

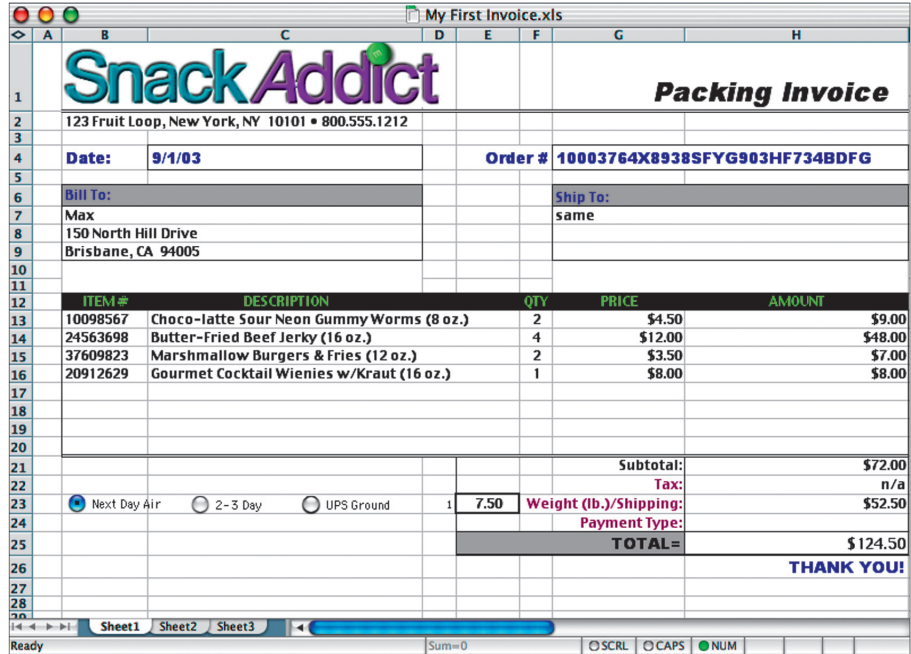
Add Automated Functions to Excel

by Kris Fong and Helen Bradley



WHAT YOU NEED

- Microsoft Excel (\$399 stand alone or \$499 as part of Office v.X, www.microsoft.com/mac)
- *MacAddict* Invoice Example worksheet or your own invoice



You can figure out shipping costs the hard way (break out the calculator!) or simply make Excel crunch the numbers for you.



Even the most dogmatic anti-Microsoft militants agree that that company's ubiquitous spreadsheet application, Excel, is a powerful tool when managing business activities. After all, how else can you expect to demonstrate your cost-cutting skills and get that promotion?

While most Excelians know their way around a spreadsheet,

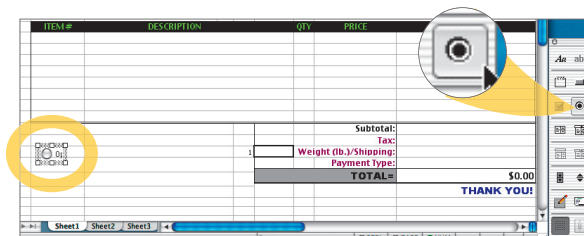
many may not know that you can use the Forms toolbar to embed custom tools directly into worksheets to automate data entries. By using this toolbar, you can create items such as buttons and drop-down menus to perform one-click entries. Here's how to add these two functions to your worksheets.

Create One-Click Option Entries

If you're tired of entering repetitive data into a spreadsheet, Excel enables you to add option buttons—what everyone but Microsoft calls radio buttons—to a worksheet that will automatically fill in repetitive information. For example, if you're in retail, you can add option buttons linked to nonvariable info such as shipping rates, so that you only have to enter variable information—such as how many one-pound bags of Butter-Fried Beef Jerky your customer wants to buy. Excel then automatically calculates and enters the shipping rates into a specific cell that you designate in your invoice.

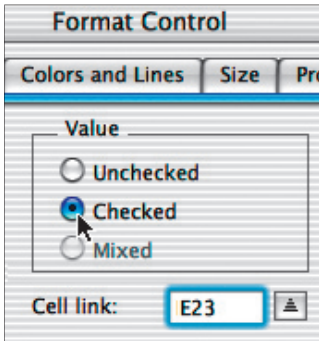
Sound complicated? It's not. Here's how to do it—just follow along using either our mock shipping invoice (on the Disc) or a document of your own.

1 Add an Option Button Open our invoice (or your own) in Excel. From the View menu, select Toolbars > Forms to display the Forms toolbar. Click the option button tool (the white circle with a black dot), and then click in the worksheet to place the button. If you need to move the button, you can drag it around with your mouse or use the arrow keys to fine-tune its placement (Shift-Option-click to select a button if it's not already highlighted).



To keep things tidy, we created our first shipping option button on the same line where our invoice's shipping cost appears.

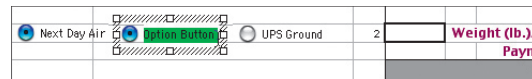
2 Set the Control Clicking the button won't do you any good unless you assign a function to it. To do so, Control-click the button and select Format Control from the contextual menu. In the dialog that appears, click the Control tab. We want cell E23 to hold the shipping-code data, so type *E23* in the Cell Link field. Then choose Checked from the Value options, and click OK. With the button still highlighted, click and drag either of the bounding box's right corners until the button name is fully displayed. Then highlight the default text (*option button*) and type *Next Day Air* to replace it.



box's right corners until the button name is fully displayed. Then highlight the default text (*option button*) and type *Next Day Air* to replace it.

Typing *E23* in the Cell Link field links our option button to this cell.

3 Create More Options Because we also want options for 2-3 Day and UPS Ground shipping, we need more buttons. Luckily, all of the buttons you subsequently create will automatically inherit the same formatting as the first. Therefore, just select the option button tool and click in the worksheet next to the first button to create a second button. Repeat to create a third. With the third button still highlighted, expand its bounding box to display its default name, and rename it as *UPS Ground*. Then Shift-Option-click the second button to select it, expand its bounding box, and change its name to *2-3 Day*. Test the buttons by clicking each in turn (clicking one deselects the others); the value shown in cell E23 (1, 2, or 3, corresponding to the order in which you created the buttons) should change as you click each button.



Rename each option button to reflect your shipping options—one will become our 2-3 Day option.

4 Devise a Formula Now that you know your buttons are working, assign real dollar values for each choice. For example, let's say UPS charges \$7.00 per pound for Next Day Air delivery, \$5.00 per pound for 2-3 Day shipping, and \$1.50 per pound for UPS Ground. In our invoice, cell F23 contains the package weight in pounds, and cell I23 displays the total shipping costs. To create a formula that calculates the shipping cost by weight for all three options and displays the total dollar amount in cell I23, click cell I23, type `=CHOOSE(E23,7,5,1.5)*F23`, and press Return. If you have your own invoice, the formula syntax works like this: `=CHOOSE(cell number to which all buttons are linked,first button's value,second button's value,third button's value)*cell number that holds the number you're multiplying by the buttons' values`.

Subtotal:		
Tax:		
Weight (lb.)/Shipping:	=CHOOSE(E23,7,5,1.5)*F23	
Payment Type:		
TOTAL=		\$0.00
THANK YOU!		

If you use our invoice, type this formula exactly as it appears. If using your own, apply the formula to your cells accordingly.

5 Check It Out To test your formula, suppose you have a 7.5-pound package to ship Next Day Air. Click the Next Day Air button, type 7.5 in cell F23, and press Return. The shipping cost should show up as \$52.50 in cell I23. Select the 2-3 Day button; the shipping should come to \$37.50. If you select UPS Ground, you should get \$11.25.

Subtotal:		\$0.00
Tax:		n/a
7.50 Weight (lb.)/Shipping:		\$52.50
Payment Type:		
TOTAL=		\$52.50
THANK YOU!		

Wanna see the payoff? Just click a shipping option, enter a weight in cell F23, and fix your eyeballs on the cell next to Shipping.

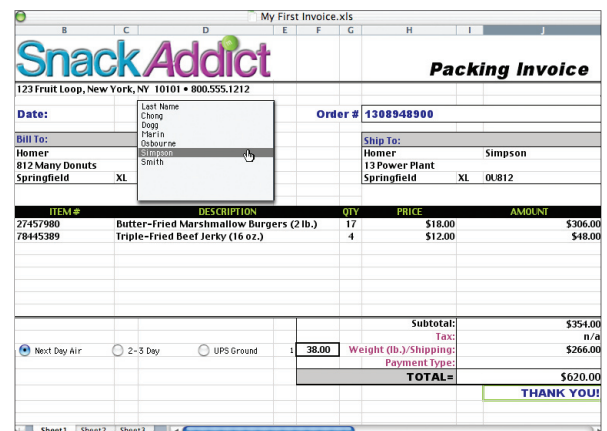
Auto-Fill Fields via a Custom Menu



WHAT YOU NEED

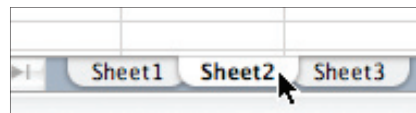
- Microsoft Excel
- MacAddict Invoice Example worksheet or your own invoice

Just as you choose items from application and Finder drop-down menus, you can add menus to your Excel worksheets for quick access to frequently used information. For example, rather than type in a customer's billing- and shipping-address info each time you ship something to them, you can simply select his or her name from a drop-down menu list and Excel will enter the shipping info for you. Here's how to create a drop-down menu and a formula that extracts customer info from a customer list.



By creating a menu, all we need to do is choose a customer from the list to auto-fill the Bill To and Ship To fields.

1 Coordinate Two Sheets You need two worksheets of data—one for your invoice and one for customer info—but you don’t need two separate files; Excel can stack together related worksheets in a single workbook. Open an invoice in Excel. At the bottom of the sheet, there are three numbered tabs that represent separate worksheets; Sheet 1 is the invoice. To create a customer list, click the Sheet 2 tab. To import contacts from an existing database, skip to step 3. If creating one from scratch, read on.



Click the Sheet 2 tab to reveal a spankin'-new worksheet just waiting for your VIP contacts.

2 Create a Customer List First create headers; in cell A1, type *Last Name*. Press the Tab key to move to cell B1 and type *First Name*. Continue tabbing and typing so that you have *Billing Address* in cell C1, *City* in D1, *State* in E1, and *Zip* in F1. Then type in all of your customer contacts starting with cell A2, which should contain the last name of the first person on your list. Don't worry about alphabetizing for now; we'll deal with that later.

	A	B	C	D	E	F
1	Last Name	First Name	Billing Address	City	State	Zip
2	Osbourne	Ozzy	666 Madman Way	Beverly Hills	CA	90210
3	Smith	Anna Nicole	1 Divorce Court	Hollywood	CA	90213
4	Dogg	Snoop	420 Spliff Street	Weed	CA	91234
5	Marin	Cheech	22 Smokey Way	San Francisco	CA	94122
6	Chong	Tommy	4 Grass Drive	Humboldt	CA	93546
7	Simpson	Homer	812 Many Donuts	Springfield		

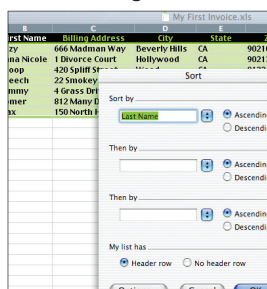
Once you create column headers, fill in each cell below them with the appropriate contact info.

3 Import Contacts If you have contacts in FileMaker or Entourage, export that data as a tab-delimited text file, open the file, select all text, copy it, and then paste it into the Excel worksheet. Delete all columns that don't contain names or parts of addresses; click the letter at the top of a column to select the entire column, and then select Delete from the Edit menu. Rearrange columns so that they fall in this order, left to right: last name, first name, street address, city, state, zip. To move a column, select it, cut it, click the column letter where you want it to appear, and select Cut Cells from the Insert menu.

	B	C	D	E	F
1	First Name	Title	Suffix	Nickname	Company
2	Kris				MacAddict
3	Owen				Owen Ink
4	Athena				Barbee Killed Kenn
5	Clay				Intel
6	Alan				Duke University
7	Lane				CNET
8	Glenn				Microsoft
9	Troy				Lucasfilm Art Dir
10	Dave				Pixar
11	Ron				The Cheeseballs

We didn't say importing contacts was going to be pretty—you may need to delete a lot of unnecessary columns.

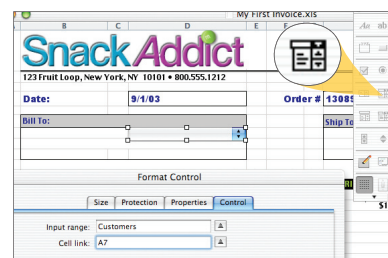
4 Add More, Arrange More Now add four more columns to hold shipping-address info. Type *Shipping Address* in G1, *City* in H1, *State* in I1, and *Zip* in J1. Then fill in your customers' shipping info accordingly (if billing and shipping are the same, just copy and paste the info between cells). If you want to change fonts, formatting, colors, or borders and shading, select Formatting Palette from the View menu and use its tools to pretty up your work. To resize a column, drag either of the separator lines flanking the column's letter header. To alphabetize by last name, click and drag down column A from cell A1 to your last entry to select.



From the Data menu, select Sort. In the dialog that appears, select Column A in the Sort By pop-up menu, then click the Ascending radio button next to it. Choose Header Row from the My List Has section, and click OK.

Use the Sort command to alphabetize your customers by last name.

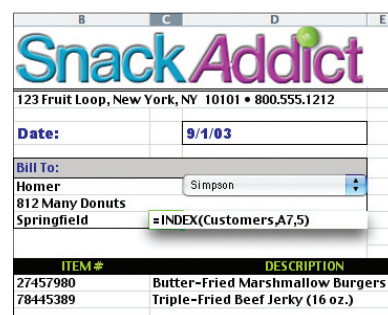
5 Create the Menu To link your menu, define your contacts list as customers. Hold down the Shift key and click the A column header and then the J column header to select all columns. From the Insert menu, select Name, and then Define. In the resulting dialog, type Customers in the box below Names In Workbook and click OK. Click the Sheet 1 tab to switch to the invoice worksheet, and from the View menu, select Toolbars > Forms to open the toolbar. Select the combo box tool and click and drag across cell D7 to draw a menu. Control-click the menu and select Format Control from the contextual menu. In the resulting dialog, type Customers in the Input Range field and type A7 in the Cell Link field. Click OK.



Then click any cell to deselect the menu, and click the menu to select a name.

Use the combo box tool to draw a drop-down menu on the invoice.

6 Automate the Details To have Excel automatically fill in all billing and shipping info, create an Index function. To display a first name to the left of the drop-down menu, click cell B7, type `=INDEX(Customers,A7,2)`, and press Return. To automate the billing address, click cell B8 and type `=INDEX(Customers,A7,3)`. Extract other chunks of data in the same manner—just alter the last number in the formula to reflect the column number of the data you want. When you're done, check your work by selecting any customer from the menu. Of course, you can also apply what you just learned to your own worksheet.



To automate address info, enter an Index formula in every affected cell.

Kris Fong and Helen Bradley wish for a Word function that would automatically generate a bio blurb. Oh, wait: `=RAND()`.