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› Red Star Tec SC-216 Scientific Calculator User Manual

Red Star Tec SC-216

Red Star Tec SC-216 Scientific Calculator User Manual

1. INTRODUCTION

This manual provides detailed instructions for the Red Star Tec SC-216 Scientific Calculator. Designed for students and professionals, this calculator offers 240 scientific functions, making it suitable for various academic and professional applications, including GCSE and A-Level examinations, engineering, and general mathematics.



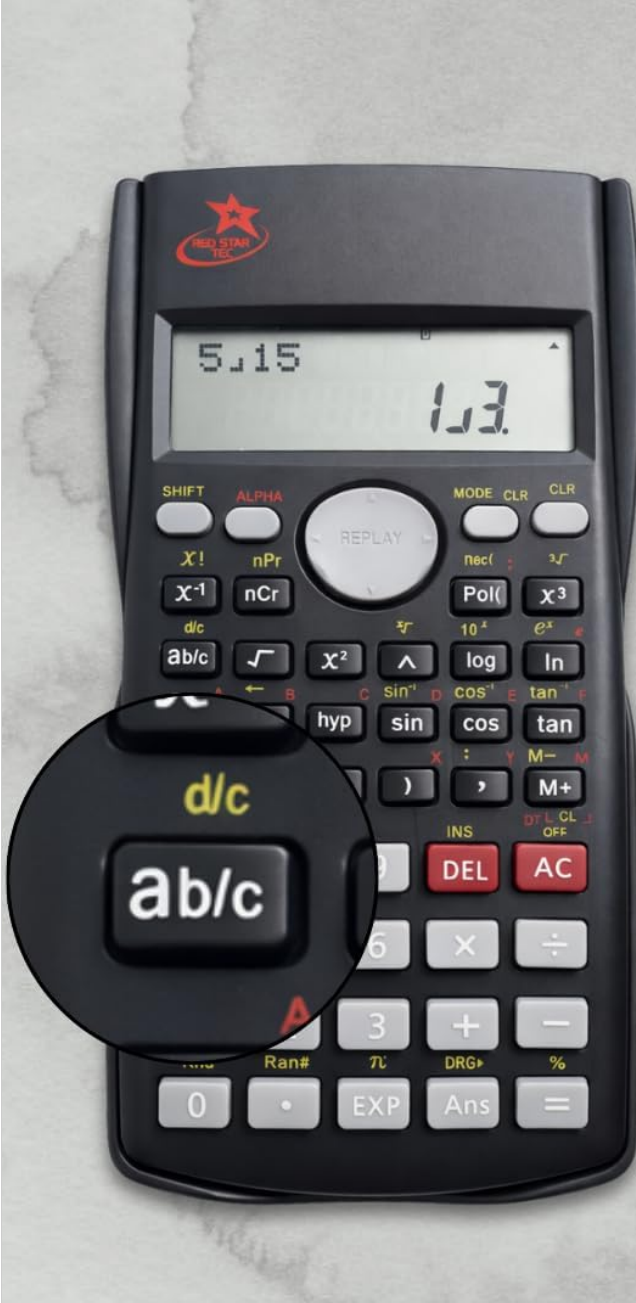
Image: The SC-216 calculator positioned on a study desk alongside a pencil and papers, illustrating its role as an essential tool for GCSE and A-Level exam preparation.

2. PRODUCT OVERVIEW AND KEY FEATURES

The Red Star Tec SC-216 is a non-graphing scientific calculator equipped with a wide range of functions to support complex calculations. Its ergonomic design ensures comfortable use, and the protective slide cover safeguards the device.

Key Features:

- **240 Scientific Functions:** Comprehensive set of functions for various mathematical, scientific, and engineering tasks.
- **2-Line Display:** Shows both the calculation input and the result simultaneously for clarity.
- **Non-Programmable:** Compliant with examination regulations that prohibit programmable calculators.
- **Statistical Calculations:** Supports 1-variable and 2-variable statistical calculations.
- **Trigonometric Functions:** Includes sine, cosine, tangent, and their inverses, with three angle modes (degrees, radians, grads).
- **Fraction Calculations:** Dedicated keys for easy input and display of fractions.
- **Logarithmic Functions:** Features log base 10 and natural logarithm (ln).
- **Power Saving:** Designed for efficient battery usage.
- **Ergonomic Design:** Comfortable to hold with responsive, clearly labeled buttons.
- **Protective Slide Cover:** Shields the display and keys from damage.



The image shows a black Red Star Tec SC-216 scientific calculator. The top line of the LCD display shows '5.15' and the bottom line shows '1.3'. A circular callout highlights the 'ab/c' button, which also has 'd/c' written above it. The calculator has a full keypad with various scientific function keys like 'X!', 'nPr', 'nCr', 'Pol', 'x^3', 'd/c', 'sqrt', 'x^2', 'log', 'ln', 'hyp', 'sin', 'cos', 'tan', 'M+', 'DEL', 'AC', 'Ran#', 'DRG+', 'EXP', 'Ans', and '='. The Red Star Tec logo is visible at the top left of the calculator's face.

Easy Fraction Calculations

- ✓ Easy fraction input with dedicated keys
- ✓ See results in fraction or decimal form
- ✓ Perfect for homework and tests
- ✓ Great for Pre-Algebra & Algebra
- ✓ Ideal for Grade 7-12

Image: The Red Star Tec SC-216 Scientific Calculator with its protective cover detached, providing a clear view of its full keypad and two-line display.

3. SETUP

3.1 Battery Installation

The SC-216 calculator requires two AAA batteries (not included) for operation.

1. Ensure the calculator is turned off.
2. Locate the battery compartment cover on the back of the calculator.
3. Slide the cover off in the direction indicated by the arrow.
4. Insert two new AAA batteries, ensuring correct polarity (+/-) as marked inside the compartment.
5. Replace the battery compartment cover until it clicks securely into place.

3.2 Initial Power On

After installing the batteries, press the **ON** button to power on the calculator. The display should show '0'. If the display does not appear, check battery installation or replace with fresh batteries.

4. OPERATING INSTRUCTIONS

This section details the various functions and operations of your SC-216 calculator.

RED STAR TEC SC-216

YOUR IDEAL PARTNER FOR SAT LEVEL EXAM

✓ Non Programmable

✓ 240 Scientific functions

✓ Four-Function Calculator

✓ 2 - line Display

✓ Power Saving

✓ Algebra, Trigonometry, and Fraction calculator



Image: A comprehensive diagram of the SC-216 calculator, labeling all major keys and display areas for easy identification and reference.

4.1 Basic Operations

- **Addition, Subtraction, Multiplication, Division:** Use the $+$, $-$, $\times$, $\div$ keys.
- **Equals:** Press $=$ to get the result.
- **Clear Entry:** Press **DEL** to delete the last entered digit.
- **All Clear:** Press **AC** to clear the entire calculation and display.

4.2 Scientific Functions

Access secondary functions printed above keys by pressing the **SHIFT** key first, then the desired function key.

- **Trigonometry:** Use **sin**, **cos**, **tan** keys. Inverse functions ($\sin^{-1}$, $\cos^{-1}$, $\tan^{-1}$) are accessed via **SHIFT**.
- **Logarithms:** Use **log** (base 10) and **ln** (natural logarithm) keys.

- **Powers and Roots:** Use x^2 , $\sqrt{}$, x^3 , $\sqrt[3]{}$, x^y keys.
- **Factorial:** Use the **x!** function.

4.3 Fraction Calculations

The SC-216 simplifies fraction input and display.

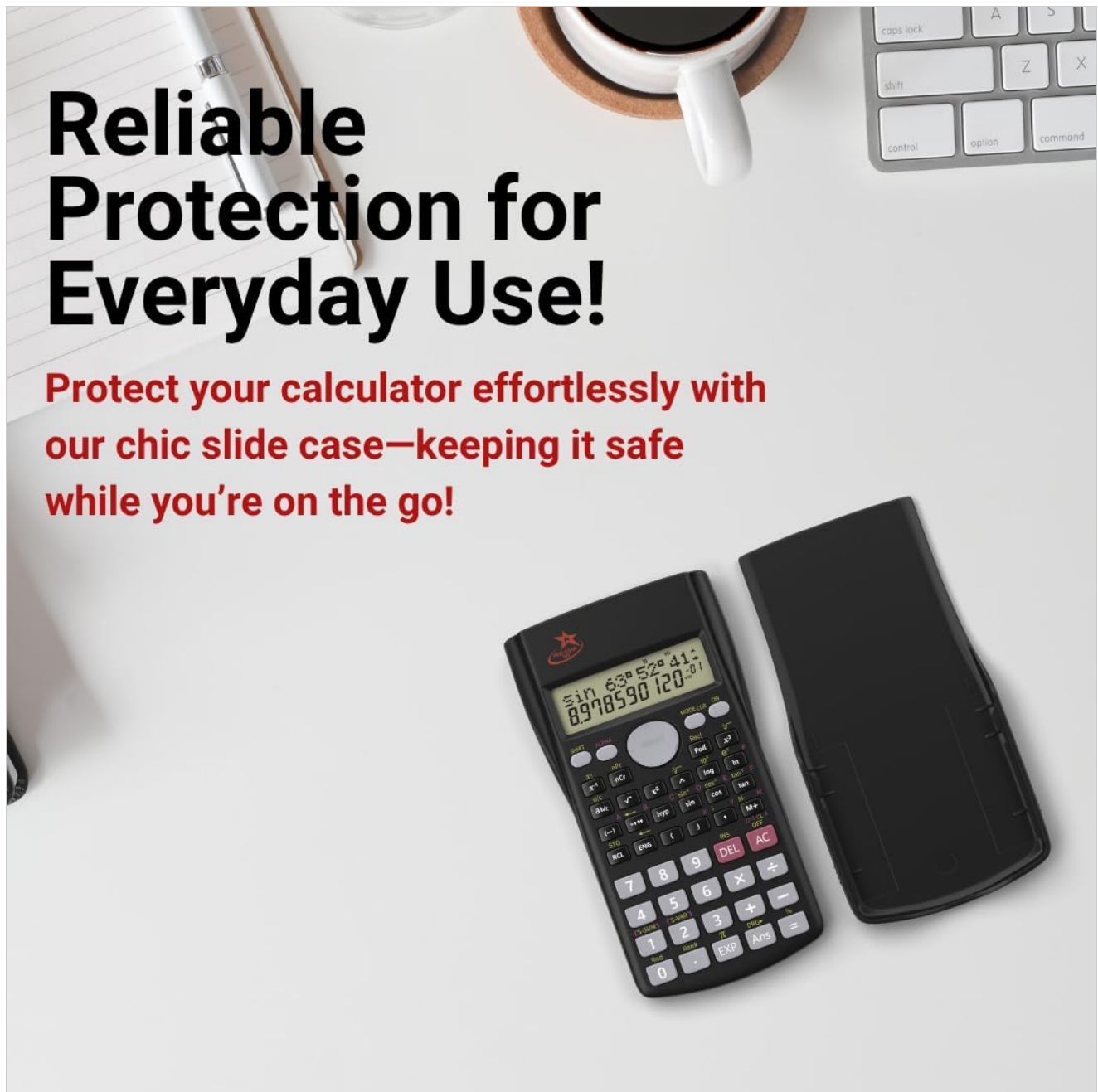


Image: A detailed view of the calculator's fraction key ('ab/c') and its application in displaying results in both fraction and decimal formats.

- **Inputting Fractions:** Use the **ab/c** key to enter mixed numbers or improper fractions. For example, to enter $1\frac{2}{3}$, press **1 ab/c 2 ab/c 3**.
- **Converting Fractions/Decimals:** Press **SHIFT** then **ab/c** (d/c) to toggle between fraction and decimal display.

4.4 Modes and Settings

Press the **MODE/CLR** button to access different calculation modes.

- **COMP (Compute):** Standard arithmetic and scientific calculations.
- **STAT (Statistics):** For statistical calculations (1-variable or 2-variable).

- **Angle Modes:** Toggle between Degrees (DEG), Radians (RAD), and Grads (GRA) using **SHIFT + MODE/CLR**.
- **Engineering Notation:** Use the **ENG** key to display results in engineering notation.

4.5 Replay Function

The **REPLAY** button allows you to review and edit previous calculations.

- After a calculation, press the **REPLAY** button to scroll through previous entries and results.
- Use the arrow keys to navigate and edit expressions.

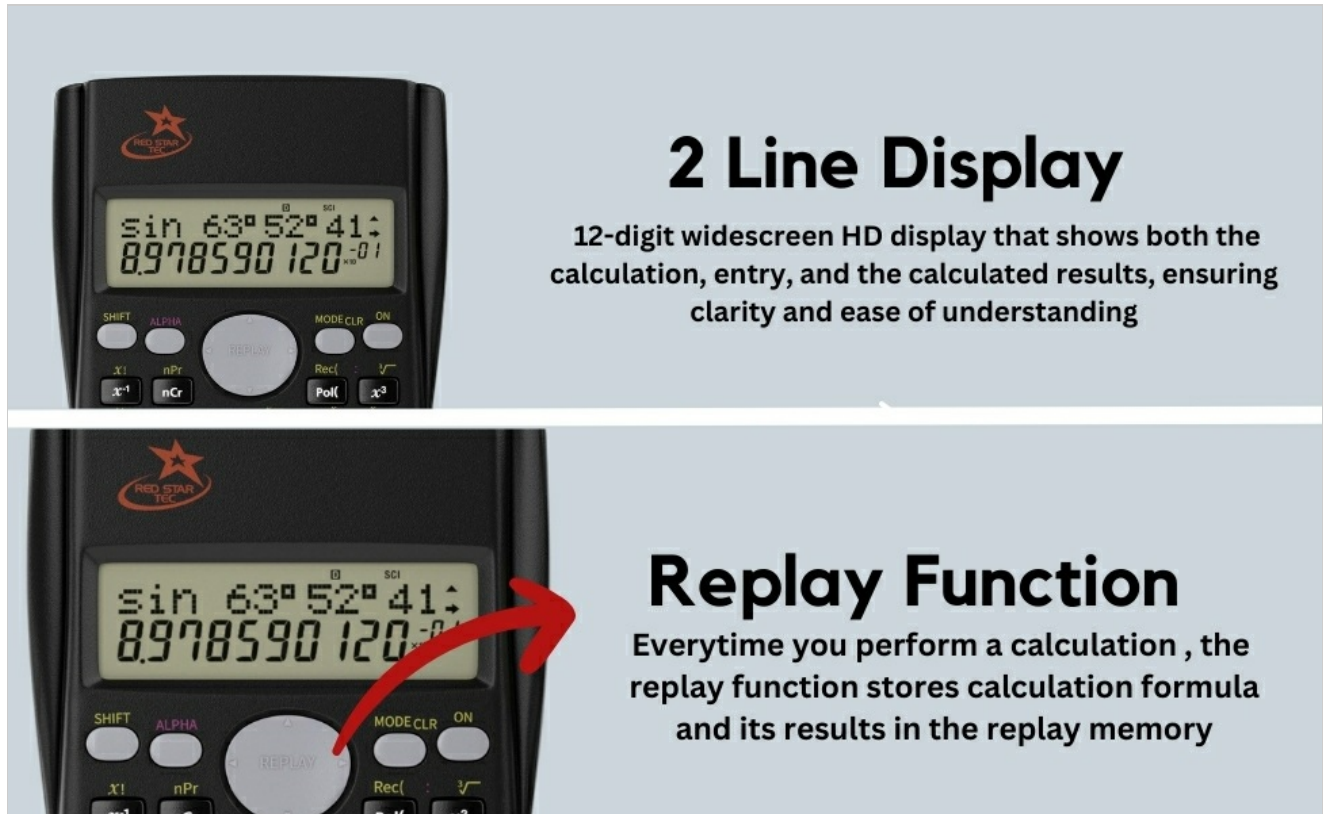


Image: The calculator's 2-line display demonstrating the replay function, which stores calculation formulas and results for review.

5. MAINTENANCE

5.1 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 device.

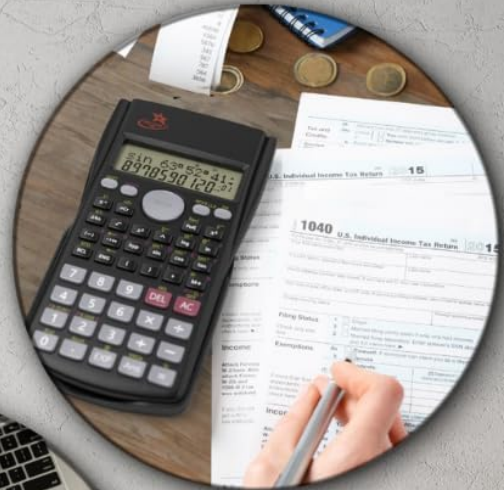
5.2 Storage

When not in use, store the calculator in a cool, dry place. Always use the protective slide cover to prevent scratches and damage to the display and keys.

Beyond Exams – SC-216 for Everyday Problem Solving



Engineering and Technical Work



Business and Finance



Everyday Use

Image: The SC-216 calculator shown with its durable slide cover, illustrating how to protect the device during transport or storage.

5.3 Battery Replacement

Replace batteries when the display becomes dim or calculations become erratic. Refer to section 3.1 for battery installation instructions.

6. TROUBLESHOOTING

- **Display is blank or dim:**
 - Check if the calculator is turned on. Press **ON**.
 - Replace the AAA batteries with new ones. Refer to section 3.1.
- **Incorrect calculation results:**
 - Ensure you are in the correct mode (e.g., COMP for general calculations, STAT for statistics). Press **MODE/CLR** to change modes.
 - Verify the angle mode (DEG, RAD, GRA) for trigonometric functions. Press **SHIFT + MODE/CLR** to adjust.
 - Clear all memory and previous calculations by pressing **SHIFT** then **CLR** (usually above **MODE**) and select 'All'.

- **Calculator does not respond to key presses:**

- The calculator might be frozen. Try removing and reinserting the batteries.
- Ensure no keys are stuck.

7. SPECIFICATIONS

Model Number	SC-216
Brand	Red Star Tec
Display Type	LCD, 2-line, 12-digit
Number of Functions	240
Power Source	2 x AAA Batteries (not included)
Dimensions (L x W)	16 cm x 8 cm
Material	Plastic
Compliance Features	Non-programmable, No Computer Algebra System (CAS), No wireless capabilities, No document/program storage, Cleared memory indicator, No QWERTY keyboard.

SC-216 Functions

- 1 DISPLAY SCREEN
- 2 ON BUTTON
- 3 MODE/CLR BUTTON
- 4 REPLAY BUTTON
- 5 TRIGONOMETRY FUNCTION KEYS
- 6 EXP / LOG KEYS
- 7 FRACTION / DECIMAL KEY
- 8 SHIFT BUTTON
- 9 ANS/ DRG BUTTON
- 10 NUMERIC KEYPAD
- 11 BASIC OPERATION FUNCTION
- 12 DELETE BUTTON

- 13 ALL CLEAR BUTTON
- 14 ENGINEERING NOTATION

- 15 CALCULATOR SLIDE COVER



Image: The SC-216 calculator displayed with a list of permitted functions (basic arithmetic, trigonometric, square root, logarithmic) and compliance features (non-CAS, no wireless, no program storage, no QWERTY) for standardized tests.

8. WARRANTY AND SUPPORT

8.1 Product Warranty

The Red Star Tec SC-216 Scientific Calculator comes with a 6-month warranty against manufacturing defects from the date of purchase. Additionally, spare parts availability is guaranteed for 1 year.

8.2 Customer Support

For technical assistance, troubleshooting, or warranty claims, please contact Red Star Tec customer support. Refer to the product packaging or the official Red Star Tec website for contact details.