

# Program Editor

In this view you can enter or edit a program in a convenient way. To show it, press the [ F ] [ P/R ] keys in the calculator's keyboard or select "Program Editor" in the "Program" button in the Main menu.

The screenshot shows the 'Program Editor' window with the following components and callouts:

- Close the view:** Points to the 'Close' button at the top left.
- Save Program and close the view:** Points to the 'Save' button at the top right.
- Action Menu:** Points to the 'Name: Leasing-12C-P054' field.
- Current program line:** Points to line 005 in the program listing.
- Program Listing:** Points to the 'Keys' column of the program listing.
- Dynamic Keypad to enter program instructions:** Points to the numeric keypad at the bottom.

#	Code	Keys
001	43, 8	G END
002	42, 34	F clear FIN
003	45, 2	RCL 2
004	11	n
005	45, 4	RCL 4
006	12	i
007	45, 8	RCL 8
008	45, 9	RCL 9
009	45, 7	RCL 7
010	40	+
011	1	1
012	45, 48, 1	RCL . 1

Dynamic Keypad buttons:

- Red buttons: Add, insert, Clear, Delete
- Function row: n, i, PV, PMT, FV
- Math row: Y^X, 1/X, %T, Δ%, %
- Row 1: R/S, SST, R↓, X⇌Y, CLX
- Row 2: CHS, 7, 8, 9, ÷
- Row 3: EEX, 4, 5, 6, ×
- Row 4: STO, 1, 2, 3, -
- Row 5: RCL, 0, ., Σ+, +
- Bottom row: ENTER, F, G

[  <b>Name ▶</b> ]	Program Editor action menu.
 New	Clears the editor to enter a new program.
 Name...	Shows a pop-up view to name the program.
> Load	Shows a submenu to load a previously saved program.
 Delete	Delete the current program list.
[ <b>Close</b> ]	Close the Editor.
[ <b>Save</b> ]	Save the program to the calculator and close the editor.
[ <b>Add</b> ]	Add a new program line at the end of the listing.
[ <b>Delete</b> ]	Remove the selected program line from the listing.
[ <b>Insert</b> ]	Insert a new program line before the selected one.
[ <b>Clear</b> ]	Clears the selected program line.

### Example 1:

Create a program that calculates Tax and Total of an entry Amount for each product for a distributor's invoice. Also calculates the total of all entries on the invoice assuming a tax rate of 6.75%.

### Solution:

We will use the Storage registers to store the tax rate ( $R_0$ ) and the total net amount ( $R_1$ ), total tax ( $R_2$ ) and total amount ( $R_3$ ) of the invoice.

First, open the **Program Editor** touching the [ **F** ] [ **P/R** ] keys in the calculator's keyboard or, select the "New" option in the options's "Program" menu. Then, enter the program following the next sequence:

Keys	Comment
[  <b>Name ▶</b> ]  New	Clears the program listing and let it ready to enter key-strokes.
[ <b>x</b> ]	Multiply the quantity and price of the current item.
[ <b>G</b> ] [ <b>PSE</b> ]	Pause to show the item amount in the display.

Keys	Comment
[ STO ] [ + ] [ 1 ]	Add the item amount to Storage Register 1.
[ RCL ] [ 0 ]	Recall the tax rate.
[ % ]	Calculates the Tax to add to the item.
[ G ] [ PSE ]	Pause to show the tax in the display.
[ STO ] [ + ] [ 2 ]	Add the item tax to Storage Register 2.
[ + ]	Calculate the item total amount.
[ STO ] [ + ] [ 3 ]	Add the total amount to Storage Register 3.
[  Name ► ]  Name...	Shows a Name entry form to name the program.
Type "Help-Ex-1" and [ Done ]	Name the program "Help-Ex-1".

After the above sequence, the Program Editor view should be as follow:

Program Editor		
Close		Name: Help-Ex-1 ►
		Save
#	Code	Keys
001	20	x
002	43, 31	G PSE
003	44, 40, 1	STO + 1
004	45, 0	RCL 0
005	25	%
006	43, 31	G PSE
007	44, 40, 2	STO + 2
008	40	+
009	44, 40, 3	STO + 3
010	43, 33, 000	G GTO 0 0 0

Finally, tap the [ **Save** ] button to close the view and save the program to the calculator's program memory and get ready to use it.

Now that we have the above program in the calculator's program memory,

Calculate the total of an invoice with a 6.75% of tax rate:

Product 1 : 13 items at \$68.5 each

Product 2 : 18 items at \$72.9 each

Product 3 : 24 items at \$85.0 each

Product 4 : 5 items at \$345.0 each

### Solution:

Keys	Comment
<b>[ f ] [ Σ ]</b>	Clears the storage registers 1 to 6
<b>6.75 [ STO ] [ 0 ]</b>	Store the tax rate in register 0.
<b>13 [ Enter ] 68.5 [ R/S ]</b>	Input the Product 1 data and run the program: <b>890.50</b> for item amount <b>60.11</b> for tax amount <b>950.61</b> for total amount
<b>18 [ Enter ] 72.9 [ R/S ]</b>	Input the Product 2 data and run the program: <b>1,312.20</b> for item amount <b>88.57</b> for tax amount <b>1,400.77</b> for total amount
<b>24 [ Enter ] 85.0 [ R/S ]</b>	Input the Product 3 data and run the program: <b>2,040.00</b> for item amount <b>137.70</b> for tax amount <b>2,177.70</b> for total amount
<b>5 [ Enter ] 345.0 [ R/S ]</b>	Input the Product 4 data and run the program: <b>1,725.00</b> for item amount <b>116.44</b> for tax amount <b>1,841.44</b> for total amount
<b>[ RCL ] [ 1 ] [ RCL ] [ 2 ] [ RCL ] [ 3 ]</b>	Sum of the items amount. <b>Result = 5,967.70</b> Sum of the tax amount. <b>Result = 402.82</b> Sum of the total amount. <b>Result = 6,370.52</b>

### Example 2: Variable Tax Rate Program

The following program calculates income tax and the net value applying different tax rates depending on the test value stored in R<sub>0</sub>. If the value is less than or equal to a test value, the tax rate stored in R<sub>1</sub> is used, otherwise the tax rate stored in R<sub>2</sub> is used.

Enter the program in the calculator following the next sequence:

Keystrokes	Description
[ f ] [ P / R ]	Shows the <b>Program Editor</b> view
[ f ] [ clr.PRG ]	Clear the current program.
[ RCL ] 0	Recall the test amount for comparison.
[ X $\leftrightarrow$ Y ]	Swap stack-X and stack-Y
[ g ] [ X $\leq$ Y ]	Compare the entered value with the test value.
[ g ] [ GTO ] 007	Execution continues at line 007 if the entered value is less than or equal to the test value.
[ RCL ] 2	Recall the tax rate for amounts greater than the test value.
[ g ] [ GTO ] 008	Jump to line 008 to calculate the tax amount
[ RCL ] 1	Recall the tax rate for amounts less than or equal to the test value
[ % ]	Calculate the tax amount applying the proper tax rate to the entered value.
[ g ] [ PSE ]	Pause execution to display the tax amount
[ - ]	Subtract tax amount from the entered amount and program stops showing the net amount.
[  Name ► ] [  Name... ]	Shows a Name entry form to name the program.
Type "Help-Ex-2" and [ Done ]	Name the program "Help-Ex-2".

After the above sequence, the Program Editor view should be as follow:

Program Editor		
Close		Name: Help-Ex-2 ▶
Save		
#	Code	Keys
001	45, 0	RCL 0
002	34	X $\leftrightarrow$ Y
003	43, 34	G X $\leq$ Y?
004	43, 33, 007	G GTO 0 0 7
005	45, 2	RCL 2
006	43, 33, 008	G GTO 0 0 8
007	45, 1	RCL 1
008	25	%
009	43, 31	G PSE
010	30	-
011	43, 33, 000	G GTO 0 0 0

Finally, tap the [ **Save** ] button to close the view and save the program to the calculator's program memory and get ready to use it.

If the test value is \$20,000; the tax rate for values less than or equal to test value is 20%, and for greater values is 25%. What is the tax amount and the net amount for \$15,000; \$20,000 and \$25,000 incomes?

Keys	Comment
20000 [ <b>STO</b> ] [ 0 ] 20 [ <b>STO</b> ] [ 1 ] 25 [ <b>STO</b> ] [ 2 ]	Store the test value in register 0. Store the tax rate to apply for value $\leq$ test value. Store tax rate to apply for value $>$ test value.
Type 15000 [ <b>R/S</b> ]	Input the income value and run the program: <b>3,000.00</b> pause to show the tax amount <b>12,000.00</b> program stop showing the net amount
Type 20000 [ <b>R/S</b> ]	Input the income value and run the program: <b>4,000.00</b> pause to show the tax amount <b>16,000.00</b> program stop showing the net amount
Type 25000 [ <b>R/S</b> ]	Input the income value and run the program: <b>6,250.00</b> pause to show the tax amount <b>18,750.00</b> program stop showing the net amount