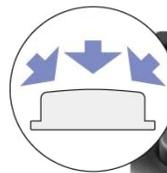
見やすく使いやすいキー表示

操作キーと入力キーを色分け

操作キー

入力キー

※画像はfx-JP900CWです。

アイコンによる機能表示

サブ機能

操作時など指で隠れない位置に
サブ機能を表記

どの方向からでも押しやすい丸型キー

Image: Detailed view of the calculator keys, highlighting the distinction between operation keys (pink) and input keys (blue), and the clear display of sub-functions.

High-Resolution Display

The fx-JP900CW-N is equipped with a high-resolution, 4-level grayscale full-dot LCD, offering clear visibility and easy navigation through menus and calculations. It supports natural mathematical expression display, showing fractions, roots, and other symbols as they appear in textbooks.

見やすく使いやすい高精細＆4階調表示液晶ディスプレイ

■ アイコンメニュー

アイコンと日本語で表示されるHOME画面。使いたい機能がすぐに選べます。
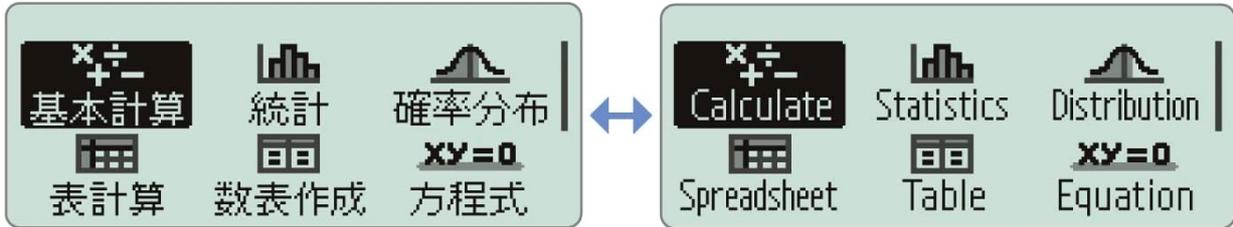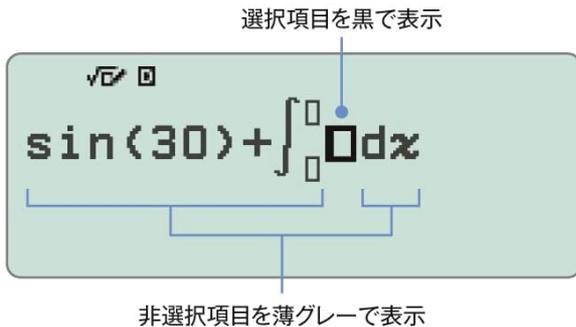

メニューなどの表示言語を日本語と英語で切り替えることができます。

※画像はfx-JP900CWです。搭載機能は機種により異なります。

■ 4階調ディスプレイ

モノクロ4階調の濃淡表示により、液晶の表現が向上。現在の選択箇所や次の操作が分かりやすい。

選択項目を黒で表示

非選択項目を薄グレーで表示

操作状況などが分かりやすい新ディスプレイ

■ 数学自然表示

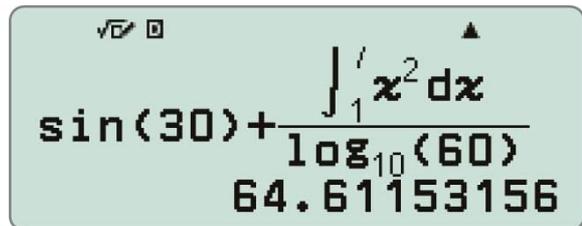分数、べき乗、Σ、対数、微分・積分、√などの数式や記号を、理工学書や教科書通りに入力、表示できます。

Image: The calculator's display demonstrating the icon-based menu, 4-level grayscale rendering, and natural mathematical input/output for expressions like sin(30) + integral.

Main Functions Overview

The calculator offers over 700 functions, including:

- **Statistical Calculations:** Perform single-variable and two-variable statistical calculations.
- **Equation Solving:** Solve simultaneous linear equations (2 to 4 variables) and higher-order equations (2nd to 4th degree).
- **Complex Number Calculations:** Execute four basic arithmetic operations, find conjugate complex numbers, absolute values, and arguments.
- **Unit Conversions:** Supports various unit conversions for length, mass, time, and other measurements.

主な機能

■ 統計計算

入力したデータの一変数／二変数統計計算が可能。結果の統計値を一覧で表示。
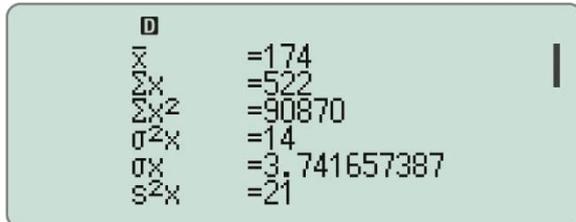
```
D
x̄         =174
Σx        =522
Σx²       =90870
σ²x       =14
σx        =3.741657387
s²x       =21
```
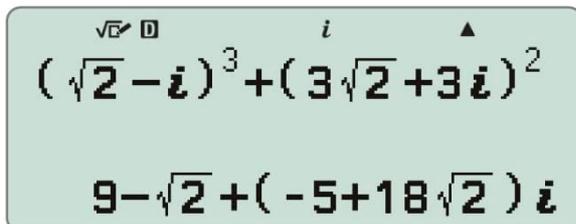
■ 方程式

連立一次方程式（2元〜4元）および高次方程式（2次〜4次）が解けます。
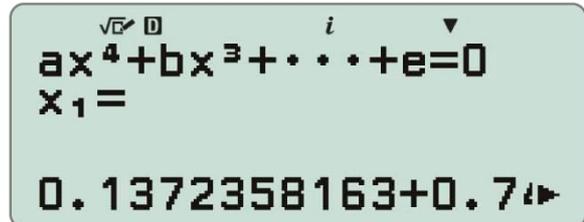
$$ax^4 + bx^3 + \cdots + e = 0$$
$$x_1 =$$
$$0.1372358163 + 0.7\ldots$$

■ 複素数計算

複素数の四則計算に加え、共役複素数、絶対値、偏角などを求めることが可能。

$$(\sqrt{2} - i)^3 + (3\sqrt{2} + 3i)^2$$
$$9 - \sqrt{2} + (-5 + 18\sqrt{2})i$$

■ 単位換算

長さ／質量／時間の単位や、尺貫法、ヤードポンド法などの単位換算にも対応。

$$120\,\text{m}^2 \blacktriangleright 坪$$
$$36.3$$

Image: A visual summary of the calculator's main functions, displaying example screens for statistical calculations, equation solving, complex number operations, and unit conversions.

Detailed Function Guides

Statistical Calculations

Input data to perform single-variable and two-variable statistical calculations. View a list of statistical values for the results.

統計計算

```
D
x̄         =174
Σx        =522
Σx²       =90870
σ²x       =14
σx        =3.741657387
s²x       =21
```

Image: Screen showing statistical calculation output, including sum, mean, and standard deviation.

Equation Solving

Solve simultaneous linear equations with up to four variables and polynomial equations up to the fourth degree.

Image: Screen showing the input of a polynomial equation and its calculated root.

Complex Number Calculations

Perform arithmetic operations with complex numbers and determine properties such as absolute value and argument.
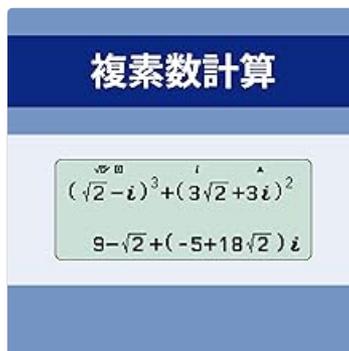

Image: Screen showing the result of an addition of two complex numbers.

Unit Conversions

Convert values between various units, including standard and traditional measurement systems.

Image: Screen showing a unit conversion example, converting 120 square meters to a different unit (likely 'tsubo' in Japanese context).

Vector and Matrix Calculations

Perform operations with vectors and matrices, including dot products, angles, and matrix manipulations.

Image: Screen showing vector dot product and angle calculation.

行列計算

整数抽出機能

少数の整数部を抽出

Image: Screen showing matrix input and display.

Other Advanced Functions

The fx-JP900CW-N includes additional advanced features:

- **Table Calculation:** Generate numerical tables based on functions.
- **Engineering Notation:** Perform calculations using engineering symbols (kilo, mega, milli, nano).
- **Inequality Calculation:** Solve inequalities of various degrees.
- **Probability Distribution:** Access calculations for three types of distributions and seven calculation methods.
- **Math Box:** Tools for random number generation (dice, coin toss), number line, and circle calculations.
- **Integer Extraction:** Extract the integer part of a decimal number.
- **Truth/False Discrimination:** Evaluate logical expressions.

【fx-JP900CWのみ】主な機能

■表計算

統計、複利計算、漸化式の
計算などに有効な表計算機能を搭載。
45行5列（最大170データ）の範囲で
基本的な表計算機能が使えます。

■エンジニアリング記号

$4\pi(6.37814k)^3$
3.2M
1.018924556M

K(キロ)、M(メガ)、m(ミリ)、
N(ナノ)などの記号を含んだ計算が
できるので、技術系の計算に
便利です。

■不等式計算

1元2次〜4次不等式計算

■確率分布計算

3種の分布・7種の計算

Image: A composite image showcasing various advanced functions: table calculations, engineering notation, inequality solving, and probability distribution calculations.

MAINTENANCE

Cleaning

To clean the calculator, wipe it with a soft, dry cloth. Do not use abrasive cleaners, solvents, or wet cloths, as these can damage the surface or internal components.

Battery Replacement

When the display becomes dim or calculations are erratic, the LR44 battery may need replacement. To replace the battery:

1. Turn off the calculator.
2. Carefully remove the battery cover on the back of the unit.
3. Remove the old LR44 battery and insert a new one, ensuring correct polarity (+/-).
4. Replace the battery cover securely.

Storage

Store the calculator in a cool, dry place away from direct sunlight, extreme temperatures, and high humidity. Avoid placing heavy objects on top of the calculator to prevent damage to the keys or display.

TROUBLESHOOTING

Calculator Does Not Turn On

- Ensure the **[ON]** key is pressed firmly.
- Check the battery. Replace the LR44 battery if it is depleted.
- Ensure adequate light for solar power.

Incorrect Calculation Results

- Verify the input values and the selected function mode.
- Check if the correct angle unit (degrees, radians, grads) is selected.
- Clear all memory and reset settings if necessary (refer to the full user guide for reset procedures).

Display Issues

- Adjust the display contrast setting.
- If the display is blank, check the power source as described above.

SPECIFICATIONS

Feature	Description
Brand	CASIO
Model Number	fx-JP900CW-N
Color	Black
Material	Plastic
Product Dimensions	16.2 x 7.7 x 1.07 cm
Weight	95 g
Calculator Type	Scientific Calculator
Power Source	Two-way power (Solar + LR44 x 1)

Display	High-resolution full-dot LCD, 4-level grayscale, Japanese display support
Functions	Over 700 functions (including statistics, equations, complex numbers, unit conversions, vectors, matrices, probability distributions)

WARRANTY AND SUPPORT

For detailed warranty information, product support, and additional resources, please refer to the documentation included with your calculator or visit the official CASIO website. The website typically provides FAQs, downloadable manuals, and contact information for customer service.