

## Unpacking

As you unpack your calculator, check to make sure that all of the items shown below are included.

- Scientific Calculator
- USB cable
- Test batteries (Four AAA-size batteries)
- Quick Start Guide (This manual)

Optionally Available

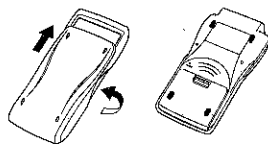
- SB-62 cable (Included with the calculator in some areas.)

## BEFORE USING THE CALCULATOR FOR THE FIRST TIME...

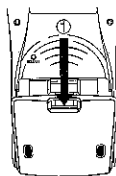
Batteries are not loaded in your calculator at the factory.

Be sure to follow the procedure below to load batteries and adjust the display contrast before trying to use the calculator for the first time.

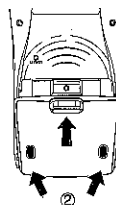
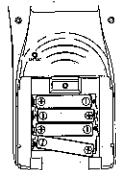
1. Making sure that you do not accidentally press the **OFF** key, slide the case onto the calculator and then turn the calculator over. Remove the battery cover from the calculator by pulling with your finger at the point marked ①.



2. Load the four batteries that come with the calculator.
  - Make sure that the positive (+) and negative (-) ends of the batteries are facing correctly.



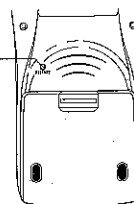
3. Replace the battery cover, making sure that its tabs enter the holes marked ② and turn the calculator front side up. The calculator will turn on automatically and the MAIN MENU will appear on the display.



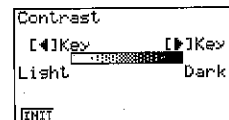
- If the Main Menu shown to the right is not on the display, press the RESTART button on the back of the calculator.



RESTART button



4. Use the cursor keys (↑, ↓, ←, →) to select the **SYSTEM** icon and press **EXE**, then press **F1** (⏻) to display the contrast adjustment screen.



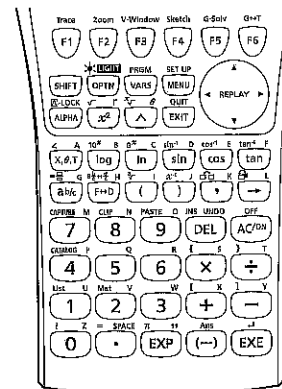
5. Adjust the contrast.
  - The → cursor key makes display contrast darker.
  - The ← cursor key makes display contrast lighter.
  - **F1** (INIT) returns display contrast to its initial default.

6. To exit display contrast adjustment, press **MENU**.

### Important!

A special USB driver must be installed on your computer in order to connect to the calculator. The driver is installed along with the Program-Link software (FA-124). Be sure to install the Program-Link software (FA-124) on your computer before trying to connect the calculator. Attempting to connect the calculator to a computer that does not have the Program-Link software installed can cause malfunction. FA-124 software can be downloaded from [http://edu.casio.com/education/support\\_software/](http://edu.casio.com/education/support_software/).

## Key Layout



## Starting and Stopping Calculator Operation

### To turn on the calculator

Press **OFF**.

If the display figures are too light or too dark, adjust the contrast ("To adjust display contrast", page 8).

### To perform arithmetic and other calculations

1. Press **MODE** (1) (RUN•MAT).
2. Input the expression and then press **EXE**.

Example: **6** **3** **4** **+** **8** **EXE**

634+8 79.25

### To turn off the calculator

Press **SHIFT** **OFF** (OFF).

The calculator also will turn off automatically after a certain period (approximately 10 minutes under initial default settings) of non-use. You can change the amount of time until it turns off to approximately 60 minutes, if you want ("To specify the Auto Power Off trigger time", page 8).

## Using the Main Menu

Pressing **MENU** displays the Main Menu.

You can use the Main Menu to enter function modes and to access the calculator and other operations.



## Battery Level Indicator

An icon in the upper right corner of the Main Menu shows approximately how much battery power is remaining.



... From left to right: Level 3, Level 2, Level 1, Dead.

**Important!** Replace batteries as soon as possible whenever (Level 1) is indicated. For information about battery replacement, see "Replacing Batteries" in the Hardware User's Guide.

## Selecting a Mode

On the Main Menu, perform either of the following operations.

- Use the ↑, ↓, ←, and → keys to move the highlighting to the icon of the mode you want to select, and then press **EXE**.
- Press the number key that corresponds to the number in the lower right corner of the icon whose mode you want to select.

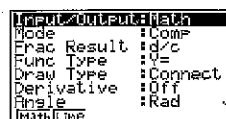
Icon	Mode Name/Description
	<b>RUN • MAT</b> (Run • Matrix • Vector) Use this mode for arithmetic calculations, function calculations, binary, octal, decimal, and hexadecimal calculations, matrix calculations, and vector calculations.
	<b>STAT</b> (Statistics) Use this mode to perform single-variable (standard deviation) and paired-variable (regression) statistical calculations, to perform tests, to analyze data and to draw statistical graphs.
	<b>e•ACT</b> (eActivity) eActivity lets you input text, math expressions, and other data in a notebook-like interface. Use this mode when you want to store text or formulas, or built-in application data in a file.
	<b>S•SHT</b> (Spreadsheet) Use this mode to perform spreadsheet calculations. Each file contains a 28-columnx999-line spreadsheet. In addition to the calculator's built-in commands and <b>S•SHT</b> mode commands, you can also perform statistical calculations and graph statistical data using the same procedures that you use in the <b>STAT</b> mode.
	<b>GRAPH</b> Use this mode to store graph functions and to draw graphs using the functions.
	<b>DYNA</b> (Dynamic Graph) Use this mode to store graph functions and to draw multiple versions of a graph by changing the values assigned to the variables in a function.

Icon	Mode Name/Description
	<b>TABLE</b> Use this mode to store functions, to generate a numeric table of different solutions as the values assigned to variables in a function change, and to draw graphs.
	<b>RECUR</b> (Recursion) Use this mode to store recursion formulas, to generate a numeric table of different solutions as the values assigned to variables in a function change, and to draw graphs.
	<b>CONICS</b> Use this mode to draw graphs of conic sections.
	<b>EQUA</b> (Equation) Use this mode to solve linear equations with two through six unknowns, and high-order equations from 2nd to 6th degree.
	<b>PRGM</b> (Program) Use this mode to store programs in the program area and to run programs.
	<b>TVM</b> (Financial) Use this mode to perform financial calculations and to draw cash flow and other types of graphs.
	<b>E-CON3</b> Use this mode to control the optionally available Data Logger.
	<b>LINK</b> Use this mode to transfer memory contents or back-up data to another unit or PC.
	<b>MEMORY</b> Use this mode to manage data stored in memory.
	<b>SYSTEM</b> Use this mode to initialize memory, adjust contrast, and to make other system settings.

## Setup

Pressing **SHIFT** **SETUP** (SET UP) in a calculation mode displays a setup screen that can be used to configure various settings that affect calculation and process execution.

For details about all of the setting items included on the setup screen, see "Using the Setup Screen" in the Software User's Guide.



## Option (OPTN) Menu

The option menu gives you access to scientific functions and features that are not marked on the calculator's keyboard. The contents of the option menu differ according to the mode you are in when you press the **OPTN** key.



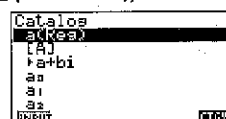
## Variable Data (VARS) Menu

To recall variable data, press **VARS** to display the variable data menu.



## Catalog Function (**SHIFT** **4** (CATALOG))

The Catalog is an alphabetic list of all the commands available on this calculator. You can input a command by calling up the Catalog and then selecting the command you want.



## Examples

### Calculations Using Math Input/Output

Math Input/output lets you enter calculations the same way they appear in your math textbook.

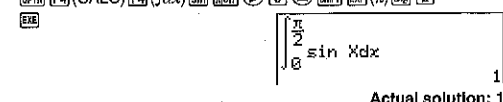
#### Example: Calculating a definite integral

To perform the following calculation  $\int_0^{\pi/2} \sin(x) dx$

- Use the radian angle unit.

**MODE** **1** (RUN=MAT)  
**SHIFT** **MODE** (SET UP) **F1** (Math)  $\downarrow$   $\downarrow$   $\downarrow$   $\downarrow$  **F2** (Rad) **EXIT**

**OPTN** **F4** (CALC) **F4** ( $\int dx$ ) **sin** **0** **DEL** **SHIFT** **EXP** ( $\pi$ ) **2** **F1**



### Graphing

#### Example: To graph a cubic function

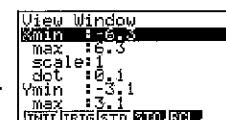
Graph the following function:  $y = x^3 + 2x^2 - x - 2$ .  
Use View Window to configure the graph screen coordinate values.

**MODE** **6** (GRAPH)

**SHIFT** **F3** (V-WIN)

**F1** (INIT)

- Initialize the coordinate settings.



Input the function into area Y1.

**EXIT**

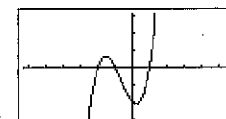
**2nd** **DEL** **3** **2nd** **+** **2** **2nd** **-** **1** **2nd** **x^2**

**2nd** **DEL** **2** **2nd** **x^2**



Graph the function.

**F6** (DRAW)



## System Setup

This section explains about some of the calculator's system settings. For full details, refer to "Chapter 12 System Manager" in the Software User's Guide.

### To adjust display contrast

- Press **MODE** **F4** (G)(SYSTEM) **F1** ( $\blacktriangleleft$ ) to display the contrast adjustment screen.
- Use  $\blacktriangleleft$  and  $\blacktriangleright$  to adjust contrast.
- After contrast is the way you want, press **EXIT**.

### To specify the Auto Power Off trigger time

- Press **MODE** **F4** (G)(SYSTEM) **F2** ( $\blacktriangleleft$ ) to display the power properties screen.
- Press **F1** (10) to specify approximately 10 minutes or **F2** (60) to specify approximately 60 minutes as the Auto Power Off trigger time.
- After the setting is the way you want, press **EXIT**.

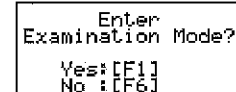
## Examination Mode

The Examination Mode puts some limits on calculator functions, which allows it to be used when taking an exam or test. Use the Examination Mode only when actually taking an exam or test. Entering the Examination Mode affects calculator operation as described below.

- The following modes and functions are disabled: **e•ACT** mode, **MEMORY** mode, **E-CON3** mode, **PRGM** mode, vector commands, program commands ( $\blacktriangleleft$  (Output Command),  $\blacktriangleright$  (Multi-statement Command)), data transfer, add-in applications, add-in languages, user name editing.
- User data (main memory) is backed up. The backed up data will be restored when you exit the Examination Mode. Any data created during an Examination Mode session will be deleted when the Examination Mode is exited.

### Entering the Examination Mode

- Press **SHIFT** **OFF** (**OFF**) to turn off the calculator.
- While holding down the **ON** and **7** keys, press the **DEL** key.
  - This displays the dialog box shown below.



- Press **F1** (Yes).

- Read the message on the dialog box that appears.

4. Press **[F2]**.
  - This displays the dialog box shown below.

Entering  
Examination Mode  
Press: [EXIT]

5. Press **[EXIT]**.

#### • Calculator Operation in the Examination Mode

- Entering the Examination Mode causes an icon (**[B]**) to flash on the display. The flash rate of the icon slows down about 15 minutes after entering the Examination Mode.

Entering  
Examination Mode  
Icon

- The icon inverts its colors (**[B]**) to indicate that a calculation operation is in progress.
- In the Examination Mode, the Auto Power Off trigger setting is fixed at approximately 60 minutes.
- Pressing **[F1]** (**[C]**) causes the dialog box shown below to appear. The dialog box shows the elapsed time in the Examination Mode.

Elapsed Time  
2:01:23  
Press: [EXIT]

- The table below shows how certain operations affect the Examination Mode.

If you do this:	The calculator stays in Examination Mode.	Data input in Examination Mode is retained.
Turn power off and then back on again	Yes	Yes
Press the RESTART button	Yes	No
Remove the calculator's batteries	Yes	No
Delete Main Memory data	Yes	No

#### • Exiting the Examination Mode

There are three ways to exit the Examination Mode.

- (1) Exiting the Examination Mode by Connecting to a Computer
  - Use the USB cable to connect the calculator that is in the Examination Mode to a computer.
  - When the "Select Connection Mode" dialog box appears on the calculator, press the calculator's **[F1]** key.
  - On the computer, start up the FA-124 software.

4. On the computer, click the toolbar **[B]** button.
  - The dialog box shown below will appear when you exit the Examination Mode.

Exit  
Examination Mode  
Restart and  
restore memories  
Press: [EXIT]

- The FA-124 software will display an error message at this time, but just ignore it.

- (2) Exiting the Examination Mode by Allowing 12 Hours to Elapse  
Approximately 12 hours after entering the Examination Mode, turning on the calculator will cause it to exit the Examination Mode automatically.

**Important!** If you press the RESTART button or if you replace batteries before turning on the calculator, it will re-enter the Examination Mode when turned on, even if 12 hours have elapsed.

- (3) Exiting the Examination Mode by Connecting to another Calculator

- On the calculator that is in the Examination Mode (Calculator A), enter the **LINK** mode and then press **[F4]** (CABL) **[F2]** (3PIN).
- Use the SB-62 cable to connect Calculator A to another calculator that is not in the Examination Mode (Calculator B).
- On Calculator A, press **[F2]** (RECV).
- On Calculator B\*, enter the **LINK** mode and then press **[F3]** (EXAM) **[F1]** (UNLK) **[F1]** (Yes).

- You could also transfer any data from Calculator B to Calculator A.

Example: To transfer setup data to Calculator A

- On Calculator B, enter the **LINK** mode and then press **[F1]** (TRAN) **[F1]** (MAIN) **[F1]** (SEL).
- Use **[V]** and **[A]** to select "SETUP".
- Press **[F1]** (SEL) **[F6]** (TRAN) **[F1]** (Yes).

\* Calculator with Examination Mode function

- The **[B]** icon will disappear from the display when the calculator exits the Examination Mode.

#### • Displaying Examination Mode Help

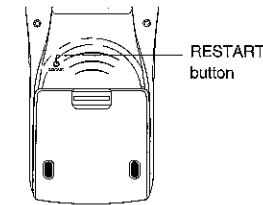
You can display Examination Mode help in the **LINK** mode.

- [F3]** (EXAM) **[F2]** (ENTR)... Displays help about entering the Examination Mode.
- [F3]** (EXAM) **[F3]** (APP)... Displays help about what modes and functions are disabled in the Examination Mode.
- [F3]** (EXAM) **[F4]** (EXIT)... Displays help about exiting the Examination Mode.

#### Restart

Should the calculator start to act abnormally, you can restart it by pressing the RESTART button. Note, however, that you should only use the RESTART button only as a last resort.

Normally, pressing the RESTART button reboots the calculator's operating system, so programs, graph functions and other data in calculator memory is retained.



**Important!** The calculator backs up user data (main memory) when you turn power off and loads the backed up data when you turn power back on.

When you press the RESTART button, the calculator restarts and loads backed up data. This means that if you press the RESTART button after you edit a program, graph function, or other data, any data that has not been backed up will be lost.

#### Reset

Use reset when you want to delete all data currently in calculator memory and return all mode settings to their initial defaults. Before performing the reset operation, first make a written copy of all important data.

For details, see "Reset" in the Software User's Guide.

#### Handling Precautions

- Your calculator is made up of precision components. Never try to take it apart.
- Avoid dropping your calculator and subjecting it to strong impact.
- Do not store the calculator or leave it in areas exposed to high temperatures or humidity, or large amounts of dust. When exposed to low temperatures, the calculator may require more time to display results and may even fail to operate. Correct operation will resume once the calculator is brought back to normal temperature.
- The display will go blank and keys will not operate during calculations. When you are operating the keyboard, be sure to watch the display to make sure that all your key operations are being performed correctly.
- Replace the batteries once every one year regardless of how much the calculator is used during that period. Never leave dead batteries in the battery compartment. They can leak and damage the unit.
- Do not use an oxyride battery\* or any other type of nickel-based primary battery with this product. Incompatibility between such batteries and product specifications can result in shorter battery life and product malfunction.
- Keep batteries out of the reach of small children. If swallowed, consult a physician immediately.
- Avoid using volatile liquids such as thinner or benzene to clean the unit. Wipe it with a soft, dry cloth, or with a cloth that has been moistened with a solution of water and a neutral detergent and wrung out.
- Always be gentle when wiping dust off the display to avoid scratching it.
- In no event will the manufacturer and its suppliers be liable to you or any other person for any damages, expenses, lost profits, lost savings or any other damages arising out of loss of data and/or formulas arising out of malfunction, repairs, or battery replacement. It is up to you to prepare physical records of data to protect against such data loss.
- Never dispose of batteries, the liquid crystal panel, or other components by burning them.
- Be sure that the power switch is set to OFF when replacing batteries.
- If the calculator is exposed to a strong electrostatic charge, its memory contents may be damaged or the keys may stop working. In such a case, perform the Reset operation to clear the memory and restore normal key operation.
- If the calculator stops operating correctly for some reason, use a thin, pointed object to press the RESTART button on the back of the calculator. Note, however, that this clears all the data in calculator memory.
- Note that strong vibration or impact during program execution can cause execution to stop or can damage the calculator's memory contents.

- Using the calculator near a television or radio can cause interference with TV or radio reception.
- Before assuming malfunction of the unit, be sure to carefully reread the User's Guide and ensure that the problem is not due to insufficient battery power, programming or operational errors.
- \* Company and product names used in this manual may be registered trademarks or trademarks of their respective owners.

#### Be sure to keep physical records of all important data!

The large memory capacity of the unit makes it possible to store large amounts of data.

You should note, however, that low battery power or incorrect replacement of the batteries that power the unit can cause the data stored in memory to be corrupted or even lost entirely. Stored data can also be affected by strong electrostatic charge or strong impact. It is up to you to keep back up copies of data to protect against its loss.

Since this calculator employs unused memory as a work area when performing its internal calculations, an error may occur when there is not enough memory available to perform calculations. To avoid such problems, it is a good idea to leave 1 or 2 kbytes of memory free (unused) at all times.

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#### Canadian Regulatory Information Information concernant la Réglementation Canadienne

This Class B digital apparatus complies with Canadian ICES-003.  
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.



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22848 Norderstedt, Germany  
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GUIDELINES LAID DOWN BY FCC RULES FOR USE OF THE UNIT IN THE U.S.A. (not applicable to other areas).

#### NOTICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

#### FCC WARNING

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.  
Proper connectors must be used for connection to host computer and/or peripherals in order to meet FCC emission limits.

Connector SB-62 Power Graphic Unit to Power Graphic Unit  
USB connector that comes with the fx-9860GII SD/fx-9860GII Power Graphic Unit to Windows® compatible PC

#### Declaration of Conformity

Model Number: fx-9860GII SD/fx-9860GII  
Trade Name: CASIO COMPUTER CO., LTD.  
Responsible party: CASIO AMERICA, INC.  
Address: 570 MT. PLEASANT AVENUE, DOVER, NEW JERSEY 07801  
Telephone number: 973-361-5400

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

#### CASIO COMPUTER CO., LTD.

6-2, Hon-machi 1-chome  
Shibuya-ku, Tokyo 151-8543, Japan

# fx-9860GII SD

# fx-9860GII

## Quick Start Guide

CASIO Worldwide Education Website

<http://edu.casio.com>

Manuals are available in multi languages at

<http://world.casio.com/manual/calc>

Thank you for selecting the CASIO graphing calculator.

For detailed information about operations, download the User's Guide (PDF file) from the CASIO Manual Download site (<http://world.casio.com/manual/calc/>).

- Be sure to keep all user documentation handy for future reference.
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