

SPREADSHEET KEYBOARD MACROS

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This article introduces accountants to an efficient method of preparing and maintaining spreadsheets. Spreadsheet macros save time and effort in performing repetitive tasks. While using Lotus 1-2-3 as an example in this article, the macros are applicable, with possible slight modification, to any spreadsheet programs.

A spreadsheet macro can do many tasks. This article is concerned with macros that type keystrokes. Mastering keyboard macros is the first step in learning to create menus and custom prompt lines as well as use looping and branching techniques.

Keyboard macros can automate almost any spreadsheet task, such as printing, formatting, or adjusting a worksheet. A keyboard macro is a series of keystrokes that the user chooses which are executed automatically whenever the user runs (invokes) the macro. Macros are a quick and easy way to execute tasks that you repeat often, or tasks which you repeat less often but are tedious. Generally, if you repeat a task five times in one spreadsheet, that task is a candidate for a macro.

Keyboard macros consist of a series of sequentially executed keystrokes. They are executed exactly as stated each time the macro is invoked. Invoking a macro requires only two keystrokes rather than the many required to manually execute a task. A keyboard macro is stored as part of a worksheet and can be invoked whenever that worksheet is in memory.

For example, in planning a worksheet, you decide that it will contain eight

columns that display dates. These columns need to be widened to 10 spaces and a cell in that column needs to be formatted for dates. Additionally, each of these date columns will be separated by two regular columns. To manually prepare this worksheet, you would go to the first cell that would contain a date and type **/ Worksheet Column Set-Width 10 Enter**. Next, you would format the cell for dates by typing **/ Range Format Date 2 Enter**. Finally, you would need to press the right arrow key three times to move the cell pointer to the next date column. This process requires 16 keystrokes repeated eight times, for a total of 128 keystrokes. Once created on a worksheet, a macro can do the same thing with two keystrokes repeated eight times, for a total of 16 keystrokes.

Creating and Using Keyboard Macros

A keyboard macro can:

- Type a combination of letters, numbers, and symbols;
- Enter formulae and @functions;
- Press Esc, Tab, Enter, Insert, and Delete keys;
- Move the cell pointer around the worksheet or use the cell pointer to highlight a range;
- Select menu items from a menu;
- Select a file name or range name; and
- Activate most of Lotus 1-2-3's standard keys, including EDIT, WINDOW, and CALC.

The keystrokes in a macro are represented by a single character key (**/WCS**) or by key names enclosed in curly braces **{UP}**. The single character keystrokes represent the typewriter keys on the keyboard and are identical to the keys they represent. The only exception to this is the Enter key. The single character which represents the Enter key is the tilde (~). The Lotus 1-2-3 standard keys such as the Function keys, Backspace, Home, and pointer-movement keys are represented by characters typed within curly braces { }. Some special key indicators have an optional abbreviation, such as {r} for right arrow move-

ment. You can type special key indicators in either uppercase or lowercase letters. The only keys that you cannot include in a macro are Lotus 1-2-3's HELP, STEP and COMPOSE keys and the computer's Ctrl, Alt, Shift, Caps Lock, Num Lock, Scroll Lock, and Print Screen. The macro representations for many of the Lotus 1-2-3 standard keys and pointer-movement keys are shown in *Table 1*.

A macro consists of a column of cells containing labels made up of the keyboard keystrokes. As you may remember, a label normally begins with an apostrophe. If the first keystroke in the cell is a letter, Lotus 1-2-3 will insert the apostrophe automatically. If, on the other hand, the first keystroke in a cell is a digit, slash (/), one of the numeric characters (+, #, @, -, or \$), or one of the label characters (' ^ or "), you must begin the entry by typing a label-prefix character, normally the apostrophe.

The column of cells that comprise the macro must begin with a cell that is in a named range. To name a range for a macro, move the cell pointer to the first (top) cell in the column of cells. Next, give the range a name by using the sequence: **/ Range Name Create**. Lotus 1-2-3 will ask for a name. Macro names always consist of a backslash (\) followed by a single letter (for example, **\W**). Ensure that you use the backslash (\) and not the slash (/). Lotus 1-2-3 does not distinguish between uppercase and lowercase letters in macro range names.

To invoke the macro, hold the **Alt** key down while pressing the letter that is the macro's name. You do not type the backslash to invoke the macro. When you invoke the macro, the keystrokes that make up the column of labels are then executed.

When the macro is invoked, it executes each keystroke in the top cell, then moves to the next lower cell and executes those keystrokes. It continues to execute keystrokes in a cell until there are no more keystrokes in that cell, then it moves to the cell immediately below. If the cell below is blank, the macro stops. The macro will continue as long as

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