

OPERATION MANUAL MANUAL DE OPERACION

CASIO PF-3000



English 1

Dear customer,

CONTENTS

Thank you very much for purchasing the Casio PF-3000. This is a highly portable 10-digit electronic calculator capable of storage/recall in the three separate categories, namely, telephone numbers, memorandum and various files. Please read this instruction manual carefully so that you can fully understand each of the calculator's functions and handle it properly.

**Special care should be taken not to damage the unit by bending or dropping. For example, do not carry it in your hip pocket.*

CALCULATION EXAMPLES

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Prior to Use

This calculator has been manufactured using Casio's advanced electronics technology under strict quality control conditions.

Use precautions

- This calculator is composed of precision electronic components. Never attempt to take it apart. Avoid shock such as throwing or dropping. Do not subject it to sudden temperature changes. Do not leave or store it in hot, humid or dusty places. At low temperatures the display may have a slower response or fail to light up. It will return to normal when the temperature becomes normal.
- This calculator has two operating panels. Be careful not to apply twisting or bending force when opening the case.
- Replace the batteries at least every 2 years even when the calculator is not used. Do not leave old batteries in place since the electrolyte may leak out and cause damage.
- Avoid using thinner, benzine or other volatile liquid to clean the calculator. Wipe it with a dry cloth or a cloth dipped in a neutral detergent and wrung dry.
- When strong static electricity is applied to this calculator, the display contrast may weaken or functions may not work properly. In such cases, remove and reinstall the main batteries then resume normal operation.

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Power Supply and Battery Replacement

This calculator uses two CR2032 lithium batteries for calculation/display. It also uses one CR1220 lithium battery for memory backup. If display contrast is low even when the contrast control (p. 4) adjusted to the maximum, it indicates that the batteries have become weak. Replace the batteries as soon as possible using the procedure described below. If the old batteries are not replaced, memory may be lost. Even when the calculator functions normally, replace batteries every 2 years.

How to replace the batteries:

1. Calculation/display batteries

- (1) Turn off the power switch, remove the two screws on the back of the unit and take off the back cover.
- (2) Remove screw (A) and remove the battery-retaining plate.
- (3) Take out the both old batteries.
- (4) Wipe the surfaces of the two new batteries well with a dry cloth and insert them with their (+) sides (flat sides) on top.



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- (5) Hold down the new batteries with the battery-retaining plate and replace screw (A).
- (6) Hook the back cover claw to the main body and replace the two screws.

* Be sure to replace both batteries.

2. Memory backup battery

Turn off the power switch and follow the same procedure as in the case of main battery replacement, beginning by removing screw (B). Replace this auxiliary battery every 2 years irrespective of main battery replacement.

Note:

If the main batteries for calculation/display and the auxiliary battery for memory back up are removed at the same time, the memory contents will be lost. Be sure to keep either in place.

- * Never throw the old batteries into a fire. This is very dangerous because they are likely to explode.
- * Never confuse the (+) and (-) sides of the batteries.

Store the batteries out of reach of infants. If an infant swallows a battery, consult a physician at once.

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Auto Power Off

This is an automatic power saving function for preventing wasteful power consumption that will result should you forget to turn off the power switch. The power supply is automatically cut off about 7 minutes after completion of operation.

In this case, power can be resumed by pressing the **AC** key or turning the power switch off and then on again.

- * Even when the power is off, independent memory and data memory contents are retained. However, mode designations ("IN", "EX", "SECRET", etc.) are canceled.

Contrast Adjustment

Adjustment of display contrast can be performed using the adjustment control located on the left side of the unit. Turn in the direction of the arrow to increase contrast. Turn in the opposite direction to reduce contrast. This is used to compensate contrast of the display in accordance with battery capacity or to adjust to compensate for the viewing angle.



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RAM Pack for Expansion (option)

The RAM area of this calculator's data memory is 961 characters (approximately 1 kilobyte), but the addition of the optional RAM Pack (OR-20) increases the area to 3009 characters (approximately 3 kilobytes).

How to install the RAM pack (OR-20)

<Preparation>

If the RAM pack is handled carelessly, its internal circuit may be destroyed by static electricity. Therefore, before handling the pack, touch a door knob or other metallic object to discharge the electrostatic charge contained in your body.

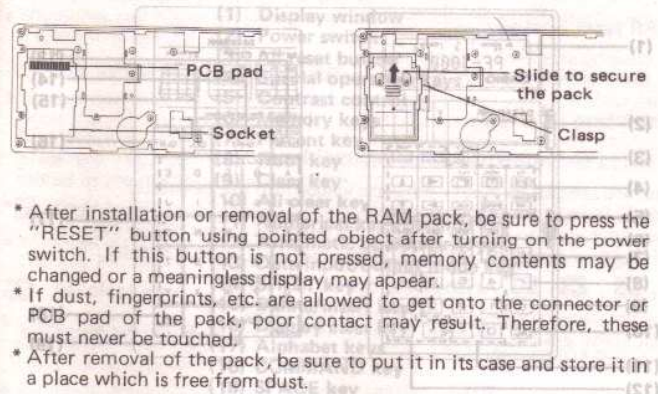
<Procedure>

- 1) Turn off the power supply. (Power switch → OFF)
- 2) Remove the two screws on the back and take off the back cover.
- 3) Move the clasp of the RAM pack downward. Insert the pack in the socket of the main body and slide it in while holding the clasp.

* Never touch the connector on PCB pad of the RAM pack.

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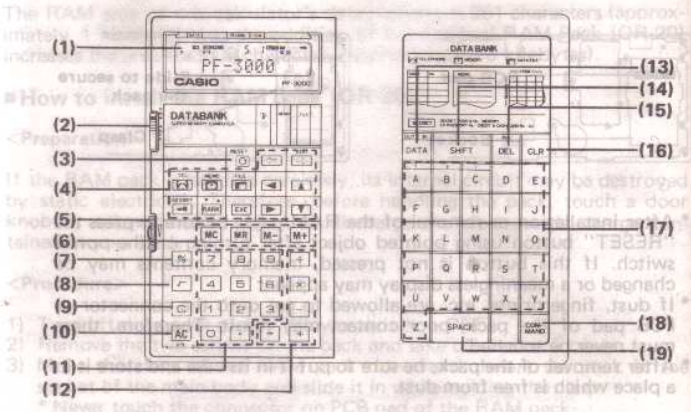
4) Screw on the back cover.



- * After installation or removal of the RAM pack, be sure to press the "RESET" button using pointed object after turning on the power switch. If this button is not pressed, memory contents may be changed or a meaningless display may appear.
- * If dust, fingerprints, etc. are allowed to get onto the connector or PCB pad of the pack, poor contact may result. Therefore, these must never be touched.
- * After removal of the pack, be sure to put it in its case and store it in a place which is free from dust.

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Each Section's Nomenclature and Operation



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Percent key

- * Press this key for percentage calculations.
- * When this key is pressed, a symbol (Page 33)

- * When a numerical value is entered, press the **%** key. When a number is entered, press the **%** key.

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- (1) Display window
- (2) Power switch
- (3) All reset button
- (4) Special operation keys
- (5) Contrast control
- (6) Memory keys
- (7) Percent key
- (8) Root key
- (9) Clear key
- (10) All clear key
- (11) Numerical keys/decimal key
- (12) Arithmetic operation keys
- (13) Data input/output mode key
- (14) SHIFT key
- (15) Delete/insert key
- (16) Display clear key
- (17) Alphabet keys
- (18) COMMAND key
- (19) SPACE key pressing

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Nomenclature

All reset button

- For clearing all memory contents.
- Use this immediately after purchase or when you want to clear all data.

Calculation keys

Numerical keys/decimal key

- These are pressed to input numerical values into the calculator.
- Press $\square$ to indicate a decimal point.
- These keys are also used when a phone number is input. (Page 18)
- The $\square$ key is displayed "0" to avoid confusion with the letter "O".

Arithmetic operation keys

- Press the necessary keys for arithmetic operation.
- When these are pressed after pressing the $\square$ key, each will be displayed as a symbol. (Page 18)

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Percent key

- Press this key for percentage calculations.
- When this key is pressed after pressing the $\square$ key, it will be displayed as a symbol. (Page 33)

Memory keys

- When a numerical value is to be input into the memory as a positive value, press the $\square$ key. When it is to be input as a negative value, press the $\square$ key. When a numerical value stored in the memory is to be displayed, press the $\square$ key. When the $\square$ key is pressed, the numerical value stored in the memory is deleted.

Clear key

- When an erroneous numerical value is input, it can be cleared by pressing this key immediately after input; also releases overflow or error check.

All clear key

- Press this key when beginning a calculation or when starting completely over again; also releases overflow or error check. The $\square$ key also overrides the auto power-off function.
- All mode designations are canceled by pressing $\square$.

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Special operation keys

Data input/output mode key

- Press this key for data storage. "IN" will be displayed and data can be input. This key is also pressed with performing data correction or deletion.
- If this key is pressed while "IN" is displayed, "IN" will disappear and the output mode will be designated. (Page 18)

Shift key

- Press this key to change to the shift-in mode.
- This will enable you to use the functions printed in blue on the keyboard. (Page 19)

Display clear key

- Press this key to clear the display.
- This key is also pressed when deleting data. (Page 56)
- After this key has been pressed, arithmetic operation key input will be displayed as symbols. (Page 18)

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Cursor keys/EDIT key

- Press these keys when the cursor position is to be shifted. When one of these keys is pressed once, a shift of one display location results. If it remains depressed, the shift is automatically repeated.
- When $\square$ and $\square$ are pressed, the cursor will return to its home position. When $\square$ and $\square$ are pressed when in the input mode, stored data can be revised or deleted. (Page 56)

Delete/insert key

- Press to delete one character to the left of the blinking cursor.
- Press this key when open one space for one character to be inserted. (Page 20)

Command key

- Each time this key is pressed in the input mode, five commands is displayed.
- When the desired command is displayed, press the $\square$ key and the command will be executed. (Page 64)
- In the output mode, one of three commands is displayed.

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Alphabet keys

- Press to input alphabetical characters.
- $\square$, $\square$, $\square$ are used to display "(", ")", or "." when in the shift-in mode.

Space key

- Press this key to insert a space.

TEL input/output key

- Press this key to input/output telephone numbers, etc. (Page 17)

MEMO input/output key

- Press this key to input/output schedule memos, etc. (Page 30)

FILE input/output key

- Press this key to input/output file names. (Page 40)

Execute key

- This key is used to input/output items in a file after inputting/outputting the same of the file by means of the $\square$ key. (Page 41)
- This key is also used to execute the command specified using the $\square$ key. (Page 64)

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Rank key

- Press this key when you want to know the overall rank order when a score, etc. has been displayed by using of the $\square$ key in the output mode. Each time it is pressed, a rank is displayed. (Page 52)

Secret key

- Press to designate/change the keyword for the secret area, or to designate/cancel the secret area. (Page 58)

Data display location keys

Classification	Key used	Data storage format	Principal uses
TEL	TEL	NAME NUMBER Max. 253 divisions	- Telephone Directory - Address book
MEMO	MEMO	MEMO Max. 253 divisions	- Appointment schedule - Train timetable - General memo
FILE	FILE	Max. 15 horizontal divisions Max. 253 vertical divisions	- Cross totaling - Score card - Test record

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Data Bank Functions

This calculator is capable of data storage and recall using a direct input system which uses the alphabet keys. Its functions can be separated into three classifications depending on the use.

Classification	Key used	Data storage format	Principal uses
TEL	TEL	NAME NUMBER Max. 253 divisions	- Telephone Directory - Address book
MEMO	MEMO	MEMO Max. 253 divisions	- Appointment schedule - Train timetable - General memo
FILE	FILE	Max. 15 horizontal divisions Max. 253 vertical divisions	- Cross totaling - Score card - Test record

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Data storage format

- A maximum of 60 characters can be stored on each line. (The cursor blinks up to the 55th character. After that, " " begins to blink.)
- The maximum number of vertical divisions in each category is 253.
- The maximum number of horizontal divisions in the case of "FILE" is 15.
- In the case of "TEL", names are automatically stored in alphabetical order.
- * 961 characters (approximately 1 kilobyte) can be stored in the three categories combined (e.g., names and telephone numbers of about 50 to 60 persons).

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(2) Direct search

Press the **TEL** key after inputting a name and the telephone number will be displayed.

Example:

What is the telephone number for HOYT, MARY?
What is the telephone number for JONES, BOB?

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(3) Initial search

When the initial letter of a stored name is input, the first stored name containing that letter is displayed. This comes in handy when the name is long or when many names are stored.

Example:

What is the telephone number for MILLS, PAUL?

* If more than one name has the same first letters, search is performed based on the alphabetical order of the second letters.

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Example: What is the telephone number for ELLIS, MIKE?

* 2 or more letters can be input to search a stored name.

Example: What is the telephone number for WATTS, GAIL?

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MEMO function

<Input procedure>
* If the initial is not stored, or if the wrong spelling is input, nothing but "NAME" will be displayed.

Example:

A telephone number can be searched for in the same way as a name by designating ITEM 2.

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(4) Record number search

When **TEL** and **TEL** are pressed after inputting a record number, the name and telephone number of that record are displayed. Record numbers are in alphabetical order. For example, record number 8 refers to SULLIVAN, ELIZABETH.

Example:

What is the name of RECORD number 8?

* When **TEL** (**TEL**) is pressed and held down, RECORD data will be displayed rapidly in sequence to the end (beginning).

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MEMO function

* This function makes possible the storage of appointment schedules, train timetables, etc. A maximum of 60 characters can be input for each data item and a maximum of 253 data items can be stored.

<Input procedure>

- (1) Designate the input mode by pressing the **TEL** key.
- (2) Press the **TEL** key then input the data.
- (3) Press the **TEL** key, and the data will be stored and the cursor will disappear. If the data exceeds 12 characters, only the first 12 characters will be displayed.
- (4) Press the **TEL** key again and "MEMO:?" will be displayed indicating readiness to accept the next data input.

Example:

Inputting a 10:00 MEETING.

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For ":", press **TEL** and **TEL**.

1 indicates first data record. Input complete.
2 Request for the next data item.

This key operation can be omitted.

* When input data contains many characters, revisions can be made without using **TEL**.

Example: 4-5 13:00 SHOPPING

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"12" is input by mistake?

Indicates that undisplayed characters exist.
Return the cursor to the home position.
Move the cursor to the point of revision.

Input the correct character.

Indicates the first data record. Input complete.

* **DEL** deletes one character to the left of the cursor and **INS** creates a blank space to the right of the cursor for insertion.

* For revision of data which has been stored by pressing the **TEL** key, see (Page 55)

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<Prior to output>

Input the following data in the same way as described on page 30. The output procedure will be described on the assumption that the above data has already been stored.

8-25 13:00 MEETING
TRAIN TIMETABLE
17: 10 30 50
18: 15 30 45
19: 10 35
20: 00 40
SALES 1700
PROFIT 30%

<Output procedure>

There are three output methods:

- (1) Sequential search
- (2) Spelling search
- (3) Record number search

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(1) Sequential search

- Use the **MEMO** key to recall the data records in the order in which they were input. ("MEMO" is displayed first.)
- When the last data record has been displayed, the display returns to the first data record.

Example: Display of SALES 1700

(Output mode)

MEMO	0
8-25 13:00 M	1
TRAIN TIMETA	2
17: 10 30 50	3
18: 15 30 45	4

First "MEMO" is displayed.
"1" indicates the first data record.

Second data record.

(2) Spelling search

Press **MEMO** after inputting the first character of the data item record which begins with that input character.

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19: 10 35	5
20: 00 40	6
SALES 1700	7

Indicates the seventh data record stored.

- The same displays can be obtained by pressing **MEMO** or **MEMO**. When **MEMO** or **MEMO** are pressed, the data will be displayed backward from the last record.
- When a data display location key is pressed after the **MEMO** key, the data item preceding (following) the record number on display will be displayed.

Example:

19: 10 35	4
19: 10 35	5

Fourth item record display cleared.

Display of fifth item record.

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18:15 30 45	4
-------------	---

- While **MEMO** or **MEMO** is depressed, the item records will be displayed rapidly in sequence to the last (first) record.

* Press **MEMO** and the data will be recalled in reverse order from the item last input.

Example: Display of train schedule between 18:00 and 18:59.

(2) Spelling search

Press **MEMO** after inputting the first character and the first data item record which begins with that input character will be displayed.

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Example: Display of TRAIN TIMETABLE

MEMO	0
TRAIN TIMETA	2

"MEMO" is displayed.

Input of initial letter.

Example: Display of train schedule between 18:00 and 18:59.

MEMO	0
18 18	
18:15 30 45	4

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- When two or more data item records have the same initial letter, the one input first will be recalled.

Example:

MEMO	0
17:00 30 50	3
18:15 30 45	4

Third item record.

- Press **MEMO** again and the nearest data item record which begins with a "1" will be displayed.

In this case, item record 4 is the next data item record which begins with a "1", so it is displayed.

* If no item containing that initial number or letter has been input, only "MEMO" will be displayed.

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(3) Record number search

Input a record number and press **MEMO** and the record having that number will be displayed. Record numbers are assigned to records sequentially as they are input.

Example:

MEMO	0
19: 10 35	5

Indicates the fifth item record.

FILE function

This function allows you to perform such tasks as sorting/totaling as well as horizontal/vertical calculation. It is convenient for storing items such as test records, etc.

<Input procedure>

Try inputting the following list using only the part within the bold frame.

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GRADES

	1	2	3	4	5 (ITEM)
0	NAME	ENGLISH	MATH	SCIENCE	SUM TOTAL = 12+13+14
1	WILLIAMS	70	100	50	(220)
2	GILBERT	80	50	70	(200)
3	ANDERSON	90	75	60	(225)
4	WHITLOCK	60	30	80	(170)
5	TOTAL	(300)	(255)	(260)	(815)

(RECORD)

- (1) Designate the input mode (indicated by "IN" on the display).

IN

- (2) Press the **FILE** key. The file name will be requested.

Input the file name.
FILE ?
GRADES

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(3) When you input the file name, the unit will request ITEM 1.

(4) Input of ITEM 1. (In this case the NAME)

(1) Press **ITEM** to input ITEM.
 (2) Press **RECORD** to input ITEM.
 (3) Designate the input mode as follows.
 (4) Press **FILE** to input ITEM.

NAME	ITEM	SCORE
ENGLISH	ITEM3?	0.3
MATH	ITEM4?	0.4
SCIENCE	ITEM5?	0.5

This function is used for inputting data as horizontal or vertical as well as horizontal or vertical. The data is input as horizontal or vertical. It is convenient for storing data as test records, etc.

<Input procedures>
 Try inputting the following data.

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(5) Input the title and formula for ITEM 5.

2	+	1	+	3	+	1	+	4	EXE	ITEM 6 ?	NAME : ?	NAME : ?
SUM TOTAL 124										NAME : ?	NAME : ?	NAME : ?
WILLIAMS										ENGLISH : ?	ENGLISH : ?	ENGLISH : ?
70										MATH : ?	MATH : ?	MATH : ?
100										SCIENCE : ?	SCIENCE : ?	SCIENCE : ?
50										NAME : ?	NAME : ?	NAME : ?
(6) Input the next name.										GILBERT	ENGLISH : ?	ENGLISH : ?
Continue inputting names and scores in sequence through the WHITLOCK										80	NAME : ?	NAME : ?

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(7) After data input is complete, input TOTAL.

TOTAL NAME: ?

This marks end of data input.

Note:

- At the point of SUM TOTAL, as a result of the mathematical expression, the values within parentheses are calculated automatically. By using the TOTAL function, the values contained within brackets are calculated automatically. However, these values are not stored but automatically calculated and displayed in the output mode. Refer to the output procedure. (Page 47)
- Whenever the TOTAL and SUM TOTAL functions are used, if the amount of data for RECORD and ITEM is great, in a situation where a series of calculations are being performed, sometimes there is a time lapse before the answer is displayed. At such times, the word "BUSY" will appear in the upper right of the display. After a few seconds, normal calculation can be continued.

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3. ITEM and RECORD insertion is possible. This is done by displaying the ITEM name (RECORD name) prior to which the insertion is to be made, then entering the ITEM name (RECORD name) and pressing **INS**.
For example, in order to insert "HISTORY" between "MATH" and "SUM TOTAL=I2+I3+I4", first display "SUM TOTAL=I2+I3+I4" and then input **H I S T O R Y** and press **INS**.

□ Calculation function

- As shown on page 42, by inputting a title and a mathematical expression for ITEM 5, the automatically calculated result can be displayed.

SUM TOTAL = I2 + I3 + I4

Title	Mathematical expression (means ITEM2 + ITEM3 + ITEM4)
-------	---

(Don't forget the equal sign)

- Only the title appears in the output mode.
- For the mathematical expression, any of the normally used mathematical operations can be performed.
- Calculations can be performed in the same sequence as the written mathematical expression.

☐ **Total function**

- By inputting "TOTAL" as the last ITEM, you can automatically request a vertical total of the items from ITEM 2 on.
The input of anything other than "TOTAL" will produce no results.
- * Up to 14 files can be created, with a maximum of 253 vertical divisions and a maximum of 15 horizontal divisions.
(However, within the memory capacity.)

<Output procedure>

There are three output methods:

- | | |
|--------------------------|--|
| (1) Sequential search | |
| (2) Direct search | |
| (3) Record number search | |

(1) Sequential search

- By pressing the **F4** key, a consecutive search for the file name is made.
- After the recalled file name has been displayed, the data can be recalled in sequence by pressing one of the four data display location keys for the proper direction.

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Example: Recall the list on page 40. If the `next` key is pressed consecutively, a

The screenshot shows a data entry interface with a table of student scores. Annotations point to various elements:

- FILE 1**: Points to the top header, indicating the file name.
- RECORD 0, ITEM 1**: Points to the 'NAME' header, indicating the record and item numbers.
- Indicates items in horizontal order**: Points to the column headers (ENGLISH, MATH, SCIENCE), indicating the order of items.
- The ITEM title, and not the formula, is displayed.**: Points to the 'SUM TOTAL' header, indicating that the title is shown instead of a formula.
- English score for WILLIAMS is displayed.**: Points to the score '70' in the 'ENGLISH' column for the student 'WILLIAMS', indicating that the specific score is displayed.

FILE	NAME	ENGLISH	MATH	SCIENCE	SUM TOTAL
	WILLIAMS	70			
	100				

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Example: Recall the list on page 40.

- Using the formula stored at the time of input, horizontal calculation is automatically displayed.

There are three output methods: HTAM, 4

- (1) Sequential search
- (2) Direct search
- TOTAL**

Using the TOTAL function, vertical

-
- 11) Sequential search
- By pressing the **Enter** key.
 - After the recalled file is displayed, pressing the **Enter** key again will display the next file in the proper direction.

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- * After pressing the **AL** key, if the **AL** key is pressed consecutively, a consecutive search of the data in ITEM 1 only can be performed.

- * By using the data display location keys the data in the desired location can be recalled as shown in the figure below.

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TOTAL 103830HOL

Deletion is complete. The contents of the next ITEM are then displayed.

- * In the case of FILE, if ITEM 1 is deleted, all horizontal data for that ITEM is also deleted.
- * Similarly, in the case of TEL, by the deletion of a name, that person's telephone number is automatically deleted.
- * Deletion or insertion of characters is performed using DEL, INS, and CLR keys.

■ SECRET function

When it is undesirable for stored data to become known to others, it can be stored in a special secret area with a keyword attached. This is an information protection function used so that people who do not know the keyword cannot see the contents of this data.

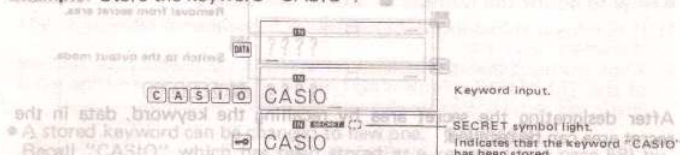
<How to store and change the secret keyword>

A keyword can be stored or changed at any time.

- 1) Select the input mode ("IN" mode).
- 2) Input the keyword containing from 1 to 60 letters.
- 3) Press the $\square$ key.

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Example: Store the keyword "CASIO".

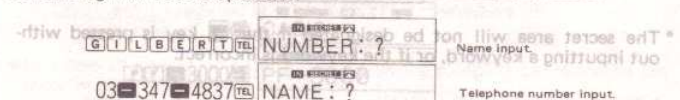


After this operation, the keyword becomes "CASIO".

- After storing a keyword to designate a secret area, data can be input into that area using the TEL, MEMO, and FILE keys, etc.

Example: Store the telephone number for GILBERT in the secret area.

Continuing from above operation

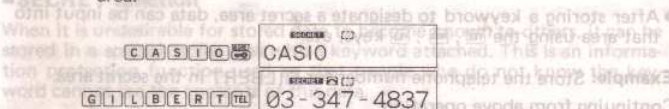


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After designating the secret area by recalling the keyword, data in the secret area can be recalled.

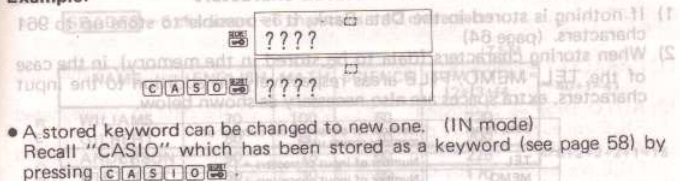
Example: Recalling the telephone number for GILBERT in the secret area.



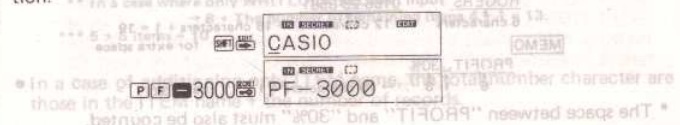
- * The secret area will not be designated if the $\square$ key is pressed without inputting a keyword, or if the keyword is incorrect.

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Example:



Change the keyword from "CASIO" to "PF-3000" using the EDIT function.



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■ How to count the number of stored characters

- 1) If nothing is stored in the Data Bank, it is possible to store up to 961 characters. (page 64)
- 2) When storing characters (data to be stored in the memory), in the case of the TEL, MEMO, FILE areas respectively, in addition to the input characters, extra spaces are also necessary as shown below.

Data Type	Method for obtaining the number of memory spaces used
TEL	Number of input characters + 1
MEMO	Number of input characters + 1
FILE	Number of characters for file name + 6
	Data characters + 1
	• Formula → Number of characters input + 1
	• TOTAL → 5 + number of items

Example: TEL

ROGERS 0166-23-8581-37
6 characters → 12 characters + 1 = 19
MEMO CASIO
PROFIT 30%
6 1 3 → 10 characters + 1 = 11 characters

- * The space between "PROFIT" and "30%" must also be counted.

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FILE CAPACITY command

GRADES → 6 characters + 6 characters = 12 characters

NAME	ENGLISH	MATH	SCIENCE	SUM TOTAL = 12+13+14
WILLIAMS	70	100	50	220
GILBERT	80	50	70	200
ANDERSON	90	75	60	225
WHITLOCK	60	30	80	170
**TOTAL	300	255	260	815

- * In this case, since 225 has not been input, it is not included in the number of characters.
- * In a case where only WHITLOCK has been input → 8 + The number of remaining items 4 + 1 = 13.
- * 5 + 5 items = 10

- In a case of adding only ITEM name, the total number character are those in the ITEM name + the number of records.

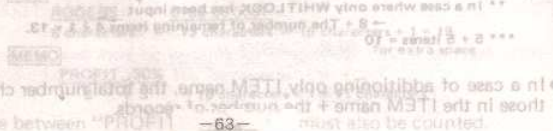
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■ COMMAND function

The five COMMAND functions are as follows:

- (1) **CAPACITY command:** Indicates the number of characters in the Data Bank plus the number of characters being used.
- (2) **AUTO DISP → command:** TEL, MEMO, or the data of a designated FILE are automatically displayed in the → direction.
- (3) **AUTO DISP ↓ command:** TEL, MEMO, or the data of a designated FILE are automatically displayed in the ↓ direction.
- (4) **AUTO INPUT → command:** Automatically designated the input sequence in the → direction at the time of input in the case of files only.
- (5) **AUTO INPUT ↓ command:** Automatically designates the input sequence in the ↓ direction at the time of input in the case of files only.

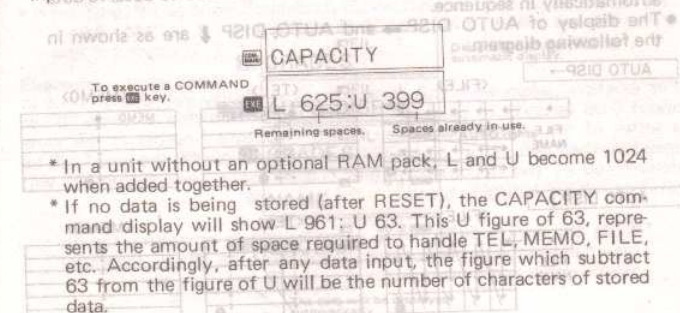
Example:



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(1) CAPACITY command

- Displays the number of character storage space remaining in the Data Bank and that in use. This is useful for knowing how much data can be input. This command can be used either in the input or output mode.

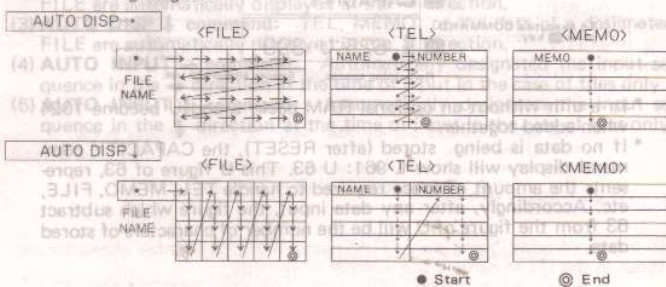


- * In a unit without an optional RAM pack, L and U become 1024 when added together.
- * If no data is being stored (after RESET), the CAPACITY command display will show L 961: U 63. This 'U' figure of 63, represents the amount of space required to handle TEL, MEMO, FILE, etc. Accordingly, after any data input, the figure which subtract 63 from the figure of U will be the number of characters of stored data.

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(2) AUTO DISP → command AUTO DISP ↓ command

- Other than the keys used to change display locations of TEL, MEMO, or the contents of a file, these commands can be used to observe data automatically in sequence.
- The display of AUTO DISP → and AUTO DISP ↓ are as shown in the following diagram:



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- (2) * By inputting n ($n = 1$ through 9) prior to pressing the Δ key, the display speed can be changed. The following table lists the display speeds. (Here speed time is approximate.)

n	1	2	3	4	5	6	7	8	9
Speed (sec.)	0.18	0.24	0.37	0.55	0.79	1.16	1.7	2.56	3.84

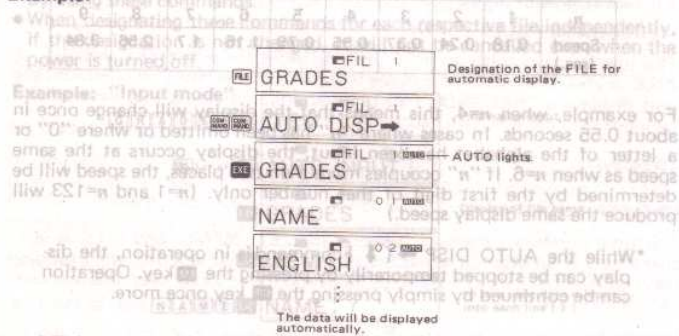
For example, when $n=4$, this means that the display will change once in about 0.55 seconds. In cases where " n " has been omitted or where "0" or a letter of the alphabet has been input, the display occurs at the same speed as when $n=6$. If " n " occupies more than two places, the speed will be determined by the first digit of that number only. ($n=1$ and $n=123$ will produce the same display speed.)

- * While the AUTO DISP → (↓) command is in operation, the display can be stopped temporarily by pressing the Δ key. Operation can be continued by simply pressing the Δ key once more.

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- * These commands can be used either in the input or output mode.

Example:



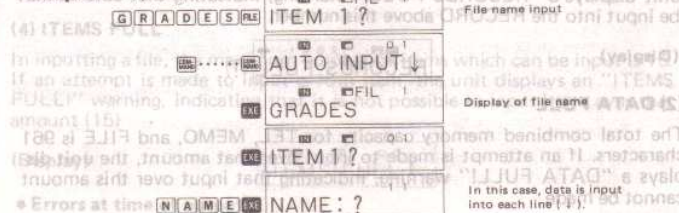
* This command is valid for the FILE function only.

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(3) AUTO INPUT → command AUTO INPUT ↓ command

- In cases where it is necessary to input data into each vertical or horizontal line when creating a file, this data can be input automatically in sequence by using these commands.
- When designating these commands for each respective file independently, if the designation is not changed, it will not be cancelled even when the power is turned off.

Example: "Input mode"



* This command is valid for the FILE function only.

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Data input/output errors

Errors sometimes occur in the Data Bank at the time of input/output.

Errors at time of input

(1) RECORDS FULL

The maximum number of RECORD divisions for either TEL, MEMO, or FILE is 253. If an attempt is made to input a 254th RECORD division, the unit displays a "RECORDS FULL!" warning, indicating that data cannot be input into the RECORD above this number.

(Display)

RECORDS FULL!

(2) DATA FULL

The total combined memory capacity for TEL, MEMO, and FILE is 961 characters. If an attempt is made to input over that amount, the unit displays a "DATA FULL!" warning, indicating that input over this amount cannot be made.

(Display)

DATA FULL!

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(3) FILES FULL

In inputting files, the maximum number of files, both those for the SECRET area, and those not designated for the SECRET area is 14. If an attempt is made to input over that amount, the unit displays a "FILES FULL!" warning, indicating that inputting files over that amount cannot be done.

(Display)

FILES FULL!

(4) ITEMS FULL

In inputting a file, the maximum number of items which can be input is 15. If an attempt is made to input a 16th item, the unit displays an "ITEMS FULL!" warning, indicating that it is not possible to input items over that amount (15).

(Display)

ITEMS FULL!

Errors at time of output

In the case of output of file data, errors made at the time of output occur only with respect to data requested by the unit.

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- Whenever calculation results exceed 10 columns.
- Whenever the calculation formula is outside the fixed parameters.

* In a case where there are letters within the formula.

Example: $ABC = 123 + D$
 $ABC = 123 + 456$

These are treated as letters.

* In a case where an unused item number is used.

Example: If 16 is input at a time when 11 to 15 are being used.
 $ABC = 12 + 16 \times 10$

- Whenever data are not input into the position of an item number being used in the formula.
- Whenever a formula input into an ITEM number contains that ITEM number.

Example: $ABC = 15 \times 10$ is input into ITEM 5.

- For the TOTAL function, when the result contains 10 or more digits or no data has been input.

(Display)

E.

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Calculation Function

If a calculation contains an excessive number of digits, "E" will be displayed and further calculation cannot be made.

Prior to beginning calculation

- Calculation can be performed in both the input as well as the output mode.
- When beginning calculation, press the Δ key and verify that the display shows 0.
- Calculation does not affect the Data Bank.
- Calculation results can be input into the Data Bank and can be used for Data Bank calculation.

Corrections

- If a numerical key is erroneously pressed, press Δ immediately then press the correct numerical key and continue the calculation.
- If a calculation instruction key ($+$, $-$, $\times$, $\div$) is erroneously pressed, press the correct instruction key and continue.

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■ Error check

If a calculation contains an excessive number of digits, "E" will be displayed and further calculation cannot be made (error check).

■ Error occurs:

1. When the integer portion of the intermediate or final result exceeds 10 digits. In this event, the numerical value displayed along with the "E" is the approximate answer with the decimal point shown 10 positions to the left of the actual decimal point.
2. When the integer portion in the independent memory exceeds 10 digits. In this event, the numerical value just prior to the overflow will remain. To recall it, press $\square$ after releasing the error check by pressing $\square$.
3. When a calculation in which a value is divided by zero is performed such as $6 \div 0 =$.

* In the event of an error check, press $\square$ to continue the calculation or press $\square$ to restart.

Specifications

■ Model: PF-3000

■ Calculator

Functions: Four basic calculations, constants, memory calculation, percentage calculation including add-ons/discounts and mark-ups, square roots and various other calculations.

Number of digits: 10

Memory: Independent memory, 10 digits

Decimal system: Full-floating with underflow

Error check: Indicated by the "E" sign, locking the calculator.

■ Data Bank

Functions: TEL, MEMO, FILE storage/recall, RANK function, SECRET function, COMMAND function, EDIT function.

Memory capacity: 961 characters (3009 with optional RAM pack).

Data input capability: TEL, maximum 253 data items.

MEMO, maximum 253 data items.

FILE, maximum 14 files.

(Each file has a capacity of 15 horizontal items and 253 vertical items.)

* However, within the memory capacity.

Read-out: 12-digit dot matrix display (liquid crystal).

Main component: C-MOS-LSI

Power source: Calculation/display $\rightarrow$ 2 lithium batteries (CR2032)

Memory protection $\rightarrow$ 1 lithium battery (CR1220)

Power consumption: 0.02W

Battery life: Main power source - approximately 350 hours

(continuous use)

Memory protection battery - approximately 2 years

Auto power off: After approximately 7 minutes

Ambient temperature range: $0^{\circ}\text{C} - 40^{\circ}\text{C}$ ($32^{\circ}\text{F} - 104^{\circ}\text{F}$)

Dimensions: 9.4mmH x 171.5mmW x 140.5mmD

(3/8"H x 6-3/4"W x 5-1/2"D) open

12.1mmH x 84mmW x 140.5mmD

(1/2"H x 3-3/8"W x 5-1/2"D) closed

Weight: 140 g (4.9 oz) including batteries.

Options: RAM pack (OR-20)