Infinity Softworks

powerOne™
For the Palm Computing® Platform

1,250,000,000.
powerOne™ by Infinity Softworks

| Business | Math | General |

powerOne Tip
Bill: **45.**
Tip%: ▼ 15%
Tip Amount: **6.75**
Total: **51.75**
#People: **1.**
Ttl/Person: **51.75**

CPT

[Clear...] [Done] www.infinitys

powerOne Markup/Discount
Method: ▼ Discount
Orig. Price: **29.99**
Percent%: **25.** CPT
New Price: **23.992** CPT

[Clear...] [Done] www.infinitysw.com

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General Information

This section helps you get started using your powerOne™ calculator.

The powerOne™ calculator

Welcome to the powerOne calculator. The powerOne calculator is a colorful and easy-to-use calculator that gives you access to both basic mathematics as well as more advanced functions. This special edition includes computations for sales tax, percent change, markup/discount, tip calculation, and calendar date computations. In addition, it includes a calculation log to review past mathematical functions. To access the worksheets, select either the "Business" or "General" button and the worksheet to use. The powerOne calculator also includes more advanced math function by selecting the Math button.

The Display

The powerOne calculator has three functional areas: the main calculator, the worksheets, and the input screen. The main and input screens serve as calculators with arithmetic in the standard mathematical format $(3 + 4 = 7)$. The worksheets perform computations, working with the input screen to enter variables and perform arithmetic.

The Palm™ Device

This manual references certain objects of the Palm™ device itself:

Applications button

Calculator button

Menu button

Power button (green button)
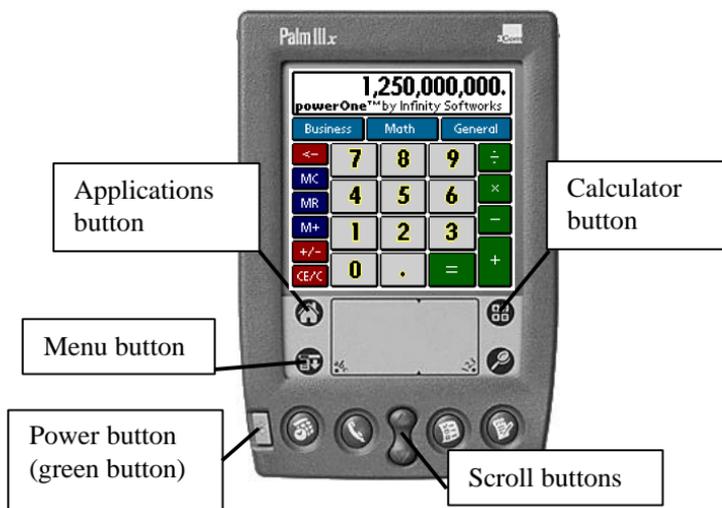
Scroll buttons

In addition, this manual will refer to scroll arrows, scroll buttons, and scroll bars. Scroll arrows appear in the lower, right-hand corner of the screen or in the pop-up list. Scroll bars appear next to the data to be scrolled. And scroll buttons are shown in the graphic above.

Setting the Default Calculator

The first time powerOne is run, it is set as the default calculator. In other words, once you run the application once, it will automatically set itself to run when the Calculator button is selected. To set something else to be the default calculator, tap the Applications button and choose Prefs. From the pull-down list in the upper, right-hand corner, select Buttons. Next to the icon that looks like a calculator, select the correct application from the pop-up list.

Removing the powerOne™ Calculator

To remove the powerOne calculator from the Palm device, select the Applications button then the Menu button. Choose Delete from the App menu. Finally, select pwrOne™ in the list and finally the "Delete…" button. Select Done to return to the Applications screen. The calculator button will reset to the built-in calculator.

Number Ranges

The powerOne calculator allows for entry of numbers up to 10 digits. Numbers larger than this will display in scientific notation (i.e., 1.234e13).

Performing Arithmetic

The main powerOne calculator serves as a standard calculator, which functions in standard (algebraic) input mode. Entries made in the main calculator tie to the input screen, and vice-a-versa. Functions are available either on the screen or via the "math" button. Selecting "Business" or "General" button displays the list of available worksheets. Other buttons function as standard calculator buttons. In addition, there are menus. Reach the menu by tapping the menu button to the lower, left of the Graffiti® input area.
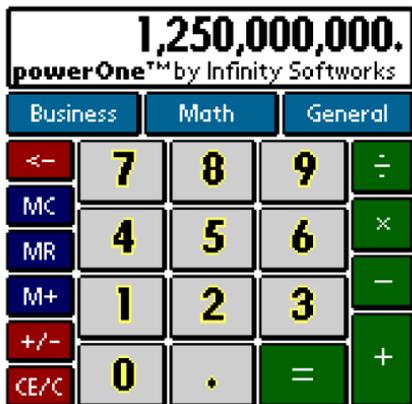
Entering Numbers (0-9; ./,; +/–; ←; CE/C)

To enter a number, tap the corresponding keypad button (0-9, decimal point, or sign).

To enter -356.96, for instance, do the following:

Key	Display	Comments
C/CE	0	Tap twice to clear the display
3	3	
5	35	
6	356	
. or ,	356.	Depends on the number format
9	356.9	
6	356.96	
+/−	-356.96	

The decimal point can either be displayed as a period or as a comma. This depends on the number format mode used. See your Palm device owner's manual for more details.

The following are number entry functions:

Operation	Example	Comments
Number	0-9	Number pad items
Decimal point	. or ,	Depends on the number format
Sign	+/−	

The **Backspace** (←) button allows for editing of numbers as they are entered. Tapping this button removes the last number entered (i.e., 54.32 becomes 54.3).

Tapping the **Clear Entry/Clear** (CE/C) button once clears only the currently entered number. Tapping it a second time clears the entire computation.

Mathematics (One- and Two-Variable Functions)

The powerOne calculator can be used only in standard input mode. Standard input mode math is performed by alternating chains of values and operations.

Math functions are either one or two variable. Two-variable math, such as add, subtract, multiply and divide, take two variables to compute. One-variable functions, such as square root and reciprocal (1/x), need only one variable to calculate.

Two-Variable Math

To perform a computation using standard input mode, enter alternating values and functions. For example, if we wanted to perform 27 + 3 x 8.5:

Key	Display	Comments
C/CE	0	Tap twice to clear the display
27	27	
+	27.	
3	3	
x	30.	
8.5	8.5	
=	255.	

The following are two-variable examples:

Operation		Example	Keystroke	Answer
Addition		8 + 3	8 [+] 3 [=]	11.00
Subtraction		8 – 3	8 [–] 3 [=]	5.00
Multiplication		8 x 3	8 [x] 3 [=]	24.00
Division		8 ÷ 3	8 [÷] 3 [=]	2.67
Power	♦	3^4	3 [power] 4 [=]	81.00
Percent	♦	15% of 350	350 [x] 15 [%x] [=]	52.50
Percent ratio	♦	9 is what percent of 25	9 [÷] 25 [%x] [=]	36.00
Percent add-on	♦	22.95 + 6% sales tax	22.95 [+] 6 [%x] [=]	24.33
Percent discount	♦	39.99 less 10%	39.99 [–] 10 [%x] [=]	35.99

♦ these functions are available by selecting the "Math" button.

One-Variable Math

The powerOne calculator provides many functions that can be used as one-variable math functions, including square root, x-squared, and reciprocal. These functions use only the value in the main view window. For example, to calculate the square root of 8:

Key	Display	Comments
C/CE		Tap twice to clear the display
8	8	

square root	2.83

The following are one-variable math examples:

Operation		Example	Keystroke	Answer
Reciprocal	♦	1/5	5 [1/x]	0.20
Square	♦	8^2	8 [x^2]	64.00
Square root	♦	$\sqrt{8}$	8[square root]	2.83

♦ these functions are available by selecting the "Math" button.

Memory

The powerOne calculator has one memory location, plus the system clipboard. To access a memory location, use the **store** (M+), **recall** (MR), and **clear** (MC) functions. To access the system clipboard, use **copy** and **paste** from the edit menu.

To store to a memory location, enter the number and select the M+ button. This will add the entered number to the amount already in the memory location. It will also display the "M" indicator in the view window. To recall a value, select the MR button:

Function	Key
Clear the memory location	MC
Store 34.5	34.5 [M+]
Recall the contents of the memory location	[MR]

To store to the system clipboard, enter the number then select copy from the edit menu. This allows numbers to be moved from one

application to another. Recall information from the system clipboard by selecting paste from the edit menu.

Memory Arithmetic
The powerOne calculator lets you easily add a string of subtotals together in the memory location. To do this, enter the computation and select M+. Then enter the next computation and M+ again. For example, to calculate (3 x 5) + (8 x 2):

Key	Display	Comments
Memory Clear	0.	Tap this to clear the memory location
3 x 5 =	15.	
M+	15.	Stores the subtotal to memory
8 x 2 =	16.	
M+	16.	Stores the subtotal to memory
MR	31.	Recalls the total

Input Screen

In the worksheets, the powerOne calculator uses the input screen to enter variables and perform computations. The input screen is similar to the main screen and


Performing Arithmetic
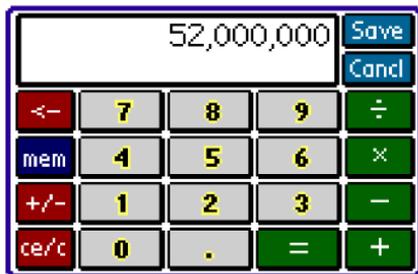
information entered in the main screen is the same as information in the input screen. For example, if a computation is begun in the main screen, it can be completed in the input screen.

For more information on the input screen, see the section on Using the Worksheets.

Menus

The main and input screens have two menus. Access the menus by selecting the menu button to the left of the Graffiti input area.

Edit Options	
Copy	✓C
Paste	✓P
Graffiti Help	✓G
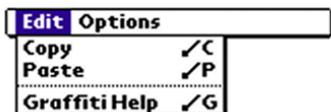
Copy and paste to the system clipboard, or use Graffiti Help to learn keystrokes. See Memory for more information.

Edit	Options	
	Error Help	✓E
	Keystroke Help	✓O
	About powerOne	
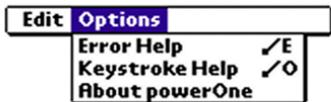
Get help with the application or product information. There is additional help as well, accessed by selecting the General button.

Using the Worksheets

The powerOne™ calculator uses worksheets to perform advanced functions. This section details general use. See the section on each worksheet for details on that specific computation. Finally, see the appendix for information on errors.
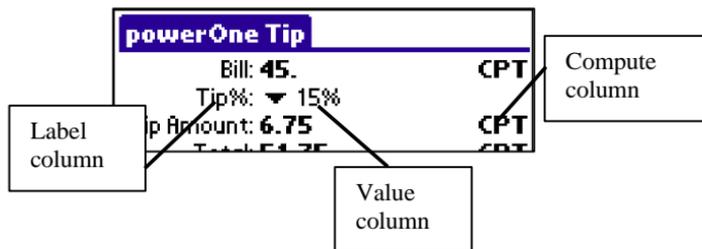
Accessing the Worksheets

To access a worksheet, select the main screen button labeled "Business" or "General" and choose the desired computation.

Worksheet Structure

All worksheets are similar in nature:
- Each worksheet has a **clear** button which sets the data back to its original state.
- To exit the worksheet, select **done**.
- Most worksheets (excluding the calculation log) contain a menu with two options: about the application and worksheet help.

The computation display for each worksheet is also similar. For most worksheets, the data is set in column form:

To enter a value, tap on the label or value column, enter it in the entry screen, and save. To compute a value, tap the "CPT" label next to the data to compute.
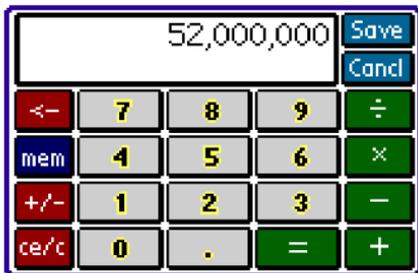
Entering Data

In the worksheets, data is entered using the input screen, date selector or time selector, depending on the type of data requested. The date and time selectors are standard to the Palm Computing® platform, used in applications such as the datebook and to do list. The input screen is native to the powerOne calculator.

Input Screen
The input screen is used to enter values in the worksheets. All of the math functions available on the main calculator are also available in the input screen.

When a value is selected, that value appears in the input screen. The keyed function buttons work similar to those in the main calculator. The only difference is memory, which is accessed by selecting the "mem" button and choosing the function from the pop-up list. See Performing Arithmetic for help with understanding mathematical functions.

To exit the input screen, tap **save** to store the view window's value for worksheet calculations or tap **cancel** ("Cancl") to disregard the value. Some variables cannot be saved. In this case, the worksheet disregards the value whether save or cancel is selected. Remember, the computations done in the worksheet itself are automatically saved for further use within the input screen or in the main calculator. Save and cancel are specifically used for saving to the worksheet itself.

Sales Tax

The sales tax worksheet computes tax before or after sales tax, or the tax rate itself.

- **Before Tax**: the amount before taxes.
- **Tax Rate%**: the tax rate as a percentage.
- **After Tax**: the amount after taxes.

powerOne Sales Tax
Before Tax: **66.3507109** CPT
Tax Rate%: **5.5** CPT
After Tax: **70.** CPT

[Clear...] [Done] www.infinitysw.com

Example: The local tax rate is 5.5% You have a maximum of $70 to spend on clothing. What is the maximum amount of clothing you can purchase and still have enough to pay for the tax?

Key	Entry	Comments
Clear…		Sets the display to its default values
Tax Rate%	5.5	
After Tax	70	

Compute the before tax amount by selecting "CPT" on the same line. You can have a maximum of $66.35 worth of clothing.

Calendar

The calendar worksheet computes both days between dates and a date based on a given number of days.

- **Date 1**: the date to compute from.
- **Date 2**: the date to compute to.
- **Difference**: the difference in number of days.

Example: Vacation begins on October 15, 1999. Today is August 18, 1999. How many days until vacation?

Key	Entry	Comments
Clear…		Sets the display to its default values
Date 1	8/18/99	Enter August 18, 1999
Date 2	10/15/99	Enter October 15, 1999

Compute the difference in days by selecting "CPT" on the same line. There are 58 days until vacation.

Markup/Discount

The markup/discount worksheet computes sales changes.

- **Method**: whether you are computing a markup or a discount.
- **Orig Price**: the original price of the product.
- **Percent%**: the percentage to markup or discount expressed as a percent.
- **New Price**: the new price of the product after the market or discount.

powerOne Markup/Discount
Method: ▼ Discount
Orig. Price: **29.99**
Percent%: **25.**   **CPT**
New Price: **23.992**   **CPT**

(Clear...) (Done) www.infinitysw.com

Example: The clothing is sold at a 25% discount. What is the current price if the original price is $29.99?

Key	Entry	Comments
Clear…		Sets the display to its default values
Method	Discount	
Orig Price	29.99	
Percent%	25	

Compute the price by selecting "CPT" on the same line. The selling price is $23.99.

Percent Change

This worksheet performs percentage change computations with either one or more compounding periods:

- **Old**: the old value.
- **New**: the new value.
- **Change%**: the percentage changed. For example, an 8.125% change would be entered as "8.125". A positive value represents an increase while a negative one represents a decrease.
- **Periods**: the number of periods.

Example: Over 4 years, sales increased from $45 million to $115 million. The industry average is 20% increase per year. How does your company compare?

Key	Entry	Comments
Clear…		Sets the display to its default values
Old	45,000,000	
New	115,000,000	
Periods	4	

Compute the percent change by selecting "CPT" on the Change%
line. Sales have increased 26.44% per year, comparing favorably
to the 20% industry pace.

Percent Change

Tip

The tip calculator computes tip, total bills, and performs bill splitting functions.

- **Bill**: the bill amount before tip.
- **Tip%**: the tip percentage chosen from the pop-up list.
- **Tip Amount**: the tip amount.
- **Total**: the total amount including the tip.
- **#People**: the number of people paying for the meal.
- **Ttl/Person**: the total per person, split evenly among the people paying for the meal.

The tip computation calculates from the top, down. In other words, to calculate the tip amount, it will first attempt to use Bill, then Total, and finally Ttl/Person to calculate. It knows to use a value when the variable is not zero. If Bill is 0, for example, it will use Total.

Example: At a team business lunch, your four person team (including you) goes to lunch. The total bill is $45. With a 15% tip, what should each person contribute?

Key	Entry	Comments
Clear…		Sets the display to its default values
Bill	45	
Tip%	15	

Compute the total per person (Ttl/Person) by selecting "CPT" on the same line. Each person should contribute $12.94.

Example: For the example above, the company will pay the entire bill instead. What is the tip and the total bill?
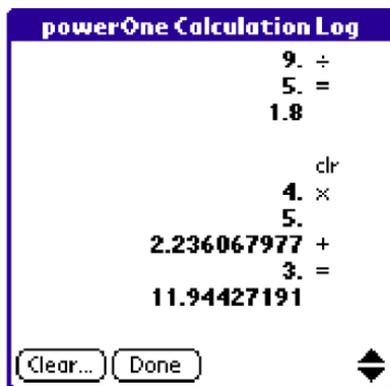
Compute the tip amount by selecting "CPT" on the same line. The tip comes to $6.75. Compute the total bill by selecting "CPT" on its line. The total bill is $51.75.

Calculation Log

The calculation log displays computations as they are entered, which makes double-checking easier.

For standard input mode, the calculations are displayed as they are entered.

To scroll the list, choose the scroll arrows or scroll buttons.

powerOne Calculation Log

```
              9. ÷
              5. =
            1.8

                   clr
              4. ×
              5.
   2.236067977 +
              3. =
   11.94427191
```

[Clear...] [Done]

Appendix

The appendix contains additional information pertinent to the use of the powerOne calculator.

Graffiti® Input

The powerOne calculator supports Graffiti® entry for both the main and input screens. To learn how to draw each character, see your Palm device user manual.

Character	Function	Character	Function
0	Zero	\<back\> \<space\>	Backspace
1	One	c	C/CE
2	Two	+	Add
3	Three	–	Subtract
4	Four	x	Multiply
5	Five	/	Divide
6	Six	=	Equals
7	Seven	m	Memory Clear
8	Eight	r	Memory Recall
9	Nine	s	Memory Store
. ,	Decimal Pt	p	Sign

Note that the Graffiti shift indicator is in the view window both on the main and input screens. Also, certain characters are not allowed. These keystrokes and their accompanying shift indicator are ignored. For instance, capital letters are not supported so the Graffiti shift indicator for shift or caps lock is not displayed.

Error Cases

Error messages appear when calculations cannot be successfully completed. This section documents the cases where error messages occur:

Mathematical Errors
- Overflow or underflow occurs in the calculation.
- Divide by 0.
- Reciprocal when $x = 0$.
- Square root when $x < 0$.
- Power when $y = 0$ and $x \leq 0$ or $y < 0$ and x is not an integer.

Calendar
- Calculating a date when difference is greater than allowed reports the maximum date or the same date.
- General math errors.

Markup/Discount
- Calculating percent when cost $= 0$.
- Calculating new price when percent is -100.

- General math errors.

Sales Tax
- Calculating before tax when tax rate = -100.
- Calculating tax rate when before tax = 0.
- General math errors.

Tip
- General math errors.

Percent Change
- General math errors.

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The powerOne calculator does not support system find functionality.

Appendix