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Q&A 5 and Win 95— A Cool Combo, Part 1



DAVID E. DVORIN

Windows 95 provides greater stability and flexibility for Q&A for DOS than Windows 3.1. Find out which Windows 95 features can enhance your Q&A experience, and how to customize a Windows 95 environment for Q&A.



TODAY, as Windows 95 appears on more and more desktops, it's important to know how to make Q&A for DOS operate successfully in this modern graphical environment. In this article, I'll discuss ways to make Q&A for DOS perform at its best in Windows 95. Here in Part 1, I'll cover the special features Windows 95 offers DOS programs like Q&A, and show to how to add a Q&A start-up icon (called a *shortcut*) to your Windows 95 desktop. Next month, in Part 2, I'll take you behind the scenes, and show you how to tweak various settings to optimize the way Q&A runs in Windows 95 on your PC.

Windows 95 features for DOS programs

Windows 95 offers DOS programs like Q&A a variety of advantages. These include:

- Virtual DOS machines that increase available conventional memory and provide optional individual AUTOEXEC.BAT and CONFIG.SYS files for each DOS program.
- A special MS-DOS mode for worst-case compatibility problems.
- TrueType display fonts when running a DOS program in a window.
- A Clipboard for cutting and pasting text and data between DOS and Windows programs.
- Multitasking—having a program working in the background while you use another program.
- DOS window toolbar for easy access to features.

Most of these benefits are available only when running Q&A for DOS in what's called a DOS window. But you'll see how easy it is to switch Q&A into a DOS window to take advantage of them.

What's left of DOS?

In Windows 95, what you've always known as DOS has changed. (Notice I didn't say "died.") The portion of DOS you can't interact with has been converted to 32-bit code to increase speed and stability. However, most of the DOS commands you can run from the DOS prompt are still there. DOS command files are now stored in the C:\Windows\Command folder. (In Windows 95, directories and subdirectories are called *folders*.)

Running Q&A for DOS in Windows 95

You can run Q&A in Windows 95 two ways: *MS-DOS mode* or a *DOS window session*. MS-DOS mode is a special "backward compatibility" Windows 95 non-graphical environment designed to run errant DOS

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programs. Fortunately, Q&A isn't one of them.

A DOS window session is how most DOS programs, including Q&A, run in Windows 95. You can run a DOS session in *full-screen mode* which, for all practical purposes, is like running the program in DOS, or in a smaller *window* like any other Windows application.

Because it's best to run Q&A in a DOS window session, I'll discuss MS-DOS mode only briefly.

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All About Q&A and Windows 95

TOM MARCELLUS

If you're running Q&A 5.0 in Windows 95, or wondering about the benefits of doing so, this month's lead article is the first comprehensive treatment we've ever given the topic. **David Dvorin** covers all the bases. In Part 1, he provides an overview of the Windows 95 environment as it applies to DOS programs like Q&A. Next month, in Part 2, he'll show you how to tweak that environment to optimize the way Q&A runs in it.

Speaking of comprehensive treatments, if you're interested in all the ways you can use Userselect and XUserselect pick-lists to simplify and speed data entry, **Erika Yoxall's** article just bristles with know-how and practical examples you can use right away.

Getting lineitem reports from databases that track things like invoices, sales orders, purchase orders can be a tricky business. Not any more, though, thanks to **Jeff Nitka's** handy-dandy, once-a-month procedure you run with a macro.

An Event You Shouldn't Miss!

If you're reading this as late as Thursday, October 23, you can still make *The Quick Answer's* Q&A Masters Seminar and National Q&A User Group's Seventh Annual Bash in Savannah, Georgia, where you'll see a host of informative presentations from the Q&A Top Guns you read right here every month, including **Tom Marcellus, Mike Bell, Erika Yoxall, Bill Halpern, Gordon Meigs, John Dow, David Flaks** and **Alec Mulvey**. Treat yourself to a weekend of fun, great food, and expert assistance among your fellow Q&A enthusiasts. Through October 21, call Gale Platt at 561-482-5604. On October 22 or 23, call the Holiday Inn Midtown at 800-255-8262 and ask for Robin or Sherrie. We'd love to have y'all with us!



Does that File Exist?



Need to find out if a particular file exists while working in a database? Here's how. Add two fields to the

form—**Filespec**, for the file's full path and name, and **Check**. Program the Filespec field along these lines:

```
> If Filespec <> "" Then {  
  Check = @Shell("If exist " + Filespec  
    + " echo " + Filespec + "> C:\Filespec.txt");  
  
  Check = @Insert("C:\Filespec.txt");  
  
  If @Instr(Check, Filespec) then  
    { Clear(Check); @Msg("File found!") }  
  Else @Msg("File NOT found!") }
```

When you enter a path and filename in the Filespec field,

@Shell runs a DOS *If exist filename* command that checks to see if the file exists. If it does, the filespec is echoed (written) to a file named C:\Filespec.txt. If the file doesn't exist, a null (blank) value is written to C:\Filespec.txt.

Control returns to the Q&A program, where C:\Filespec.txt is inserted in the Check field, then compared to the Filespec field. If the two match, it means the file exists, and a message to that effect appears. Otherwise, the file wasn't found, and a message tells you so.

You can replace the @Msg commands with commands that take different actions based on whether or not the file exists. The trick works whether you're running Q&A in DOS or Windows

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The Independent Guide to Q&A Expertise

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Tom Marcellus

MS-DOS Mode

MS-DOS mode is a special Windows 95 environment designed for DOS programs that won't run in a window. There's no graphical interface—you work from a DOS prompt. The two easiest ways to access this mode are by pressing F8 during boot-up, or selecting *Restart in MS-DOS mode* when shutting down Windows 95. In this mode, you can have Windows 95 run custom *Config.sys* and *Autoexec.bat* files that accommodate the DOS program's special needs.

Q&A will run in MS-DOS mode, but it totally removes Q&A from all the potential Windows 95 offers, and turns your PC into a kind of Q&A-only box.

DOS in a window—the advantages

In Windows 95, Q&A runs best in a DOS window. In this mode, each DOS program has its own “virtual machine,” which makes Q&A think it's the only program running even though other programs might be running, too.

Windows 95 provides windowed DOS sessions with fast hard disk access via a built-in high-performance disk cache. Windows 95 also provides mouse-compatible DOS programs such as Q&A with full mouse functionality without having to load a separate mouse driver. What's more, there's no need for separate sound card drivers, CD-ROM drivers, scanner drivers, or network drivers. Windows 95 provides drivers for these services, and loads them outside the precious conventional memory area. What this means is that Q&A, previously running in DOS or

Windows 3.1 with barely enough conventional memory, might have access to more than 600K (plus Expanded memory) when properly configured in Windows 95.

Q&A running in full-screen mode looks just like it's running on a DOS-only PC. In window mode, Q&A runs in a smaller window, where it takes on some of the attributes of other Windows applications. (See Figure 1.) You can switch Q&A between full-screen and window modes by pressing Alt-Enter.

What's a Windows 95 shortcut?

Without knowing much about Windows 95, you can start Q&A by double-clicking on the QA.COM file in Explorer (Windows 95's file manager) or by clicking Start / Programs / MS-DOS Prompt, and entering QA (with the path) at the prompt. In most cases, Q&A will run fine this way, and that's all there is to it. But to customize the way Windows 95 runs Q&A, and have an icon you can click on to start Q&A, you need to create a *shortcut*.

A shortcut is like a Windows 3.1 Program Information File (PIF). But whereas a PIF was a means of running a DOS program, shortcuts can handle other “objects” such as documents, folders, or even other shortcuts. You can place a shortcut on your Windows 95 desktop (the “main” Windows 95 screen—see Figure 2) to make Q&A just a double-click away. I'll discuss creating a Q&A shortcut later. For now, let's look at the tools available when Q&A is running in a window.

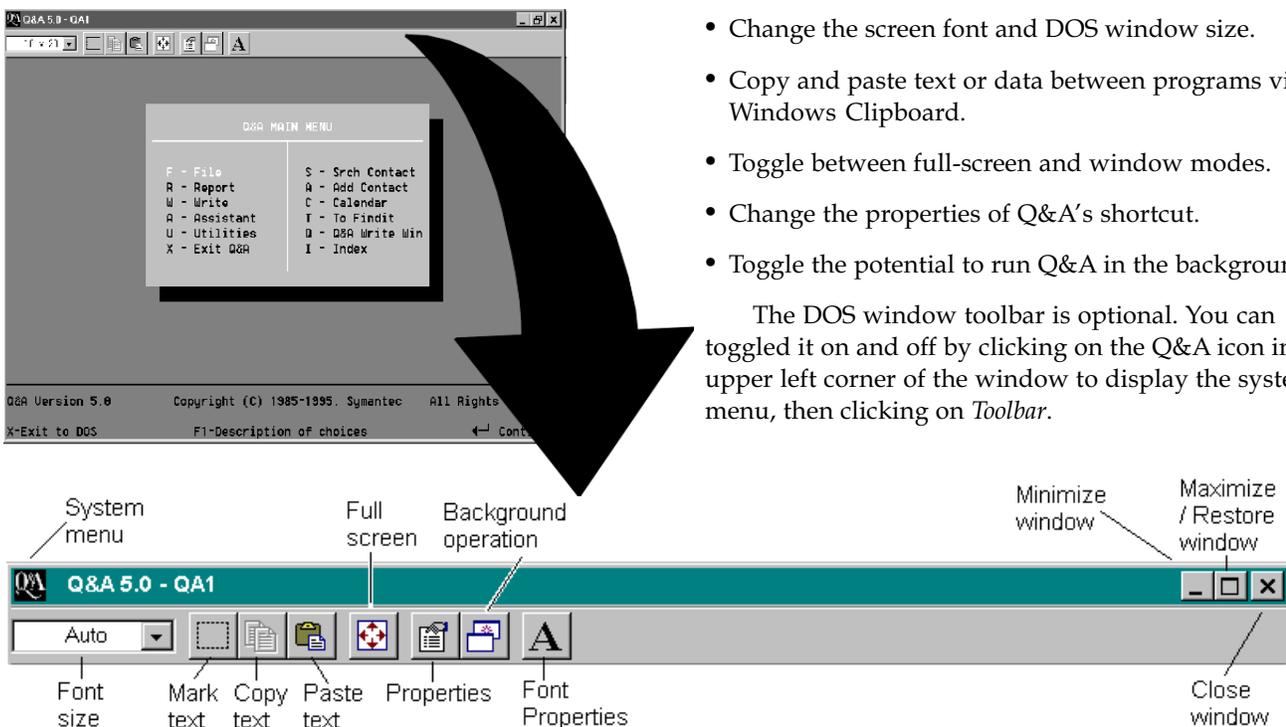
DOS window toolbar

As you can see in Figure 1, Q&A running in a window has a toolbar like other Windows programs. The toolbar is the same for all DOS programs when they're running in a window. It lets you perform these actions:

- Change the screen font and DOS window size.
- Copy and paste text or data between programs via the Windows Clipboard.
- Toggle between full-screen and window modes.
- Change the properties of Q&A's shortcut.
- Toggle the potential to run Q&A in the background.

The DOS window toolbar is optional. You can toggle it on and off by clicking on the Q&A icon in the upper left corner of the window to display the system menu, then clicking on *Toolbar*.

Figure 1. Q&A 5.0 (with a custom Main menu) running in a DOS window. In this mode—you can switch to it temporarily—you have access to all the features on the Windows 95 toolbar.



Choosing a DOS window display font

Windows 95 provides more than a dozen fonts for displaying DOS screens in a window. Each one gives Q&A (or any DOS program) a particular appearance when running in a window — the one you choose is a matter of personal preference. In full-screen mode, the screen font built into your PC's ROM is used — it's the same font you see when Q&A is running in DOS.

The screen font you use determines the size of the window in which Q&A runs. (Generally, the larger the font, the larger the window.) With the toolbar displayed, you have two ways to select a screen font/window size. The first is by clicking on the font drop-down list. The second is by clicking on the "A" icon and choosing a font from the Font size list. The second way lets you preview the font and window size relative to the entire screen.

A nifty feature of Windows 95 is *Auto Font*. When you select Auto Font, Windows 95 changes the font when you resize the DOS window (by dragging its edges in or out). The four font sizes are 23, 18, 16, and 9 points.

Clipboard

One of the most often-used Windows features is the Clipboard. It lets you quickly transfer text or data between programs. To use the Clipboard, click on the Mark text icon on the toolbar. (See Figure 1.) Mark the text in your Q&A window by holding down the left mouse button and dragging the pointer over it. Release the mouse button, then press Enter (or click on the Copy icon on the toolbar) to copy the text to the Clipboard.

To paste the text into another DOS program window, move the cursor to where you want the paste to begin, and click on the Paste icon on the toolbar. To paste the text into a Windows program, move the cursor to where the paste should begin, pull down the program's Edit menu, and select *Paste*.

Expand the Q&A window to full-screen

It's easy to toggle Q&A between a window and full-screen mode. Simply click on the Toolbar icon with four arrowheads, or press Alt-Enter.

Access to shortcut properties

The Properties icon gives you access to all the shortcut's properties. When you click on it, Windows 95 displays the properties in an easy-to-navigate tabbed dialog box.

You can optionally access your shortcut's properties by clicking your right mouse button on the Q&A desktop icon (see Figure 2), and selecting Properties. I'll cover the various settings on the property tabs (*Program*, *Font*, *Memory*, *Screen*, and *Misc*) next month in Part 2.

Background operation

The toolbar's background icon (see Figure 1) lets you multitask Q&A — that is, run Q&A in the background (minimized) while you do something else. When the icon is depressed to allow background operation, Q&A can be

busy running a macro-driven procedure or mail-merge while you check your email or go Net-surfing. Otherwise, Windows 95 will halt Q&A in its tracks as soon as you switch to another application.

Closing a DOS Application

You should always exit Q&A by pressing "X" from the Q&A Main menu. However, if something goes wrong, and you can't quit Q&A this way, you can exit by clicking the "X" (Close) button in the extreme upper right corner of the window. The button with the dash ("-") on it minimizes Q&A — reduces it to an icon on the Windows 95 Taskbar along the bottom of the screen.

Creating a Q&A shortcut

A Windows 95 shortcut for a DOS program is really just a PIF file that tells Windows 95 how to manage the program, along with an icon that starts the program. You should have a QA.PIF file in your Q&A directory that contains most of the information Windows 95 needs to run Q&A. If not, you can reinstall Q&A in a new directory, copy QA.PIF to your old Q&A program files directory, then delete the second copy of Q&A.

If you don't have a QA.PIF file and don't want to go through a reinstallation, you can create a Q&A shortcut from scratch. Follow these steps:

1. Right-click (click the right mouse button) on an empty space on your Windows 95 desktop.
2. From the shortcut menu, select *New*, then select *Shortcut*. The Create Shortcut dialog box appears.
3. Click the Browse button, and navigate to your Q&A folder (subdirectory).
4. Look for a file named *QA.PIF* or just *QA*, and click on it to select it. (If neither of these files is present, select *QA.COM*.) Click Open to return to the Create Shortcut dialog box.
5. Click Next, and Windows 95 will propose a description for the shortcut's icon. You can change it if you like.
6. Click Finish, and a generic MS-DOS shortcut icon for Q&A will appear on your desktop. Double-click on it, and Q&A should start.

Next month, in Part 2, I'll show you how to replace the generic MS-DOS shortcut icon with the custom icon that comes with Q&A. And I'll cover how to tweak your shortcut's properties to make Q&A perform optimally.

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Figure 2. A Windows 95 shortcut for Q&A 5.0. With this on your desktop, Q&A is just a double-click away.

Meet the Userselect Family

ERIKA YOXALL



To make life with Q&A easier and more productive, you can't beat picklists. Here's the best summary of these powerful data entry tools we've ever published.

AMONG my favorite Q&A 5.0 tools is the Userselect family of pop-up selection lists. Not only do they boost data entry speed and accuracy, the XUserselect members of the family bring a new dimension to data lookup. We all use XLookups, but a problem with them is how to figure out what key value to enter to find the right record in the external database. A number of innovative workarounds have been devised, but none of them offer the simplicity of XUserselect, as you'll see.

Q&A 5.0 comes with three types of Userselect commands. Each is available as a function (returns a value) or a statement (places the returned value in a field). Here's how the three types compare:

@Userselect and **Userselect** display an alphabetically-sorted selection list of values you specify. This type is best suited for cases where you have just a few selections to choose from (*Red, Blue, Green*, for example) and the selections remain fairly constant.

@XUserselect and **XUserselect** display an alphabetically-sorted selection list of values from a Speedy field in an external database. For example, you could use XUserselect in a payroll database to display a selection list of employee names from an employee database.

@XUserselectR and **XUserselectR** work like XUserselect except for two differences. First, the "R" stands for *Range*. You can specify a *range* of values to control what appears of the list. Second, you can specify a list selection field *and* a data field in the external database. Using the payroll database example, you could have Q&A show you a list of employee names, but return the selected employee's Social Security Number.

The table below shows each Userselect command and basic syntax, along with an example and comments. Here are some definitions that should help with the syntax:

Value – An item on a selection list. (Also refers to the data retrieved from the external database.)

Command	Syntax and Example	Comments
@Userselect	@Userselect("Value1;Value2;Value3,...") @Userselect("Blue;Green;Red")	Returns the value selected from the list. Values must be separated by a semicolon or comma. Specify literal values as in the example, or use a command such as @Insert to use a text file of values.
Userselect	Userselect("Value1;Value2;Value3", Dest Field) Userselect("Blue;Green;Red";#20)	Places the value selected from the list in the Destination (Dest) Field. Same as @Userselect except the Destination Field is specified in the command. Avoid spaces after each semicolon or comma.
@XUserselect	@XUserselect("Filename","External Selection Field") @XUserselect("Employee";"EmployeeName")	Returns the value selected from the list. If no Key field in the external database contains enough information for a correct selection, or if duplicate values might exist, concatenate values in a Read-only Speedy field, and use it as External Selection Field.
XUserselect	XUserselect("Filename","External Selection Field", Dest Field) XUserselect("Employee"; "EmployeeName"; #20)	Places the value selected from the list in the Destination (Dest) Field. Same as @XUserselect except the Destination Field is specified in the command.
@XUserselectR	@XUserselectR("Filename", "External Selection Field", "External Data Field", "Start", "End") @XUserselectR("Employee"; "EmployeeName"; "SSNumber"; "N"; "Z")	Displays a list of External Selection Field values in the Start to End range, and returns the value in the External Data Field of the selected record. Use to display a range of meaningful values (e.g. peoples' names) and return a less-meaningful value (e.g. Social Security Number).
XUserselectR	XUserselectR("Filename", "External Selection Field", "External Data Field", "Start", "End", Dest Field) XUserselectR("Employee"; "EmployeeName"; "SSNumber"; "N"; "Z"; #20)	Displays a list of External Selection Field values within the Start to End range. Places the External Data Field of the selected record in the Destination (Dest) Field. Same as @XUserselectR except that the Destination Field is specified in the command.

Filename – The full path (if necessary) and name of the external database.

External Selection Field – The field in the external database whose values fill the selection list.

External Data Field – The field in the external database whose value is passed (returned) to the current database.

Start/End – The lowest and highest values, respectively, to include on the selection list.

Destination Field – The field in the current record where you want Q&A to place the data.

Okay, now that you've met everybody, let's look at some of the ways you can use them in your databases.

Conditional lists

Let's start with a basic list technique you might call *conditional* or *drill-down*. When you make a selection from a list, the program uses your choice to decide which options to offer you next. This way, instead of having to scroll a lengthy list to find the item you need, you choose from a brief list, then another brief list related to the first one appears for you to make your next selection:

```
<#1: #1 = @Userselect("UPS,FedEx,Airborne");
If #1 = "UPS" Then
  #1 = @Userselect("UPS Red,UPS Blue,UPS Ground");
If #1 = "FedEx" Then
  #1 = @Userselect("FedEx Priority,FedEx Economy,FedEx
Two Day");
If #1 = "Airborne" Then
  #1 = @Userselect("AB Express,AB Next Afternoon,AB
Second Day")
```

Here, you're prompted to select a shipper. When you do, the subsequent list shows the company's shipping options. If you select UPS from the first list, the next list prompts for the type of UPS service.

Here's a more sophisticated drill-down example. I have CUSTOMER, VENDOR, and EMPLOYEE databases that contain a Speedy Name field and a multiline MailingAddress field that stores the name and address block. To print envelopes, I use a one-record database with these two fields:

```
Select: #10
MailingAddress: #20 (multiline field)
```

My program executes when I display the envelope printer record. Userselect prompts me to choose the database, then XUserselectR displays all the names in it. I choose one, the address appears in the MailingAddress field, and the envelope-printing macro is launched.

```
< #10: #10 = @Userselect("CUSTOMER;VENDOR;EMPLOYEE");
XUserselectR(#10, "Name", "MailingAddress", "A", "Z", #20);
#10 = "";
@Macro("Print Envelope")
```

Pass a list selection to an XLookup command

Embedding an XUserselect command in an XLookup command makes it easier to select the right external

record. It also streamlines your programming. Instead of placing the selection in a field, then using it as a key value in an XLookup, you can have Q&A prompt you to select the key value as it executes the XLookup. In the following example, a list of names from the Clients database appears. When you select one, the client's address information is retrieved:

```
<#1: XLookup("Clients", @XUserselect("Clients", "Company"),
"Company", "Client ID", Client ID, "Address", Address,
"City", City, "State", State, "Zip", Zip)
```

Optionally display a list

Using @Askuser with XUserselect lets you to decide on-the-fly whether or not you want to see the selection list. In the following example, if you answer Yes, the selection list appears. If you answer No, it doesn't:

```
<#1: If @Askuser ("Do you want to","add another item","to
this invoice?") Then XUserselect("ITEMS","ItemNumber", #2)
```

Give fair warning

Userselect lists don't include the context or topic of what you're being asked to select. (The word *Selection* appears at the top of the list, and that's all.) To add context, you can use the @Msgbox command to display instructions before the selection list appears, or to display variable information based on the selection you make. In the following example, the selection list appears as soon as you press Enter to clear the message box.

```
<#1: @MsgBox("Select a customer." , "" , "");
#1 = @XUserselect("CUSTOMER", "Name")
```

Keep your list in order

Items on Userselect lists always appear in alphabetical order, but this might not be best for data entry. For example, you might want a list of products to appear in *size* order like the one shown below on the left, but Q&A will sort it like the one on the right:

<i>You want</i>	<i>You get</i>
Extra Small	Extra Large
Small	Extra Small
Medium	Large
Large	Medium
Extra Large	Small

To force Q&A to sort the list the way you want, precede each selection with a number and space, and use the @Mid function to fill the field with only the size:

```
< Size = @Mid(@Userselect("1 Extra Small,2 Small,3 Medium,
4 Large,5 Extra Large"), 3, 20)
```

You'll get a list that looks like this:

```
1 Extra Small
2 Small
3 Medium
4 Large
5 Extra Large
```

On the other hand, you might have a *Size Code* field for the size *number*. In this case, you can use @Num to

return only the number of the selected size:

```
< Size Code = @Num(@Userselect(
"1 Extra Small,2 Small,3 Medium,4 Large,5 Extra Large"))
```

If your list includes more than nine selections, you should number them 01, 02, 03, and so forth so they appear on the list in the proper order.

Make Userselect work like XUserselectR

XUserselectR lets you display a list of easily-identifiable values (company names, for example) and return a *different* value (say, the selected company's credit status code.) You can get this kind of functionality from a Userselect list as well. You do it by having the meaningful descriptions appear on the list, and their corresponding return values *off* the right side of the list where they can't be seen.

An example. Suppose you have macros named Alt-A, Alt-B, and Alt-C that run reports. During data entry, you want to choose which macro to run from a list that shows the descriptions rather than confusing the issue with

obscure Alt-key identifiers. Try a program like this:

```
< @Macro(@Right(@Userselect(
"Show Open Invoices" + @Text(20, " ") + "<alta>," +
"Show Current Stock" + @Text(20, " ") + "<altb>," +
"Customer History" + @Text(20, " ") + "<altc>"), 6 ))
```

Here, @Userselect is nested in @Macro and @Right commands. When you move to the field, the selection list appears, but only your custom descriptions show. (<alta>, <altb>, and <altc> don't appear on the list because the 20 spaces added by the @Text command force them beyond the 19-character boundary.) When you choose one, its rightmost six characters (<altb>, for example) are returned to @Macro, which runs the macro.

Restrict what appears on a list

You can use the XUserselectR range command to restrict the selection list based on the first few characters you type. In the following example, you'd type one or more characters of the name, then press Enter:

```
>#1: #1 = @XUserselectR("CUSTOMER", "Name", "Name", #1, #1)
```

Special Notes on the Userselect Commands

- Although only the first 19 characters of the list items are visible, Q&A returns the *entire* selected value. Keep this in mind if your list values are lengthy.
- External selection fields for all XUserselect commands must be Speedy. The external data field for the XUserselectR command need not be Speedy.
- Userselect will display duplicate values, whereas the XUserselect commands won't. Accordingly, make sure your external selection fields are unique. If you use an employee name field as a selection field and you have two John Smiths, only one will appear on the list, and you'll have no way of knowing which one it is.
- If two selection field values in the external database are identical through the first 16 characters, XUserselect will consider them duplicates and include only one on the list.
- If you create special selection fields for use as key values for XLookups, be aware that although the selection list displays 19 characters and the complete value is returned when selected, Q&A can still only match on the first 16 characters when performing the XLookup.
- All selection lists display values in alphabetical order regardless of their order in the external database or Userselect command. When typing a Userselect command, this means you can add your selections in any order.
- Passwords are active! An XLookup password allows initial access to the protected external database, but users can't display or return values from fields the Field Security Spec doesn't allow them to access.
- @Error is supported. Like XLookup, if an XUserselect command fails for any reason, an internal error is generated. You can check for and use the error condition (for example, *If @Error Then [do this] Else [do this]*) to take an appropriate course of action.
- What happens when you press Esc from a displayed list depends on whether you're using the *function* (with the "@" sign) or *statement* version of the command. With either, Esc will close the list. But the *function* version will additionally blank the destination field.
- You can scroll a displayed list using your cursor, PageUp, PageDown, Home, and End keys. You can optionally press a character to move to the first selection that begins with that character. If you're using a mouse, you can scroll a long list by clicking on the up arrow at the top of the list or the down arrow at the bottom of it. You choose a selection by clicking on it, or highlighting it and pressing Enter.
- The number of records Q&A can include in an XUserselect list depends on available memory. About 3,200 is the maximum. But a list of such length would take Q&A a long time to compile, and it would be tough to navigate. You'd be better served by using the XUserselectR command with restrictive start and end range parameters.
- You can optionally use @Fn—that is, the current database—as the filename parameter in any XUserselect command to display a selection list of internal values. For it to work, the database's Sharing Mode (File / Design a file / Secure a file / Declare Sharing Mode) must be set to *Allow* or you'll receive an *Index File In Use* error message. After resetting the Sharing Mode, exit and restart Q&A for the change to take effect.

If you typed *RE* or *re*, then pressed Enter, the selection list would appear and include only customer names that begin with RE, such as Reeky Cheese Company and Research Associates. When the external database contains lots of records, limiting the range this way will make the list appear faster.

Using field contents to define the list's range

This example assumes that field #20 contains the starting value, and field #30 contains the ending value for a list whose range you want to limit:

```
<#100: XUserselectR("CUST", "Name", "Name", #20, #30, #40)
```

Here, if field #20 contains *B* and field #30 contains *CA*, the selection list will include Betty and Cathy, but not Alice or Chris. Using variable field values as range parameters this way allows you to control, during data entry, what appears on your list.

Use a document as a list

This next example demonstrates how you can insert a text file (an ASCII, .txt, or Q&A Write document) in a field, and use it as a selection list. You could compose a Dept.txt document containing a list of department names separated by semicolons, such as Sales; Accounting; Maintenance; Engineering; Shipping, then specify it in an @Insert command embedded in a Userselect command:

```
<#1: #1 = @Userselect(@Insert("Dept.txt"))
```

This technique lets you update your selection lists without having to change any programming. You simply edit then resave the document in Write, or in any word processor that can save to text-only (.txt or .asc) format.

Use field contents as selection values

You can team up Userselect with programming that concatenates (strings together) several values in a field to create a selection list. For example, the results of XLookups to multiple external fields, with a semicolon added to separate each returned value, could be concatenated in field #2. You could then use field #2 as your selection list:

```
< #1: #1 = @Userselect(#2)
```

Prevent selection list from reappearing

Here's an example of how to prevent a selection list from appearing once the target field is filled.

```
< #20: If #20 = "" Then #20 = @Userselect("Red;Blue;Green")
```

You can optionally use the @Add or @Update context functions to make a list appear only when adding new records, or updating existing ones.

Force a selection

You can have Q&A send the user back to a field and redisplay the list until a selection is made:

```
< #30: #30 = @Userselect("Red;Blue;Green");
If #30 = "" Then Goto #30
```

Selecting values in a lineitem form

The following technique might come in handy in a lineitem form (such as an invoice) where you want to select from the items entered. The item fields in this case are #20, #30, #40, #50, and #60. This method creates a selection list that changes for each record. In this example, if the invoice includes five items sold, you could select one by name to delete or edit:

```
< #100 = @Userselect(#20+";"+"#30+";"+"#40+";"+"#50+";"+"#60)
```

Adding sophistication

This final example shows Userselect used in combination with other commands. In this case, you have a one-record database designed to run any of several procedures (macros) by first selecting the procedure, then the customer. The database contains these two fields:

```
Procedure: #10 CustomerID: #20
```

You have an external CUSTOMER database that includes a Name field, and a CustomerID field that serves as the XLookup key value. Both are Speedy.

You have three macros, each of which copies the CustomerID to the clipboard (F11), then exits the record and performs its task.

The program illustrates several techniques: Field #10 contains a simple @Userselect command. Field #20 embeds @Userselect in an XLookup command. The remainder of the program shows how you can use @Askuser and @Msgbox in conjunction with Userselect to make your interface efficient and easy to use:

```
< #10:
#10 = @Userselect("Create an Invoice;Create a
Quotation;Print Sales Report");
Goto #20

< #20:
#20 = @XLookup("CUSTOMER", @XUserselect("CUSTOMER", "Name"),
"Name", "CustomerID");

If #10 = "Create An Invoice" Then
  {@Msgbox("An invoice will be","created for","Customer
ID " + #20,"");
  @Macro("Create Invoice")};

If #10 = "Create A Quotation" Then
  {@Msgbox("A quotation will be","created for","Customer
ID " + #20,"");
  @Macro("Create Quotation")};

If #10 = "Print Sales Report" Then
  If @Askuser("Is the printer ready?", "", "") Then
    @Macro("Print Sales Report")
```

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EDITED BY T.J. SHUFLIN

Mail Merge Memory Problems

When performing simple mail merges using a small Q&A 5.0 for DOS database, I receive *Out of Memory* messages on my Pentium 120 PC. Why is this?

Mary Jones, Boston, Massachusetts

Mail merge is one of those tasks for which Q&A 5.0 likes expanded memory, particularly if available conventional memory is low. (Q&A is designed for 640K conventional memory. It runs in as low as 484K, but can run out of memory while performing memory-intensive operations such as sorting, copying, and mail-merge.) Without knowing your system configuration, or whether you're running in DOS or Windows, I can't give details on what you should do, but try giving Q&A 128K of expanded memory. Your Pentium PC should have more than enough memory to turn at least 128K of it into expanded memory that Q&A can use. (See *Expanded memory* in your DOS or Windows manual.)

Mailing Label Labyrinth

I'm a senior citizen volunteering in an office that uses Q&A 5.0 for DOS. I maintain various mailing lists and mail out letters, announcements, and the like. I'm having fits trying to keep track of what I need to put in the design of each different mailing label, and I can never remember which label I'm supposed to use. I finally figured out how to insert the fields at the label design screen, but I have to do this every time I print labels. Is there a way to simplify all this?

Alice Guillory, St. Louis, Missouri

Here are a few tips that might help you better organize your labels.

When you open the List of Mailing Labels (Write / Mailing labels), take a look at the bottom of the screen. You'll see some function key commands such as F5-Copy and F8-Rename. You can take advantage of these commands to avoid having to design a new label each time you perform a mailing.

For example, take a mailing label you use often—let's say it's one of the Avery 5160 labels. Highlight it, then press F5 to copy it. Q&A will prompt you to type a name. Type something like *My Label Design*, and press F10. You'll now have an Avery 5160 label design named *My Label Design*. It might be on the third or fourth page (Q&A

sorts the List of Mailing Labels in alphabetical order), but there's a remedy for that, too, as I'll explain later.

Once you've copied a Q&A-supplied label template to a new name, you can modify it by adding the merge fields from the appropriate database. When you've done so, save your custom template (press Shift-F8 or F10), and it will be ready to use whenever you need it.

If you need a variety of custom labels, create and save one for each kind of mailing task. You can copy (F5) a label you've designed, then modify the copy, or rename (F8) a label.

Never modify a label template that comes with Q&A. Instead, copy it to a meaningful name, then modify *the copy*. Down the road, you might need to create a new custom label with the same specifications as the original template. If you renamed or modified the original, you won't be able to use it as a starting point.

When working with a copied label for the first time, don't forget to check the name of the Q&A Merge File associated with it. With the label displayed, press F2, and type the path and database name on the *Name of Q&A merge file* line at the bottom of the Print Options screen. You can then press F9 to save your change and return to the label design screen.

To make it easier to access your custom labels, you can use numeric prefixes to force them to the top of the List of Mailing Labels. Try it. Highlight your *My Label Design* label, and press F8 to rename it. Type in something like *01 My Label Design* and press F10, and Q&A will move it to the top of the list on page 1. A numbering system like this lets you place up to 99 custom labels at the beginning of the list, and gives you 10 ranges (for example, 01 through 09, 10 through 19, 20 through 29) in case you want to assign numbered groups to labels you use for similar tasks.

Fonts in Q&A for Windows Reports

I'd like to make my Q&A for Windows columnar reports look more attractive by using several fonts in them. The problem is that I'm not sure how to go about it.

Bill Applegate, Spokane, Washington

With Q&A for Windows columnar reports, you can only change the default font for the entire report. To do this, first get the report layout onscreen. From the menu bar, select Reports, then choose Report Print Options. Click on the Default Font button, assign your font, then save the report by selecting Reports / Save.

You can save the report to the same name or to a new name. You can now Load the report, then run it in Preview mode before printing it to paper.

To have a columnar report with multiple fonts, you'll have to convert it to a Free-Form report. Get the report layout onscreen. From the menu bar, select Reports / Save as Free-Form. In the Save Free-Form Report As dialog box, type in a unique name, preferably one that indicates it's a Free-Form report. Now, you can select the Free-Form report from the drop-down list of reports. You can modify the header, footer, and body, assigning whatever font you want to each section. Save, Load, then Preview the report before printing. You'll probably have to fine-tune the layout to get the precise look you're after.

Use @Select for If-Then-Else



I have a database with two groups of fields for two different mailing addresses. Is there a way to print a report that looks for data in one of these groups of fields and, if none, automatically uses the data from the other group?

Brett Hadley, Helena, Montana

There are several ways to do it, but I'll show you a trick that works well for situations like yours. Over the years, there have been many articles and tips in *The Quick Answer* that describe how to use the @Text function in report derived columns to achieve a kind of *If-Then* conditional decision-making. Using @Select in a derived column gives you a way to perform *If-Then-Else* logic.

Suppose the database records contain a group of permanent address fields, and another group of vacation address fields. You want Q&A to check each record for information in the vacation address fields and, if none, use the permanent address fields. You could express the *If-Then-Else* logic this way:

If the record's vacation address fields contain data
Then include them in the report.
 Otherwise (*Else*) include the permanent address fields

Here's a sample Column/Sort Spec you could use for the report:

```

First Name: 1      Last Name: 2,AS
Vacation(1): 3,I   Permanent(1): 8,I
Vacation(2): 4,I   Permanent(2): 9,I
Vacation City: 5,I Permanent City: 10,I
Vacation State: 6,I Permanent State: 11,I
Vacation Zip: 7,I  Permanent Zip: 12,I
  
```

Here are the derived columns (in a table format to conserve space):

Heading	Formula	Column Spec
Which One	@Text(#5 > " ", 1)	100,I
Address(1)	@Select(#100=1,#3,#8)	110
Address(2)	@Select(#100=1,#4,#9)	120
City	@Select(#100=1,#5,#10)	130
State	@Select(#100=1,#6,#11)	140
Zip	@Select(#100=1,#7,#12)	150

All the address fields in the Column/Sort Spec have been made invisible (I). The first derived column (*Which One*) checks the record to see if there's anything in the City field associated with the Vacation group of fields. (We'll assume that if Vacation City is blank, the rest of the vacation fields are, too. At any rate, the address is incomplete.)

If Vacation City isn't empty, then the *Which One* column is set to 1. (Since it's an invisible column, the 1 doesn't appear in the report.) In the subsequent derived columns, @Select checks to see if the *Which One* column contains a 1. If it does, then @Select executes the *Then* condition, and the column prints the corresponding Vacation address value. Otherwise, @Select executes the *Else*, and the derived column prints the corresponding Permanent address value.

You can modify this technique whenever you need a report to perform an *If-Then-Else*-like action. Tom Marcellus describes uses for @Select in his January 1993 *Quick Answer* article, "Conditional Merge Printing." Robert Laudensack's October 1992 article, "Conditional Logic in Report Columns," discusses @Select, too.

DAVE Doesn't Do Landscape



I have Q&A for Windows 4.0, and I like to use the Intelligent Assistant (IA) to answer ad hoc requests for information from my coworkers. One thing I'd really like is the option to print IA-generated reports in landscape instead of portrait orientation. Any suggestions?

Fred Moses, via The Internet

I tried everything I could think of, with no joy, to get *DAVE - The Intelligent Assistant* to produce a landscape-oriented report. I couldn't get Q&A for Windows to print in landscape orientation at all unless I was printing a pre-defined report with landscape specified in the design. Q&A appears to default to portrait orientation even when the printer's default is landscape. If anyone has an answer to Fred's dilemma, let's hear from you.

T.J. Shufflin is a forensic chemist and crime lab director in Alexandria, Louisiana. He served as the National Q&A User Group's first president in 1991-92, and remains active by maintaining the group's Web site at <http://www.qaug.com>.



Stumped?

Send your Q&A questions to @Help, *The Quick Answer*, Marble Publications, Inc., PO Box 9034, Gaithersburg, MD 20898-9034 or fax to 301-424-1658. Please include your name, address, phone number, and your Q&A version number (and whether DOS or Windows) and a detailed description of the problem. We'll publish those questions we feel are of general reader interest; individual responses aren't possible.

Reports from a Multi-Lineitem Database



JEFF NITKA

Sometimes when you solve a problem, you create another one. For example, you might design a database that simplifies data entry and printing, then find out it doesn't do reports.



WHEN designing a purchase order, sales order or invoice with lineitems (product codes, descriptions, prices, and quantities), you can incorporate all the lineitem fields into the database so that each record represents the *entire* sales order or invoice (a multi-lineitem database—see Figure 1), or you can create a database that stores each lineitem as a separate record (a single-lineitem database).

A big advantage of the single-lineitem approach is that it lets you easily obtain information (run reports, for example) on the lineitems, since each one is a single record. The disadvantage is the application's complexity, including how to assemble transactions to view or print, since each invoice consists of multiple records.

The advantages are just the opposite with a multi-lineitem database. Viewing and printing invoices or purchase orders as whole documents is simpler, but getting information on lineitems sold or purchased over a period of time, or by customer, gets complicated.

Have your cake and eat it, too

If you could combine the simplicity of a multi-lineitem database for data entry, viewing, and printing, with a way to get reports on the lineitems, you'd have the solution. That's just what I'll show you this month.

My technique exports the lineitems from a multi-lineitem database to a single-lineitem-per-record archive database. You run your lineitem reports using the archive database. I'll assume the originating database has fields for three lineitems as shown in Figure 1. You can, of course, adapt the technique to accommodate a database containing any number of lineitems.

I won't use Q&A's Copy command to copy the data to the archive database. Instead, I'll export the data from the source database (which I'll call INVOICE.DTF), then import it into the archive database (which I'll call ARCHIVE.DTF). This way, users on a network can continue to work in the originating database while the export/import procedure is running.

At the end of every month—or according to a

schedule you adopt—you'll simply run a macro that (1) prompts you for the date range of INVOICE records to include, (2) exports the relevant data from them, then (3) turns around and imports that data into ARCHIVE.

Setting up ARCHIVE.DTF

Create ARCHIVE.DTF by selecting INVOICE.DTF at the List of Files screen, pressing F5 to copy it, typing in ARCHIVE.DTF as the copy's filename, then removing all the records from ARCHIVE.DTF.

Next, redesign ARCHIVE.DTF so that only the necessary fields from the invoice header remain, along with the fields for a *single* lineitem. For example, assuming the relevant portion of INVOICE looks like Figure 1, ARCHIVE should include the following fields:

Invoice No	<InvNo	>	Customer Number	<CustNo	>
Customer Name	<CustName	>	Invoice Date	<InvDate	>
Item Number	<Product	>	Price	<Price	>
Quantity	<Qty	>	Extended Price	<ExtPrice	>

Define some Specs

You'll need to create some Retrieve Specs in INVOICE (or whatever you call your multi-lineitem database) that the macro can use. Here's what you do:

1. Select File / Search/Update, and enter *INVOICE*.
2. Move to the Product ID field of the first lineitem (*Prod1* in Figure 1), and type */=* (not empty) in it.
3. Press Shift-F8, and save this Retrieve Spec to *Line1*.
4. Press F3 to clear the Spec, then move to the Product ID field of the next lineitem. Type */=* in it, press Shift-F8, and save this Retrieve Spec to *Line2*.
5. Repeat Step 4 for each subsequent lineitem in the database, naming the saved Retrieve Specs *Line3*, *Line4*, and so forth.

Invoice Date	< InvDate >	Bill To	<CustName >	Cust Number	<CustNo >
Invoice No	< InvNo >		<Address1 >		
			<Address2 >		
			<Location >		
Item No	<Description >	Price	<Qty >	Ext Price	< >
1 <Prod1 >	<Desc1 >	<Prc1 >	<Qt1 >	<ExtPr1 >	< >
2 <Prod2 >	<Desc2 >	<Prc2 >	<Qt2 >	<ExtPr2 >	< >
3 <Prod3 >	<Desc3 >	<Prc3 >	<Qt3 >	<ExtPr3 >	< >

Figure 1. Part of a multi-lineitem INVOICE database with fields for three lineitems. (Field names are shown in angle brackets.)

Next, you'll need to save an Export Spec for each lineitem in INVOICE.DTF. Here are the steps:

1. Select File / Utilities / Export Data / Standard ASCII.
2. Enter *INVOICE.DTF* as the Q&A filename, and *Line1.XXX* as the Export filename.
3. Press F10 for the Merge Spec, then type numbers only in the fields you're exporting to ARCHIVE.DTF. Make sure the numbers reflect the relative position of the corresponding field in ARCHIVE.DTF. For example, in InvNo, type **1**, since InvNo is the first field in ARCHIVE.DTF. Type **2** in CustNo, **3** in CustName, **4** in InvDate, **5** in Prod1, **6** in Prc1, **7** in Qt1, and **8** in ExtPr1.
4. Press Shift-F8 to save the Spec to the name *Line1*.

Repeat these steps for each subsequent lineitem. For example, you'd name the next export file *Line2.XXX*. In the next Merge Spec you'd type 1 through 4 in the same fields, but you'd type 5 in Prod2, 6 in Prc2, 7 in Qt2, and 8 in ExtPr2, then press Shift-F8 and save the Spec to the name **Line2**. These saved Retrieve and Merge Specs (one for each lineitem in INVOICE) are all you need.

Automating the procedure

The macro that runs the export/import procedure assumes that Q&A is set to Automatic Execution, and the invoice date field (in this case InvDate) is the first field in INVOICE.DTF. The macro performs seven key steps:

```
<begdef><altt><name>"Export<sp>Data"<vidon>wudd<capsf4>
Line*.XXX<enter><up><f3><lft><enter><f3><lft><enter><f3>
<lft><enter><esc><esc><esc><esc><esc><esc>
```

```
FUES<capsf4>INVOICE<enter>Line1.XXX<enter><altf8>Line1
<enter><home><home><wait><enter><vidoff><home><home>
<f11><f10><altf8>Line1<enter><f10>Y<enter><home><rgt>
<f10><esc><esc><esc><esc><esc>
```

```
FUES<enter>Line2.XXX<enter><altf8>Line2<enter><home><home>
<f12><f10><altf8>Line2<enter><f10>Y<enter><home><rgt><f10>
<esc><esc><esc><esc><esc>
```

```
FUES<enter>Line3.XXX<enter><altf8>Line3<enter><home><home>
<f12><f10><altf8>Line3<enter><f10>Y<enter><home><rgt><f10>
<esc><esc><esc><esc><esc>
```

```
FUISLine1.XXX<enter><capsf4>ARCHIVE<enter><f10>y<enter>
<home><rgt><f10><esc><esc><esc><esc><esc>
```

```
FUISLine2.XXX<enter><enter><f10>Y<enter><home><rgt><f10>
<esc><esc><esc><esc><esc>
```

```
FUISLine3.XXX<enter><enter><f10>Y<enter><home><rgt><f10>
<esc><esc><esc><esc><esc><endef>
```

The macro's first section deletes any existing ASCII files leftover from last time. (The "*" in *Line*.XXX* is a wildcard that shows only the *Line1.XXX*, *Line2.XXX*, and *Line3.XXX* files at Q&A's List of Files screen.

The subsequent three sections (each begins with FUES for File / Utilities / Export / Standard ASCII) export all non-empty lineitems to their respective ASCII files. The macro is designed so that if a lineitem contains no data, no export file is created for it, and the macro can proceed correctly. The first of these three sections includes the prompt to type the date range in the InvDate field, followed by an F11 command that copies it to Q&A's clipboard. The second and third sections then paste (F12) the same date range into the same date field.

The final three sections (beginning with FUIS for File / Utilities / Import / Standard ASCII) import the ASCII files into ARCHIVE.DTF. Once that's done, the macro ends, and your lineitem data is now in a file designed to accommodate almost any kind of report you might want. Since each ARCHIVE record contains date and customer information in addition to lineitem information, you can generate reports by date range, by customer, by product code, or combinations of all three.

Jeff Nitka works for a chemical manufacturer and develops Q&A applications part-time for Epoch Software, 908-874-3989. Jeff is the author of the Program Evaluator (a Q&A program debugging utility), SurfDrive (a Q&A disk drive reader), and FaxMan (a Q&A faxing database), all of which are available from Marble Publications.



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