Getting Started With COMPUTERS

by Craig Savage

Answers to frequently asked questions from builders about using computers

Occasionally I participate in seminars on computers for building and design professionals. These seminars usually divide up into roundtable discussions in which individuals can ask the "dumb" questions they were afraid to ask with hundreds of people listening. Here's a sampling of the most commonly asked questions. If you're still trying to decide which computer to buy and what software will best serve your needs, the answers may help you make up your mind.

Q. ***I have a small construction company with just a few employees. I run it mostly by myself, with some help from my spouse, who keeps the books. I don't know anything about computers, but I know I need to get started. What is the right starter system for me?***

A. The short answer is: Buy the most powerful computer system you can comfortably afford. That said, there is no "right" system that fits everyone, just as there is no "right" cordless screwdriver. But the more powerful your hardware is, the longer it will be able to handle the ever-changing demands of software.

Today's software is easier to use than the software of ten years ago, but that convenience exacts a cost in high-powered hardware. The popular graphical user interfaces, or GUIs, require more memory and faster processors. For example, most programs now include extensive on-screen help, so you can get instructions on how to use the software without searching through the manual. But the help files take up lots of space on your hard drive and require more RAM to run. A low-end computer may not be able to run these kinds of programs as well as a more powerful machine.

Q. ***With computers getting more powerful and dropping in price almost weekly, should I wait to buy mine?***

A. If you needed a new cordless drill today, you wouldn't postpone the purchase simply because cordless drills were "getting more powerful and dropping in price," would you? The same holds true for office technology. Don't wait. Every week you delay is a week your competitors are learning

ILLUSTRATIONS BY DAN DRABEK

all the new ways that computers can help them ease their work load.

Q. ***Should I buy an IBM-compatible or a Mac? I've heard that Macintosh computers are easier to learn to use but that there is more software available for the IBM. Also, IBM clones seem to be much cheaper.***

A. This is a tough question for me because I was weaned on a Mac. And the fact that computing systems are constantly changing make this question a moving target.

I think a Mac is still easier to master than a PC, even a PC running Windows — not a lot easier, but easier. A Mac is still easier to hook up than a PC because all of the peripherals — devices like printers, fax/modems, and CD-ROMs — are designed for each other. And because one Mac is exactly like all others, it's easier to connect them together (called "networking").

PCs and their peripherals are supported by a larger number of manufacturers, which accounts for the greater variety of hardware available, but small differences in each manufacturer's design make it more difficult to get the equipment to work together. Microsoft Corp. is trying to convince PC manufacturers to conform to a common standard — similar to the Mac's "plug-and-play" designs — but it won't be here for a while.

The software part of the question, however, falls cleanly on the PC side. There are 10 PC programs for every one written for the Mac. But the differences between Mac and PC hardware are growing smaller all the time, so you should match the software you want to use to the hardware it runs on. For instance, if you know you want to use Timberline Construction Gold for your construction accounting, you have to buy a PC because the software isn't available for the Mac. On the other hand, if you plan to use Quicken for your accounting, then your choice is open: Quicken has been written for both PCs and Macs.

I realize this answer may sound like a cop-out, but the truth is that most good software is available on both computer "platforms." What tips the scales for some people is the kind of support they can get from friends who are already using computers. Despite all of the training and tutorials available to help you learn to use a computer, there's still no substitute for someone you can call on to get you out of a jam or to explain something you don't understand. If most of the people you know are using one platform or the other, it probably makes sense for you to use that platform, too.

Q. ***I've decided to purchase a Windows system for my remodeling business. What do I need to know when I go to buy?***

A. First, establish a budget. Brand-name manufacturers, such as Compaq, Dell, Gateway, Zeos, and others, are constantly trying to beat one another's prices. Partly because of the stiff competition, and partly because the technology is changing so fast, you can now buy a PC computer with monitor for less than $1,300 at computer discount stores and through catalogs. But there are so many bells and whistles available for today's machines — at added cost, of course — that you need a budget to help you narrow your choices.

Don't forget to budget for a printer. For very high-quality printouts — especially for desktop publishing and CAD — you'll need an ink jet or laser printer. Prices start at about $500 and keep going up, depending on the speed and resolution of the output.

On the other hand, a dot matrix printer will probably handle all your printing needs for much less money (prices start as low as $125). Dot matrix printers are also easy to maintain and use economical inked ribbons; ink jets and laser printers use expensive cartridges.

Q. ***I've used a basic setup for several years and now I'm ready to upgrade. Which options are most useful?***

A. Adding extra RAM and a larger hard drive is always at the top of my list. Beyond that, consider adding a fax/modem and a CD-ROM.

Fax/modem. If you plan to take advantage of the growing number of construction-related services available "on line," a fax/modem is a good buy. The modem will let you dial in to electronic bulletin boards and data services, such as CompuServe and America On-Line. From there, it's just a short hop to the Internet, a vast network of government, educational, and corporate computers that's teeming with information.

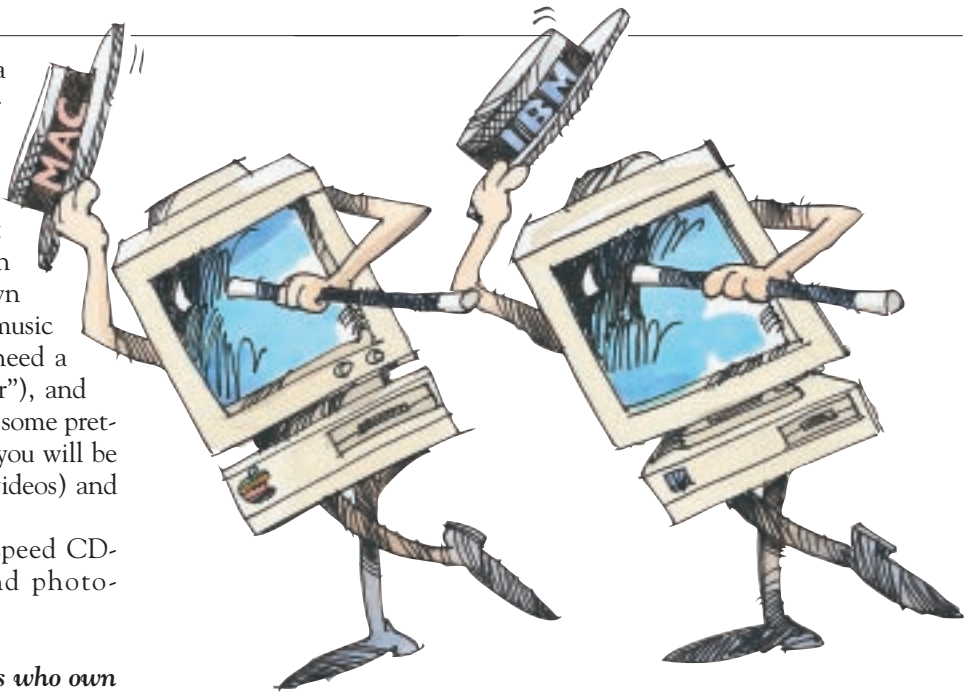
The fax will both send and receive electronic images of text files, such as estimates and proposals, as well as images that are either created on the computer — with a CAD program, for example — or translated into electronic form with a scanner. You will need graphics software to view them, however.

CD-ROM. For the foreseeable future, information will probably be stored and exchanged using CD-ROM. CD-ROM disks look just like music CDs and work like floppy disks, but they can store much more information. But unlike floppy disks, you can't "write" data to a CD-ROM, you can only "read" it. (This, too, will change, but it's very expensive at the moment to create your own CDs.) Currently, CD-makers have published mostly encyclopedias and games, but there are an increasing number of construction cost databases and tool catalogs on CD-ROM. With sophisticated search and retrieval schemes in the software, and increased speed in the CD-ROM drives themselves, it is much easier to

look up information on a CD than in a book or catalog, or even in a conventional database.

CD-ROMs are also being used to preview software. A single sampler disk can hold hundreds of demo programs that you can "test drive" before you lay down your hard-earned cash for the full-blown software. CD-ROM drives can also play music CDs (Macs are factory-ready, but PCs need a separate sound card and software "driver"), and game manufacturers are coming out with some pretty spectacular CD-ROM versions. Soon you will be able to watch movies (including home videos) and "listen" to books on CD-ROM as well.

Be sure to buy a double- or triple-speed CD-ROM drive that is multisession and photo-CD compatible.



Q. ***Against all the advice of my friends who own PCs, I want to purchase a Mac to run my business (my kids use Macs in school, and my wife uses one at work). If I'm going to buck the tide, which Mac should I buy?***

A. Macintosh owners have a choice: They can stand on the "bleeding edge" of technology by purchasing a Macintosh Power PC (dubbed a "Power Mac"), or they can make a great deal on last week's technology by buying a Quadra 605, 610, or 630.

The Power Mac gives you the hottest new computing chip, but brands you as an "early adopter," with all the inherent pitfalls: Software isn't readily available, and even the hardware is rumored to have problems. However, the bugs are being ironed out, and more software is coming to market each week.

But if you're the kind of person who never buys the first model of anything, buy a Quadra instead. The Quadra line is a great buy, and will continue to drop in price. And by staying with a Quadra, all existing software will work with your computer. Later, you can upgrade to a Power Mac chip for a few hundred dollars.

A Mac needs at least 8 megabytes (MB) of RAM, and it should have a hard drive no smaller than 200 MB. As with a PC, the higher the monitor's resolution, the better. Many Macs also come with a CD-ROM drive; if not, it can be added later.

Q. ***There are so many programs on the market that I don't know where to start. What is the right beginning software for me?***

A. If you are a complete beginner, and expect to move methodically into computing, I suggest you look into one of the "works" packages, such as Microsoft Works and Claris Works (see "Construction Software for Beginners,"), which are written for both the Mac and PCs (including Windows). These programs are mini-versions of full-blown applications — typically, they contain a word processor, spreadsheet, database, drawing program, and communications program, all served up in one neat package. For example, the word-processing module in Microsoft Works looks and functions like Microsoft's full-blown version, called Microsoft Word 6.0, and the spreadsheet works like Microsoft Excel. The database makes a good contact-manager, and the communications software will let you cruise the Infobahn. You can even make scaled drawings with the drawing module.

In many cases, these "lite" versions are all you will ever need to run your business. But they also serve as training wheels while you learn to use the computer, and they prepare you to move up to the more powerful applications. Also, there are Works add-ons containing premade forms, estimating templates, and sample brochure and newsletter formats that you can use as is or customize for your own business.

Q. ***I've heard that so-called software "suites" are a good deal. Should I consider buying them for my business?***

A. Software suites are the grown-up version of Works software. They are packages of popular software applications that business owners have bought separately in the past (see *State-of-the-Art Contractor*, 10/94). The three most popular suites are *SmartSuite* from Lotus, *Microsoft Office*, and *PerfectOffice*. PerfectOffice, for instance, consists of WordPerfect (a word processor), Quattro Pro (a spreadsheet), Paradox (a database), Inspire (a presentation program), and a mini-application called Symmetry to help the packages work together.

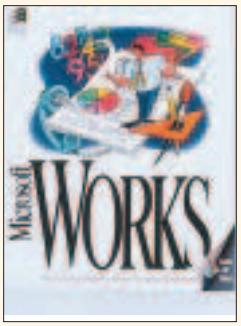
There's no doubt that it makes sense to purchase

Construction Software for Beginners

There are hundreds of programs on the market, and often the differences between them are slight. Here's a selection that will probably meet your needs.

General-Purpose Software for PCs and Macs

Claris Works
Claris Corp.
5201 Patrick Henry Dr.
Santa Clara, CA 95052
408/727-8227



Microsoft Works, Microsoft Office
Microsoft Corp.
One Microsoft Way
Redmond, WA 98052
800/426-9400

PerfectOffice (PC only)
The Novell Applications Group
1555 N. Technology Way
Orem, UT 84057
800/451-5151

SmartSuite (PC only)
Lotus Development Corp.
55 Cambridge Pkwy.
Cambridge, MA 02142
800/343-5414

Estimating for the PC

Buildsoft
UFAB, Inc.
Research Triangle Park, NC 27709
919/941-6269

EasyEst
Construction Management Software
9320 Carmel Mountain Rd., Suite C
San Diego, CA 92129
800/255-7407

GC *Works*
Synapse Software
1171 Titus Ave.
Rochester, NY 14617
716/467-5796

Precision Lite
Timberline Software Corp.
9600 S.W. Nimbus
Beaverton, OR 97005
503/644-8155

Quantum Leap
Lantron Technologies
429 Catalpa Ave.
North Plainfield, NJ 07063
800/235-6726

Turbo Construction Estimator
P.O. Box 2068
Vashon, WA 98070
800/321-1624

WinEst
WinEstimator
8209 S. 222nd St., Suite B
Kent, WA 98032
800/950-2374

Estimating for the Mac

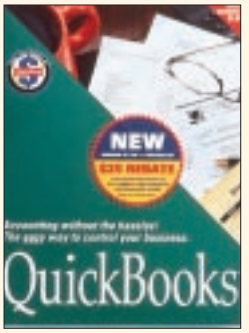
BidWorks
MacNail
Turtle Creek Software
651 Halsey Valley Rd.
Spencer, NY 14883
607/589-6858

Construction Mac
Revelar Software
772 E. 3300 S, Suite 100
Salt Lake City, UT 84106
800/669-5191

Scheduling for PCs and Macs

FastTrack Schedule
AEC Software
22611 Markey Ct., Bldg. 113
Sterling, VA 20166
800/346-9413

Microsoft Project (PC only)
Microsoft Corp.
One Microsoft Way
Redmond, WA 98052
206/882-8080



Accounting/Job Cost for PCs and Macs

Quicken, QuickBooks
Intuit
1555 Linfield Ave.
P.O. Box 3014
Menlo Park, CA 94026
800/624-8742

CAD for the PC

Chief Architect
Advanced Relational Technology
15640 Oakridge Ct.
Morgan Hill, CA 95037
408/776-0310

Claris Draw
Claris Corp.
5201 Patrick Henry Dr.
Santa Clara, CA 95052
408/727-8227

Solid Builder
Computer Integrated Building
P.O. Box 222
Occidental, CA 95465
707/874-2826

CAD for the Mac

MacDraft
IDD Inc.
1820-L Arnold Industrial Way
Concord, CA 94520
510/680-6818

MiniCAD
Graphsoft
8370 Court Ave.
Ellicott City, MD 21043
410/290-5114

a group of applications that are designed to work together, especially since they are half the price of the applications purchased separately. I wouldn't start out with them (the Works packages are simpler for beginners to use), but if you're already comfortable with a computer, then loading one of these suites is a smart choice. (Be forewarned: These are monster software packages that occupy 60 to 80 MB of space on your hard drive. They also require Windows.)

Q. ***What about estimating and job-costing software? They're the reason I bought a computer in the first place.***

A. If you bought your computer strictly for estimating (and you're not alone), you are in for a rude awakening. Estimating and the accompanying job-cost accounting are some of the most difficult tasks for any construction office, even as manual systems. My advice is: Walk before you run.

Estimating. The first step is to learn to use a "stand alone" estimator. These electronic estimators use a database of items — materials, labor, and subcontractors — from which you can pick what you need using the cursor keys or by pointing and clicking the mouse. They are easy to learn, and they produce quick, accurate estimates. There's a lot of work involved, however, especially when adding and deleting items in the database and changing prices.

Job cost. Stand-alone estimators do not, however, perform job costing. For that, you need to use an "integrated" construction software package that not only performs job costing, but produces estimates, develops schedules, and takes care of general accounting. Unfortunately, these packages are expensive, and beginners usually find them intimidating and confusing. One reason is that integrated construction programs usually force you to change your familiar routines to conform to the software. Trust me on this: *You don't want to change the way you do business while you are also learning to use the computer.*

A better solution is to use your estimate data in a simple, stand-alone accounting package, such as *Quicken* or *GC Works*. While these programs are not specifically designed to do job costing, they are flexible enough to use for that purpose. Keep in mind that accounting software will not teach you how to job cost, just as estimating software will not teach you how to estimate. Even integrated construction software packages assume that you understand the construction business; generic software provides even less instruction.

Q. ***How should I use a computer in my business?***

A. Start by using the computer to do the paperwork you do now by hand. For example, if you write letters and proposals on a typewriter, learn to use word-processing software. You'll save lots of time simply because you can store the documents in files that can be retrieved and modified later, instead of having to start from scratch each time.

Spreadsheets are great for beginners because they demonstrate the power and speed of computers while teaching you the fundamentals. I use spreadsheets to estimate, write specs, and create forms. You can even use a spreadsheet to set up a simple flat-file database to keep track of names and addresses.

If you do your own accounting by hand, a program like Quicken will really make your life easier. Not only will it store your data for you, but you can generate several different reports that display the information in different ways. And at the end of the year, all of your tax records will be easy to retrieve.

Once you're comfortable using a computer, you will find a hundred different ways to use it. You can create drawings, write up invoices and statements, and even design and print marketing materials, like brochures, flyers, and portfolios. Eventually, through the use of fax/modems, CD-ROMs, and scanners, you could eliminate paper from your office altogether.

The point is, computers are tools and they're here to stay. A construction business is a perfect place to put them to use. The sooner you get started, the sooner you'll reap the benefits. ■

Craig Savage owns and operates a construction company in Carpinteria, Calif., and writes JLC's *"State-of-the-Art Contractor" column. He also publishes two computer newsletters,* Macintosh Construction Forum *and* Window On Construction.