

SCIENTIFIC and ENGINEERING TOOL  
For LOTUS (R) 1-2-3

WELCOME

This program is an easy to use, completely menu driven program designed for the use of the Lotus 1-2-3 user who deals with number crunching and likes the way Lotus works. If you know Lotus 1-2-3 you already know this program. Because this tool operates with 1-2-3 style command, menus, formulas, etc. you can start working without having to learn a new program, so your investment in in 1-2-3 training is preserved and enhanced.

The program includes a sophisticated programmable calculator and solver which can do:

1. Simple arithmetic
2. Functions editing (programming) and functions calculations
3. Physical units definition and conversion
4. Integration and Differentiation of functions and data tables
5. Editing and calculating statistic functions on list of numbers
6. Frequency distribution and normal distribution
7. Curve fitting (4 types)
8. Root finding (including non-linear equations)
9. Matrix operations
10. Simultaneous linear equation

Statistical functions and any other functions and units are user programmable. Therefore this program can become the user's custom scientific handbook. The user can program thousands of functions: from one variable functions to seven variables functions and by splitting functions of higher number of variables to groups of functions of seven variables and less, to solve more complicated problems.

Integration and differentiation is done on functions inserted from the keyboard or on data tables imported as a text file. The program enables a graph of the function before and after integration or differentiation and allows saving the numeric data tables and the graphs for later use.

The distribution functions are build-in with the program and are working on a list of numbers inserted from the keyboard or imported as a text file. These functions produce a graph of the distribution and allows the saving of the graph as a .PIC file and the data as a text file for later use.

The program already includes a large number of common used functions and units and the user can edit them or add as much as he likes. The user can use this program to keep track of his spreadsheets, and by using a keyword instead of a function he can activate a whole spreadsheet.

Because this program was written in LOTUS macro language, when the user retrieves another program this program erases itself and leaves the full memory for the new spreadsheet. The user can create a small macro in his spreadsheets which will retrieve this program automatically when quitting.

## 2. GETTING STARTED

To start this program start LOTUS 1-2-3 and use the File/Retrieve command to retrieve the file ATOOL.WK1, the program will automatically start and the next screen will appear:

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Calculator Solver Format Help Other  
Enter calculator mode

|   | A     | B | C            | D | E      |
|---|-------|---|--------------|---|--------|
| 1 | ===== |   |              |   |        |
| 2 | Units |   | Output/Input |   | Memory |
| 3 | ===== |   |              |   |        |
| 4 | None  |   | 0.00         |   | 0.00   |
| 5 | ===== |   |              |   |        |

Scientific & Engineering Tool

For Lotus 1-2-3 Users

Developed and Written by Israel Kehaty

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The first menu is:

Calculator Solver Format Quit Help

<Q>uit

Press <Q> to get the next menu:

No Quit\_123 Program\_quit Save Dos

<S>ave

This is an important feature, it gives the user the way to save all the new formulas, units and statistic functions he created. This option updates the formulas file on the disk (FORMULAS.WK1).