

JZ-12W

**User's Guide
Guía del usuario
Mode d'emploi
Guia do usuário
Pedoman Pemakai
Kullanım Kılavuzu
用戶說明書**

Introduction

Before using this product

Be sure to read the "Safety Precautions" section of this User's Guide before trying to use this product.

After reading this User's Guide, keep it in a safe place for future reference.

- In no event shall CASIO COMPUTER CO., LTD. be liable to anyone for special, collateral, incidental, or consequential damages in connection with or arising out of the purchase or use of these materials. Moreover, CASIO COMPUTER CO., LTD. shall not be liable for any claim of any kind whatsoever against the use of these materials by any other party.
- Contact a nearby dealer whenever you require servicing.
- The contents of this document are subject to change without notice.
- In this manual, some intermediate calculation results and indicator symbols are not shown in example displays.
- No part of this publication may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any human or computer language, in any form or by any means, without the express written permission of CASIO COMPUTER CO., LTD.

Important Safety Precautions

Note following safety precautions before using the calculator. Keep these safety precautions and operating instructions on hand for future reference.

About safety precaution symbols

The following symbols are used in this manual and on the product itself to alert you and others to the risk of personal and material injury.



Danger

This symbol indicates information that, if ignored or applied incorrectly, creates the danger of death or serious personal injury.



Warning

This symbol indicates information that, if ignored or applied incorrectly, creates the possibility of death or serious personal injury.



Caution

This symbol indicates information that, if ignored or applied incorrectly, creates the possibility of personal injury or material damage.

Examples



A circle indicates something you should not do.

This symbol indicates you should not try to take something apart.



A black circle indicates something you must do.



Danger

Alkaline Batteries



Perform the following steps immediately if fluid leaking from alkaline batteries ever gets into your eyes.

1. Do not rub your eyes! Rinse them with water.
2. Contact your physician immediately.

Leaving alkaline battery fluid in your eyes can lead to loss of sight.



Warning

Battery



Misuse of batteries can cause them to leak and damage nearby components, which creates the risk of explosion, fire, and personal injury. Be sure to observe the following precautions.



- Never try to take batteries apart and do not allow them to become shorted.
- Do not subject batteries to intense heat or allow them to become shorted.

- Never mix old batteries with new ones.
- Never mix batteries of different types.
- Never try to charge the batteries.
- Make sure the positive (+) and negative (–) poles of each battery are facing correctly.

Do not dispose of the calculator by burning it



Throwing the calculator into a fire creates the risk of explosion, fire, and personal injury.



Caution

Battery



Misuse of batteries can cause them to leak and damage nearby components, which creates the risk of explosion, fire, and personal injury. Be sure to observe the following precaution.

- Use only the battery type that is specified for this calculator.
- Remove batteries from the product if you do not plan to use it for a long time.

Display



- Do not apply strong pressure to the LCD or subject it to strong impact. Doing so can crack the glass of the LCD panel.



- If the LCD panel cracks, never touch the liquid inside it. LCD panel liquid can cause inflammation of the skin.
- Should LCD panel liquid get into your mouth, wash it out immediately, and then contact a physician.
- Should LCD panel liquid get into your eyes or onto your skin, rinse with clean water for at least 15 minutes, and then contact a physician.

Precautions when Using the Calculator

- Never use or store the calculator in an area subjected to temperature extremes. Do not leave it in direct sunlight, near a window, near a heater, or in any other area where it is exposed to heat. Heat can discolor or deform the calculator, or damage its internal circuitry.
- Never drop the calculator or otherwise subject it to strong impact.
- Never subject the calculator to rough treatment.
- To clean the calculator, wipe it with a soft, dry cloth. When it is very dirty, wipe the calculator with a soft cloth moistened in a weak solution of water and a mild neutral detergent. Before wiping, be sure to wring all excess moisture from the cloth. Never use thinner, benzene, or other volatile chemicals for cleaning.
- Before disposing of the calculator, remove its batteries.

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Getting Started

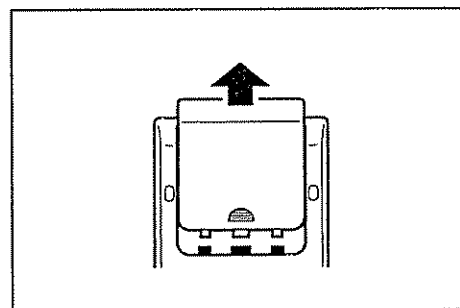
JZ-12W Operating Environment

Information about operating environment (the computer operating system that the calculator supports) is printed on the package.

Read this first!

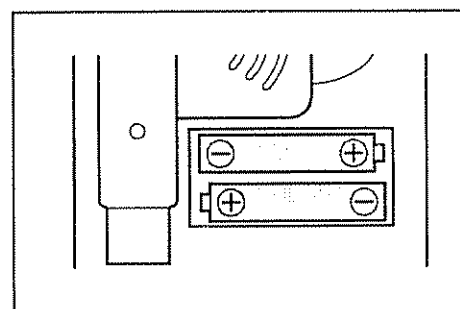
Before using this calculator for the first time, use the following procedure to load the two AAA-size alkaline batteries that come with it.

1. Slide the battery cover in the direction indicated by the arrow and remove it.

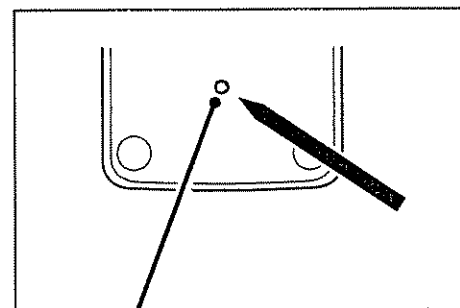


2. Load the two batteries, and then close the battery cover.

* Make sure the positive (+) and negative (–) ends of each battery are facing in the correct directions.



3. Use a mechanical pencil (with its lead retracted) or some other sharp, pointed object to press the reset button on the back of the calculator.



Reset button

- This will cause "0." to appear on the display of the calculator, indicating it is ready for use.
- Do not use a toothpick or any other object whose tip may break off to press the reset button. Doing so can cause malfunction of the calculator.

- The batteries that come with the calculator discharge slightly during the time it takes for the calculator to get from the factory to you. Because of this, the life of the supplied batteries may be shorter than the standard battery life shown under Specifications.

Auto Power Off

Power turns off automatically whenever you do not perform any operation on the calculator for about six minutes. If this happens, press **AC** to turn power back on.

- The calculator maintains communication with the computer even when power is turned off. You will be able to exchange data with your computer after turning power back on.

CAL Mode and PC Key Mode

Your calculator has two modes: a CAL mode and a PC Key mode.

Press **PC/CAL** to toggle between the CAL mode and PC Key mode. Pressing **AC** while in the PC mode will switch to the CAL mode.

■ CAL Mode

- You can use the calculator as a standard calculator.
- You can send calculation results (display contents) to your computer.
- Use can also use the ←, →, ↑ and ↓ keys.

■ PC Key Mode

- Pressing a key sends the applicable code (0 to 9, ., -, Enter, BS, ESC, Tab, ←, →, ↑, ↓) to your computer for input or cursor movement.
- In the PC Key mode, the display shows the indicator "PC MODE" along with input values, etc.
- See page 17 for information about sending data to a computer.

Replacing the Batteries

The “” icon appears on the display when the batteries go low. Replace the batteries as soon as possible after this icon appears.

- If you continue using the calculator while the batteries are low, you run the risk of losing data in calculator memory whenever light to the solar cell is cut off momentarily. You should replace the batteries at least once a year, even if the “” icon does not appear.
- The built-in lithium battery should be replaced at least once in five years. Contact an authorized CASIO dealer or your nearest CASIO Service Center about having the battery replaced.

■ Important! Read this before replacing batteries!

- Replace both batteries with new ones.
- Be sure to use AAA-size alkaline batteries only. The life of manganese batteries is very short when used to power this calculator, and their use can cause malfunction.

Resetting the Calculator

Electrostatic charge can cause the calculator to stop operating or stop responding to operations. If this happens, reset the calculator.

■ Important! Read this before resetting the calculator!

- Pressing the reset button will delete all values in calculator memory and all of the calculator's settings. Be sure to keep separate written copies of all important values and settings.

Calculator Functions

Basic Calculation Examples

Press **AC** to clear the calculator before starting a new calculation. The following examples are performed with the rounding selector (**F**, **5/4**, etc.) set to **F**.

$4 - 6 =$ $(1 + 2) \div 3 \times 4 - 5 =$ $999999999999 + 1 =$ $2 \times (-3) = -6$ Constant Calculations $12 + 23 =$ $45 + 23 =$ $78 + 23 =$ $7 - 5 =$ $2 - 5 =$ $2 \times 12 =$ $4 \times 12 =$ $45 \div 9 =$ $72 \div 9 =$ Percent Calculations What is 5% of 100? What is 100 increased by 5%? What is 500 reduced by 20%? What percent of 60 is 30? What percent increase of 10 is 12? If the profit is 25% of the selling price, what would be the selling price and profit on an item that has a cost of \$120? Independent Memory $80 \times 9 = 720$ $\rightarrow 50 \times 6 = 300$ $20 \times 3 = 60$ Total: 480 (* Supported by models with a GT key) GT Memory $5 \times 6 = 30$ $2 \times 8 = 16$ $\underline{\quad 4 \quad}$ Total: 50 Correction Examples $\times 2 + 3 \rightarrow \bigcirc 2 + 4 = 6$ $\times 2 + \rightarrow \bigcirc 2 - 7 = -5$ $\times 12 \rightarrow \bigcirc 123$	$4 - 6 =$ $1 + 2 \div 3 \times 4 - 5 =$ $999999999999 + 1 =$ AC Overflow error $2 \times 3 =$ $23 + 12 =$ $45 +$ $78 +$ $5 - 7 =$ $2 -$ $12 \times 2 =$ $4 \times$ $9 \div 45 =$ $72 \div$ $100 \times 5\% =$ $100 \times 5\% +$ $500 \times 20\% =$ $30 \div 60\% =$ $12 \div 10\% =$ $120 + 25\% =$ MRC MRC *1 $80 \times 9 =$ *2 $50 \times 6 =$ *3 $20 \times 3 =$ *4 MRC *4 ★ 1 Clears independent memory ★ 2 Adds a value to independent memory ★ 3 Subtracts a value from independent memory ★ 4 Displays current independent memory contents $\text{AC } 5 \times 6 =$ *5 $2 \times 8 =$ *5 $4 =$ *5 GT *6 ★ 5 Adds the result to GT memory ★ 6 Displays current GT memory contents $2 + 3 \bigcirc 4 =$ $2 + - 7 =$ $12 \rightarrow 3$	-2 -15 $E 1.00000000000$ 0 "Trillion" unit -6 K 35 K 68 K 101 K 2 K -3 K 24 K 48 K 5 K 8 5 105 400 $50\% \div 50$ $20\% \div 20$ Selling price $\rightarrow 160$ Profit $\rightarrow 40$ M 720 M 300 M 60 480 GT 30 GT 16 GT 4 50 6 -5 123
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Time Calculations

The following examples are performed with the rounding selector (**F**, **5/4**, etc.) set to **F**.

The following abbreviations are used in this section: h = hours, m = minutes, s = seconds.

Example 1

$$\begin{array}{rcl}
 3\text{h } 30\text{m } 45\text{s} & 3 \text{ [H/M/S]} 30 \text{ [H/M/S]} 45 \text{ [H/M/S]} & 3-30'45'' \\
 +) & 15\text{s} & + 0 \text{ [H/M/S]} 0 \text{ [H/M/S]} 15 \text{ [H/M/S]} 0-00'15'' \\
 -) & 2\text{h } 25\text{m } 40\text{s} & - 2 \text{ [H/M/S]} 25 \text{ [H/M/S]} 40 \text{ [H/M/S]} 2-25'40'' \\
 \hline
 1\text{h } 5\text{m } 20\text{s} & = & 1-05'20''
 \end{array}$$

Example 2: 5,400s = 1.5h = 1h 30m 00s

$$\begin{array}{rcl}
 5400 \text{ [H/M/S]} 60 \text{ [H/M/S]} 60 \text{ [H/M/S]} & = & 1.5 \\
 & & \text{[H/M/S]} 1-30'00''
 \end{array}$$

- Each press of **[H/M/S]** toggles the display between "1.5" and "1-30'00".

Example 3: Working for seven hours at an hourly rate of \$ 12 yields a wage of \$ 90.

$$\begin{array}{rcl}
 12 \text{ [X]} & 12. \\
 7 \text{ [H/M/S]} 30 \text{ [H/M/S]} \text{ [H/M/S]} & 7-30'00'' \\
 & = 90.
 \end{array}$$

Example 4

$$\begin{array}{rcl}
 1\text{h } 6\text{m } 36\text{s} & 1 \text{ [H/M/S]} 6 \text{ [H/M/S]} 36 \text{ [H/M/S]} & 1-06'36'' \\
 \times) & 5 & \text{[X]} 5 = 5.55 \\
 \hline
 5\text{h } 33\text{m } 00\text{s} & & \text{[H/M/S]} 5-33'00''
 \end{array}$$

As shown in Example 4, a **[X]**, **[÷]**, or **[%]** operation that includes a time value produces a decimal value result (1-hour units). To convert the value to a time (hours, minutes, seconds) value, press the **[H/M/S]** key.

■ Input Range

Hours

You can input up to seven digits for the hour. Input of decimal and negative values is also supported.

Minutes and Seconds

Input of values from 0 to 99 is supported. Input of decimal values and negative values is not supported.

■ Calculation Range

–9999999 hours 59 minutes 59 seconds to 9999999 hours 59 minutes 59 seconds

Tax Calculations

The following examples use a tax rate of 5%.

■ Introduction

Before performing a tax calculation, make sure the tax rate is set correctly.

To check the tax rate:  

■ To change the tax rate setting

1. 
2. Press and hold for 3 seconds . This causes TAX and % to appear on the display.
3. 5  This specifies a tax rate of 5%. The value you input in place of “5” specifies the tax rate.
 - For a tax rate of 1 or greater, you can input up to six digits.
Example: 123.456, 1.23456
 - For a tax rate less than 1, you can input up to 12 digits. Note, however, that you can input only six digits to the right of the decimal point or any leading zeros to the right of the decimal point.
Example: 0.123456, 0.0123456, 0.000000123456

■ Sales Tax Calculation (Rate = 5%)

Example 1: For an item with a pretax price of \$ 100

What is the price plus tax? 100 $\overset{\text{TAX RATE}}{\boxed{\text{TAX+}}}$ \$ 105.

What is the tax amount? $\overset{\text{TAX RATE}}{\boxed{\text{TAX+}}}$ \$ 5.

Example 2: For an item with a price of \$ 105, tax included

What is the pretax price? 105 $\boxed{\text{TAX-}}$ \$ 100.

What is the tax amount? $\boxed{\text{TAX-}}$ \$ 5.

- Pressing the $\overset{\text{TAX RATE}}{\boxed{\text{TAX+}}}$ ($\boxed{\text{TAX-}}$) key toggles the displayed value between the with tax amount (\$ 105 in Example 1) or without tax amount (\$ 100 in Example 2), and the tax amount (5).
- Cutting or rounding of the decimal part is performed automatically in accordance with the setting of the rounding selector (F, 5/4, etc.) and decimal places selector (4, 3, etc.) During internal calculations the calculator first obtains the tax amount in accordance with the selector settings, and then calculates the tax included (without tax) amount in accordance with the selector settings.

Example 3: What would be the amount due, including tax, for three items with prices of \$ 300 excluding tax, \$ 700 including tax, and \$ 2,000 including tax?

Operation: First calculate the amount due for the items that does not include tax.

Normal Calculation 300 $\overset{\text{TAX RATE}}{\boxed{\text{TAX+}}}$ 315.

$\boxed{+}$ 700 $\boxed{+}$ 2000 $\boxed{=}$ 3'015.

Calculation Using $\boxed{\text{M+}}$ and $\boxed{\text{M-}}$ $\boxed{\text{MC}} \boxed{\text{MC}} \boxed{\text{AC}} 300 \overset{\text{TAX RATE}}{\boxed{\text{TAX+}}} \boxed{\text{M+}}$ 315.

700 $\boxed{+}$ 2000 $\boxed{\text{M+}} \boxed{\text{MR}}$ 3'015.

Decimal Part Rounding

■ Rounding Selector

F: No rounding

CUT: Decimal part cut off.

5/4: Decimal part rounded off.

■ Decimal Places Selector

The setting of this selector is applied when any setting other than **F** is selected with the rounding selector.

4, 3, 2, 1, 0

Use this selector to specify the number of decimal places. If you want values rounded to three decimal places (like 12.000), select **3**.

Example: The following shows results by different rounding selector settings when **2** is selected with the decimal places selector.

5  3  1.6666666...

"F" → 1.6666666... / "CUT" → 1.66 / "5/4" → 1.67

ADD2

This setting automatically adds a decimal point and two decimal places, even if you do not input them. This setting is useful when performing addition and subtraction of dollar and cent values.

Note, however, that a decimal point and two decimal places are not added in the following cases.

- When you press the [.] key during value input
- For calculation operations other than addition and subtraction.

Main Display Indicators and Symbols

GT: Indicates GT memory contains a value.

' : 3-digit separator: 1'234

M: Indicates independent memory contains a value.

E: Indicates an error condition.

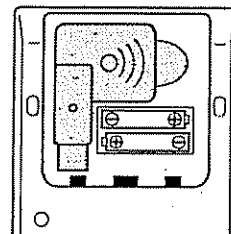
−: Indicates a negative value.

K: Indicates a constant calculation is in progress.

- Other indicators (+, −, ×, ÷, =) appear to indicate the current calculation operation.

Installing and Removing the USB Wireless Receiver

A USB wireless receiver is built into the back of the calculator. Remove the USB wireless receiver when you want to communicate between the calculator and a computer.



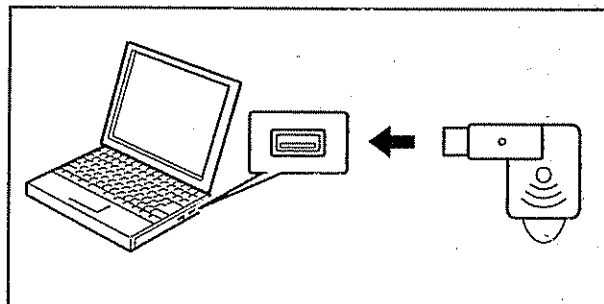
Return the USB wireless receiver to the calculator when you are not communicating with a computer.

Connecting with a Computer

Use the following procedure to connect the USB wireless receiver to your computer and to configure the computer's communication settings.

1. Plug the USB wireless receiver into the computer's USB port.

- Be sure to connect directly to the computer's USB port. Proper operation may not be possible if you connect to a USB hub or some other indirect connection.

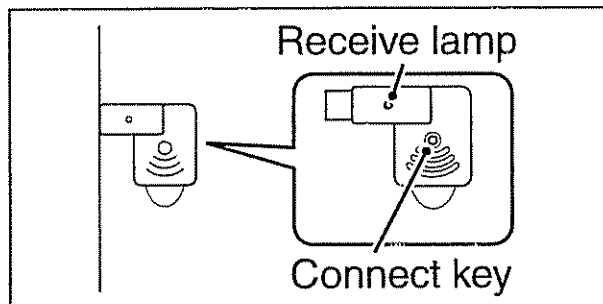


2. Install the USB driver, if required.

- Following the instructions that appear on your computer screen. Note that with some operating systems, USB driver installation will be performed automatically.

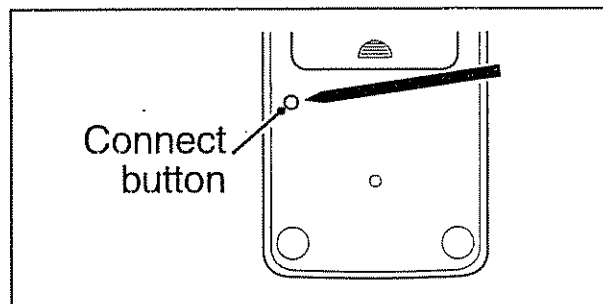
3. **Press the receiver's connect key, and confirm that the receiver's receive lamp is flashing.**

- The lamp will continue to flash for about eight seconds. You need to perform step 4 within that time. If you don't the lamp will stop flashing and you will have to press the receiver's connect key again.



4. **Point the top of the calculator towards the receiver, and use a mechanical pencil (with lead retracted) or some other sharp, pointed object to press the connect button on the back of the calculator.**

- Do not use a toothpick or any other object whose tip may break off to press the connect button. Doing so can cause malfunction of the calculator.



5. **Communication between the calculator and computer is indicated when the receiver's receive lamp goes out.**

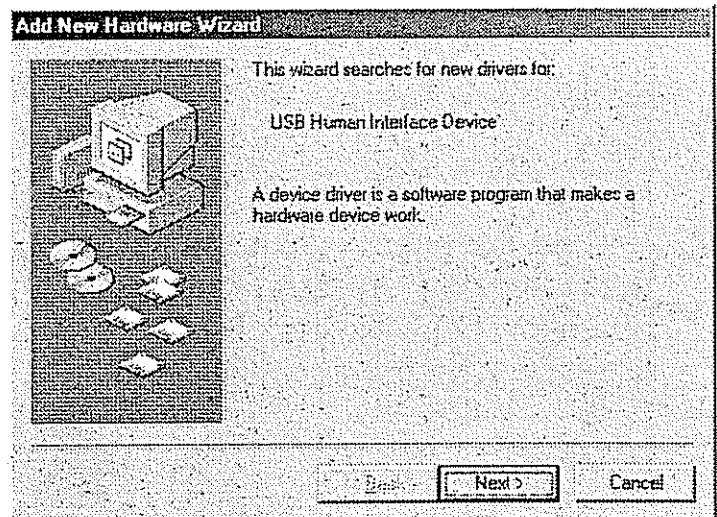
Windows 98: Installing the USB Driver

When connecting the calculator to a computer running Windows 98, you need to install a USB driver.

The following installation procedure assumes the following system setup.

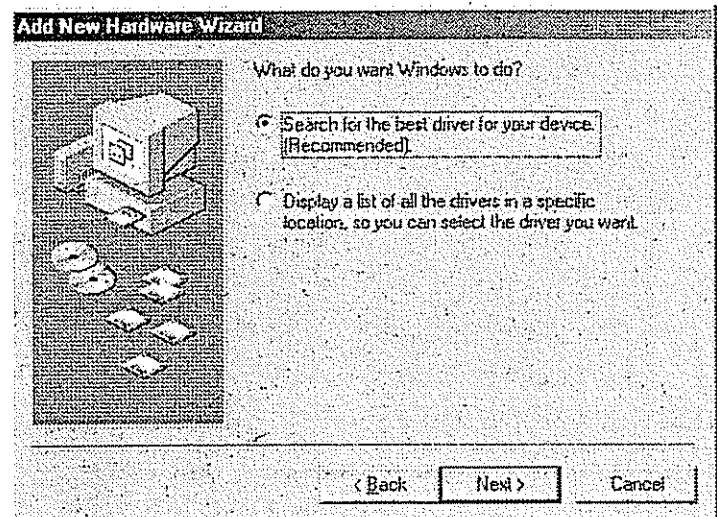
- Windows is located on the C: drive.
- Windows 98 is installed in a folder named Windows.

Connecting the calculator to your computer causes the dialog box shown on the right to appear.

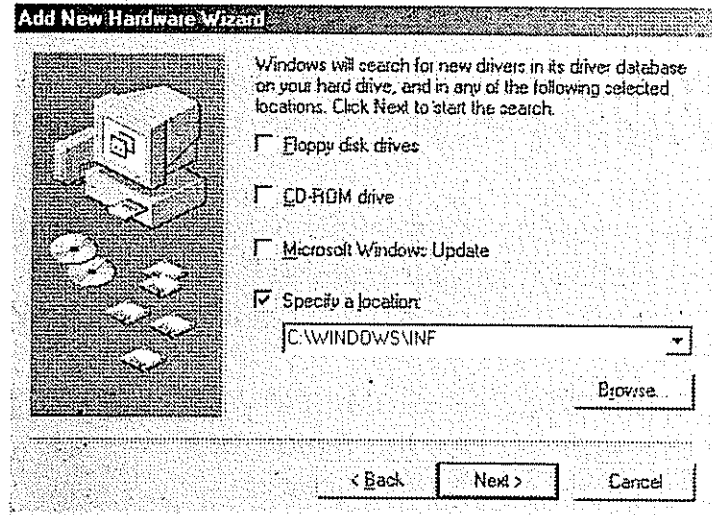


Perform the following steps to install the driver.

1. Click [Next].



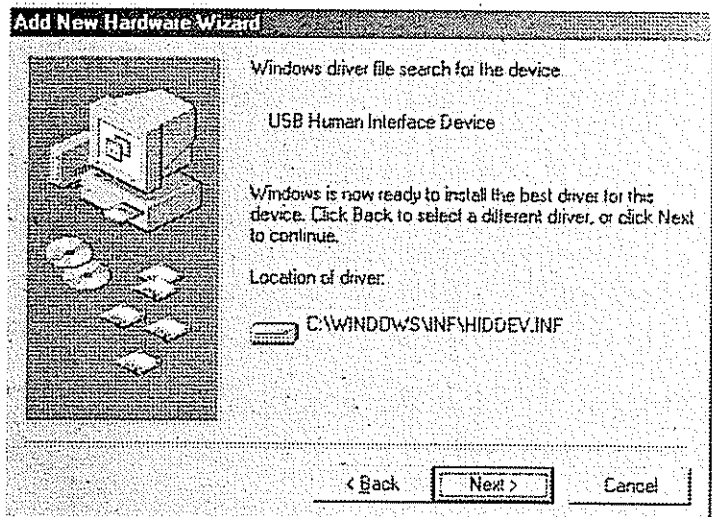
2. Click [Next].



3. You do not have to perform the [Specify a location] operation. Click [Next] to start the search for the driver.

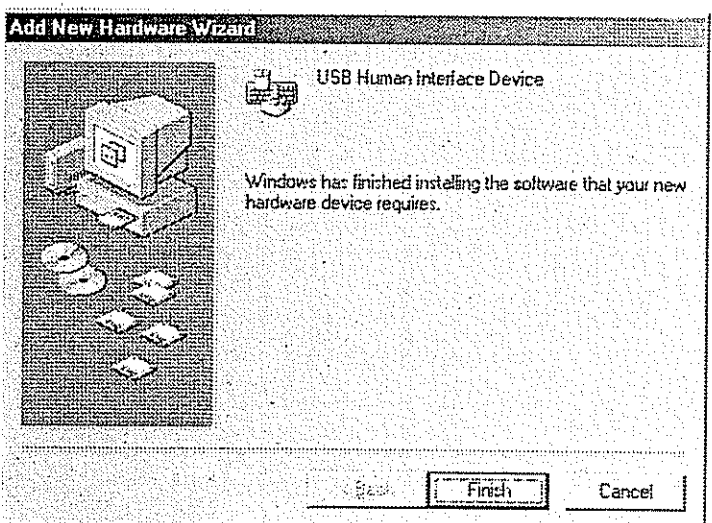
Important!

If the USB driver is not located on your computer's hard disk, the installer will ask you for the Windows 98 CD-ROM. Place the CD-ROM into your computer's drive, and then click [OK].



4. Click [Next].
This starts actual installation of the USB driver.
5. Click [Finish].

Windows is a registered trademark of Microsoft Corporation in the United States and other countries.



Sending Data

■ CAL Mode

In the CAL mode, you can send calculation results (display contents) to your computer. While the result you want to send is on calculator's display, press **SEND**.

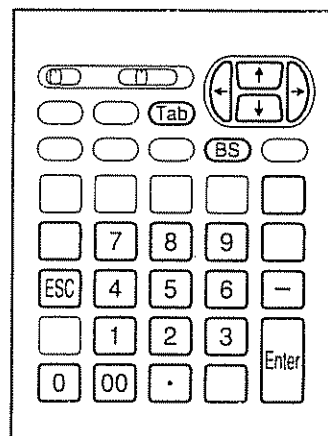
- The calculation result send operation takes some time to complete. The calculator ignores all key operations while a send operation is in progress.
- Only values are sent. The 3-digit separator mark, and **M**, **=**, and other indicators are not sent.
- The send operation cannot be performed while an error condition is present (**E** symbol displayed).
- When there is no connection between the calculator and computer, the calculation result will not appear on the computer screen.
- If the computer's keyboard keys are pressed while a calculation result send operation is in progress, the characters or codes input on the keyboard may be inserted into the calculation results.
- You cannot send time calculation data to the computer.

■ PC Key Mode

In the PC Key mode, pressing any of the keys shown nearby will sent the applicable code to the computer.

Any other key operation is ignored.

- Holding down the BS, ←, →, ↑, or ↓ key will repeat the applicable operation. Key repeat is not performed when a number key or an arithmetic operator key is held down.



Important!

- If the computer enters the screensaver mode, performing one of the following key operations will cause the computer to exit the screensaver mode.

CAL Mode: Press the **SEND** key.

PC Key Mode: Press any key supported in the PC Key mode.

Note that you cannot use a calculator operation to exit the computer's standby mode.

- Never unplug the USB wireless receiver from the computer while the calculator is sending values to the computer.
- The result of a receive operation depends on the software you are running on your computer. Check the settings on your computer before performing a send operation.
- Certain computer system configurations assign letters to the number keys of the main keyboard. When inputting values with the calculator, be sure to enable number input for your main computer keyboard. Otherwise, pressing number keys on the calculator will input the letters assigned to your computer keyboard number keys.
- Depending on the application you are using or the keyboard configuration of your computer, pressing a calculator key may input a character that is different from that marked on the key. In some cases, for example, pressing the "." key on the calculator inputs a comma instead of a decimal point.

If you can't establish a connection with the computer...

Possible Cause	Required Action
Communication settings are not correct.	Perform the procedure under "Connecting with a Computer" again.
Batteries are dead.	Perform the procedure under "Replacing the Batteries."
The calculator is too far from the receiver.	Move the calculator closer to the receiver. The calculator should be within about 110 cm from the receiver.
The computer is in one of the following modes. • Screensaver mode • Sleep mode • Standby mode	Perform the required operation on the computer to recover.
The calculator is in an error conditions (E symbol displayed)	The calculator cannot perform a send operation when an error condition exists.

- If you cannot determine the problem referring to the above, contact your nearest CASIO Service Center.

Specifications

Power Requirements:	Solar cell (built-in); 2 AAA-size alkaline batteries Lithium battery (built-in); CR2032×1
Approximate Battery life:	2 years for the 2 AAA-size alkaline batteries, based on 1 hour of operation per day.
Auto Power Off:	Power turns off automatically if no operation is performed for about 6 minutes
Operating Temperature:	0°C to 40°C
Reception Range:	Approximately 110cm * Depend on receiver setup.
Dimensions:	35(H) × 110(W) × 176.5(D)mm (13/8"H × 45/16"W × 615/16"D)
Weight:	225g (7.9oz)
Receiver Dimensions:	14(H) × 47.5(W) × 66.5(D)mm (9/16"H × 17/8"W × 25/8"D)
Receiver Weight:	22g (0.78oz)

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.

Declaration of Conformity

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.