

# *f(x)* **Pocket Solver User Guide**

Version 1.3  
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## *Installation*

Pocket Solver is supplied as a single self-extracting (.exe) file called 'Pocket-Solver.exe'. Installation is performed from a desktop PC that must have HPC Explorer (Windows CE 1.0) or Windows CE Services (Windows CE 2.0) already installed. These were supplied on CDROM with your handheld PC.

Double click the 'Pocket-Solver.exe' file to start the install. You will be automatically guided through the stages of the install using a set of dialogs.

The stages of the install are as follows:

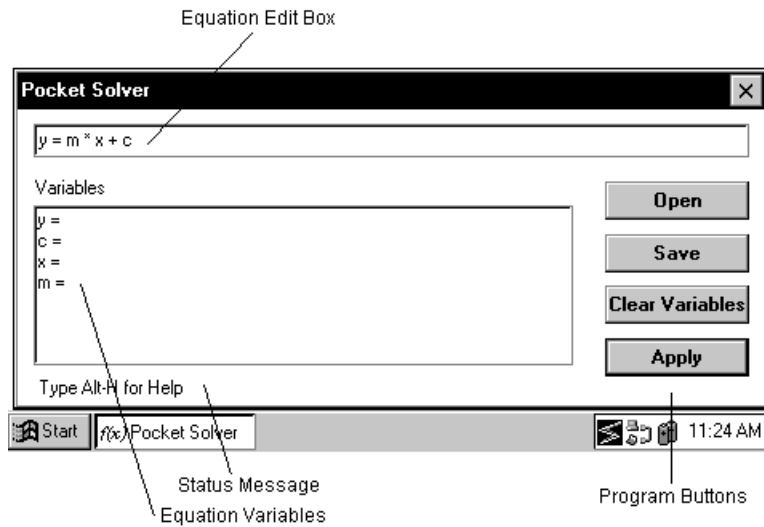
1. Extraction of the setup files from the self extracting file
2. Copying of the setup files to your PC
3. Connection to your handheld PC
4. Copying of files to your handheld PC

At the end of the install you should see a new Pocket Solver icon on the desktop of your handheld PC. Double click it to start the program.

You can uninstall the product at any time by selecting 'Remove Programs' in the control panel of your handheld PC. Any solver (.sol) files you have created will remain on your handheld PC for use should you reinstall the product in the future.

## Overview

Pocket Solver allows you to solve equations on your handheld PC. Typing an equation into the equation edit box and pressing the **Apply** button causes the equation's variables to be listed. Entering values for all but one of the variables causes the value for the unknown variable to be calculated.



Using the program buttons, it's possible to save and load frequently used equations. The status message line at the bottom of the screen changes to show you the current solver equation.

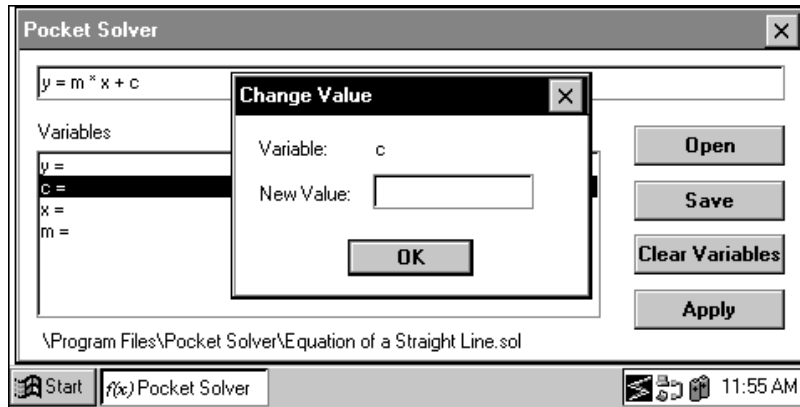
## *Entering an Equation*

After starting Pocket Solver type in an equation and tap the **Apply** button. Use the following guidelines when forming your equation:

- The equation **must** contain an = sign  
e.g.  $\text{area} = \text{length} * \text{breadth}$
- The equation does **not** have to have one variable on its left hand side  
e.g.  $\text{area} / \text{length} = \text{breadth}$
- Variables may be alphanumeric  
e.g.  $z1 = y1 + x1$
- Variables may be repeated  
e.g.  $x\_squared\_plus\_one = x * x + 1$
- Variables may contain underscores to make them clearer to read  
e.g.  $\text{triangle\_area} = 0.5 * \text{triangle\_base} * \text{triangle\_height}$
- Variables may be up to 30 characters in length  
e.g.  $a\_very\_very\_very\_very\_long\_variable = x + 1$
- All variables are converted to lower case  
e.g.  $y = M * x + c + X$ , yields the variables y, m, x and c
- Parentheses may be used to force the ordering of the calculation  
e.g.  $y = (x + 1) * (z + 2)$
- Enter large numbers in the form of a mantissa and exponent  
e.g.  $23e20$  or  $23e-20$  or  $23*10^20$
- The solver will only work with unknown variables that lie in the range  $-3.4e38$  to  $+3.4e38$
- Do not use any of the following reserved words for variables:  
sine, cos, tan, asin, acos, atan, sinh, cosh, tanh, exp, log, log10, sqrt, floor, ceil, abs, deg, rad
- Pocket Solver will only solve for equations having one value for the unknown  
e.g. Pocket Solver will not solve quadratics

## Setting the Variables

After typing in an equation and tapping the **Apply** button, the variables will be displayed. Double tap a variable to change its value.



Enter a value into the dialog box or leave it empty to set it to 'unknown' Tap on **OK** to set the value. When only one unknown variable remains the equation will be solved. Change any set variable to perform a re-calculation.

## Saving and Loading an Equation

After typing in an equation, it may be saved. Tap the **Save** button. Enter a filename and Tap **OK**.

A previously saved equation may be loaded into Pocket Solver. Tap the **Open** button. Select a solver filename and Tap **OK**.

Double tapping a solver (.sol) file will also start Pocket Solver.

## *Function Reference*

The following operations and functions are supported:

+	Addition
-	Subtraction
/	Division
*	Multiplication
^	Raised to the power
%	Remainder
sine(x)	Sine in radians
cos(x)	Cosine in radians
tan(x)	Tangent in radians
asin(x)	Arcsine in radians
acos(x)	Arccosine in radians
atan(x)	Arctangent in radians
sinh(x)	Hyperbolic sine
cosh(x)	Hyperbolic cosine
tanh(x)	Hyperbolic tangent
exp(x)	e raised to the power
log(x)	Logarithm
log10(x)	Logarithm to base 10
sqrt()	Square root
floor()	Round down
ceil()	Round up
abs()	Absolute value
deg()	Convert to degrees
rad()	Convert to radians

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