

Uncertainties, Mysteries, and Doubts

A lot of people find computers overwhelming, even threatening. That's sad because, in reality, they're neither. If you're curious and interested but still a little bit wary, that's only natural. Until recently, doing anything with computers required special skills, even special languages, and those who knew what it was all about weren't very interested in initiating everyone else.

Personal computers like the Franklin ACE changed all of that. True, no computer is as easy to use as a toaster or a calculator, but what you need to know to operate a personal

computer is explainable and comprehensible. What's more, it's quick and almost painless to learn. This booklet will give you a start.

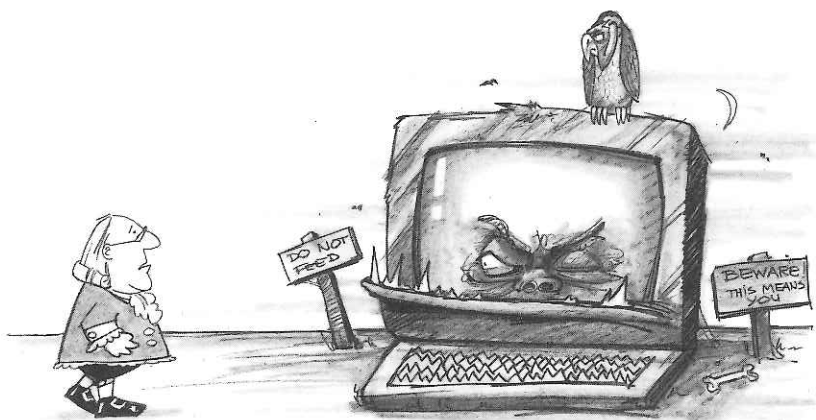
If you want to learn how to program, how computer graphics work, what disk transfer rates are, or how to master the dozens of other exotic sounding skills you hear about in computerdom, there are hundreds of other books on the market to help you learn all those things.

This one won't.

What you will find in this booklet and throughout all Franklin manuals is plenty of practical information, suggestions, and answers to questions that you might otherwise have to learn the hard way. You'll find advice about computer products — what they're for, how they work, what their quirks are, and so forth. In a field that's growing and changing as fast as computer science, you'll need this sort of information in order to make sound purchasing decisions.

Someone may already have begun to persuade you that a Franklin ACE will make your life complete. It may; it may not. People use computers for all kinds of reasons. Some people buy them simply to keep their kids quiet. There are, however, many other practical applications for a computer, ranging from financial forecasting to Space Invaders™, from word processing to setting up a blind date.

If you're having second thoughts about your curiosity, your interest, or your purchase, dispel those doubts. With a little practice you can put a computer to work and enjoy the process.



They Won't Bite — But You Can Bite Yourself

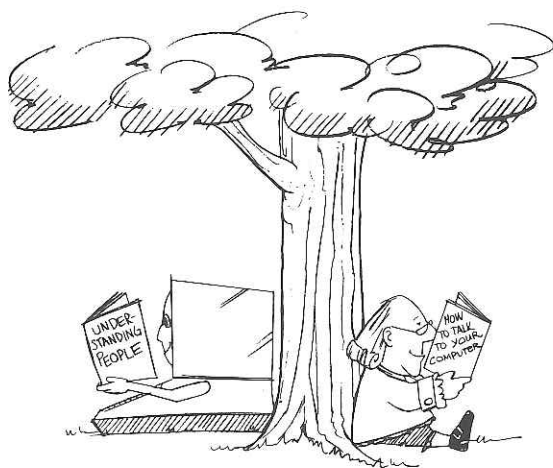
Even though computer types are always talking about bits and bytes (pronounced “bites”), most people aren’t afraid that they’re going to get bitten. But many worry that the machine will do something they won’t understand or that it will suddenly start to spit out all kinds of symbols and nonsense. Computer phobia is the fear of feeling incompetent and helpless in the face of high technology. With personal computers, however, there’s nothing to fear.

The On/Off Switch Is Never Out of Reach

One of the joys of using a personal computer is the feeling of complete control that you get by having the ON/OFF switch so close at hand. You’re in charge. Nothing is going to happen

unless you make it happen. And if the machine gets you confused, all you have to do is turn it off and start over. Your computer will do whatever you ask, whenever you ask.

True, computers do have a reputation for being fussy about the way you phrase your questions and commands. Some people even think they're evasive, somewhat like a witness in court who manages to avoid providing information by sidestepping the intent or spirit of a question. The fact is, you do have to develop something of a rapport with the way the computer understands what you tell it. That comes with a little practice. If you ever find yourself frustrated, just remember that ON/OFF switch.



As in all of life, awesome power is not without some responsibilities. Since you're in charge, if something goes wrong, then you're probably the one who's to blame. Exercise some discretion when using the machine, and look at instructions and directions as a way of developing a common sense about computers, as well as a way to assemble the components of your machine and get it running.

Getting a Feel For Computerdom

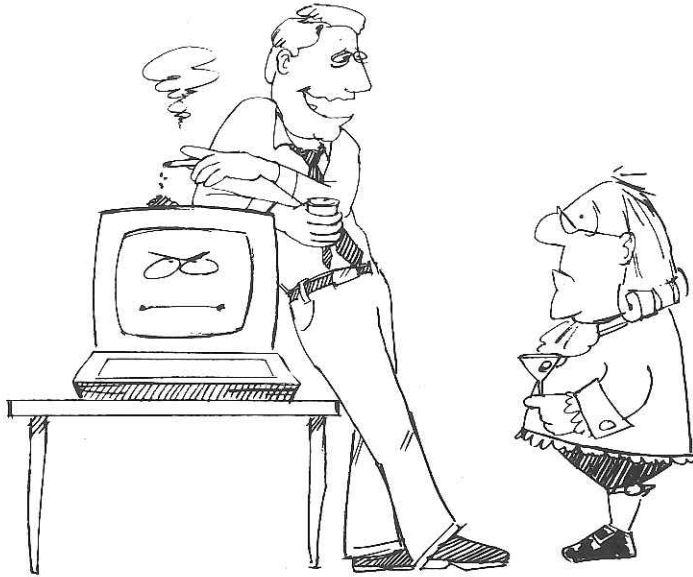
When you're first starting out, it's hard to get a feel for computerdom. Making a computer work for you takes some knowledge and skill, but it also takes a proper attitude or disposition. You can acquire the knowledge and skill readily, since those are both teachable and learnable. The attitude is a little more tricky.

It's a matter of staying loose while at the same time remaining methodical, analytical, and meticulous. That sounds impossible, but it isn't. Don't worry about making mistakes. Using a personal computer is a hands-on, learn-by-doing process that is somewhat less than perfectly straightforward. As long as you're analytical, you'll learn more from your errors than anything else.

Once you have your computer set up, you won't be able to hurt it with anything you may do at the keyboard. You can lose programs or data, but as long as you follow the correct procedures, there's little chance of your doing irreparable harm to the machine.

Making mistakes at the keyboard and mishandling the equipment are not the same thing, so be warned. You can do damage if you're not careful. Probably the most sensible

approach is to treat a computer, any attached equipment, and any diskettes as if they were an expensive stereo system and records or tapes. What you wouldn't do to your stereo and your record albums, you shouldn't do to an ACE or diskettes.



The World Can Live Without Bits and Bytes

You won't find out what bits and bytes are here. If you really want to know, look in a dictionary of computer terms. That may sound a little brusque, but the point is that you don't have to know these or hundreds of other specialized terms to use an ACE or any other personal computer effectively.

"Bits" and "bytes" are examples of the terminology that computer experts use to communicate with one another. You

can use most programs popular today without knowing or caring about bits, bytes, enable pins, annunciators, nibble, or the rest of the other jargon that keeps much of the computer industry detached from the rest of the world.

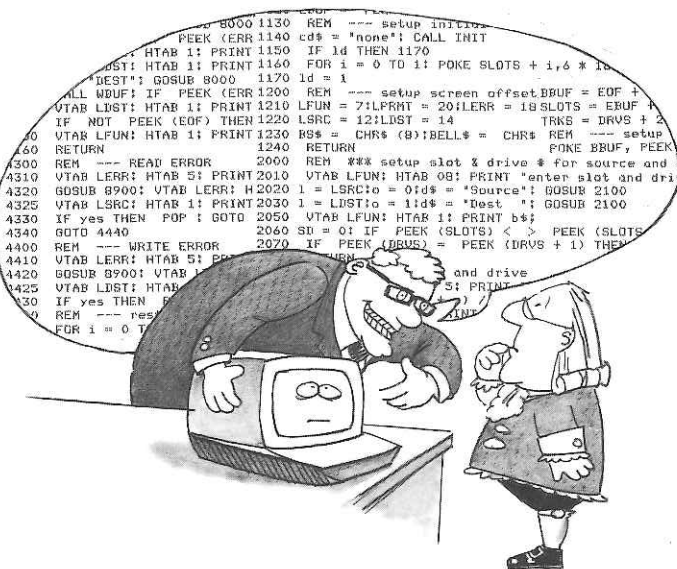
Dealing with the Knowledgeable

Probably few people in the history of the world have done a better job of making themselves incomprehensible than computer scientists. It's too bad, really, because the technology is finding its way into every aspect of life. Yet it seems that virtually all the experts' explanations of how computers work do little more than make computer processes absolutely opaque. There are reasons why this happens, but those aren't particularly relevant at this point.

Don't let them confuse you! And more importantly, don't be intimidated if you don't understand what a computer person tells you. Everything that you need to know can be explained in plain English. If someone begins to lose you, it's not your fault. Often those who are technically competent are among the least articulate members of society.

There are computer people who can explain things clearly. You'll know who they are by their patience and their pace. They'll explain things slowly and simply without seeming condescending. They'll illuminate the powers and workings of the machine. They won't, as a rule, take themselves too seriously and they'll refrain from inundating you with the quasi-English jargon and syntax of computerdom. Such people are few and far between. When you find one, stick like glue.

Avoid, at all costs, computer people who talk a mile a minute, ladle jargon into their speech, and use common words in ways that are almost, but not quite, normal. These may actually be very nice human beings, but when they're talking about computers, they can go on forever, ignoring the glazed expression on your face and ignoring you, for that matter. Some will even continue talking after you've walked away. Listen to them politely, but escape as quickly as possible. They can make you hopelessly, even terminally, confused.



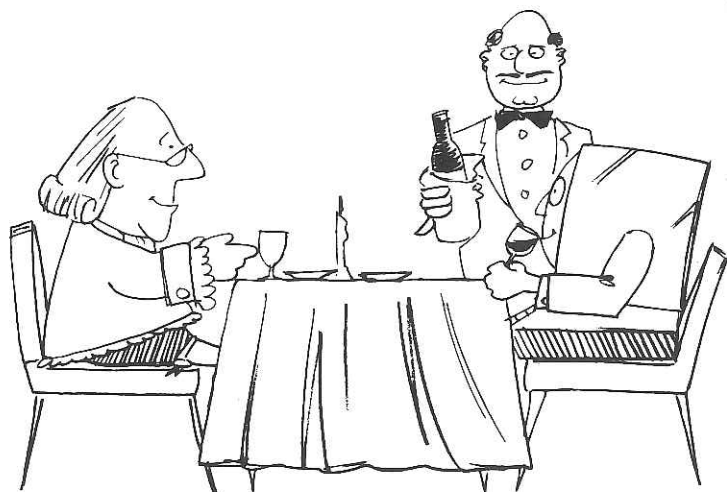
Somewhere down the line, through repeated exposure and osmosis, you'll start to pick up the jargon and learn computer language. Until you do, find a dealer or knowledgeable friend that you can understand, and avoid those people you can't. Remember that you can use a personal computer very effectively without understanding even a tiny percentage of what experts say when they're talking to one another.

You're Not a Programmer — It's a Dirty Job

Programming is something else you don't have to know anything about in order to use a personal computer. You could probably spend the rest of your life doing nothing more than using the programs that have already been written. Some computers, as a matter of fact, were designed with users, not programmers, in mind. The Franklin ACE, for example, is a user's delight.

That's fine, because you don't want to be a programmer. Not yet, at least. Instead of trying to write a program as one of the first things you do, spare yourself the headaches and use what already exists.

You'll need to learn how to use others' programs before you try to create your own. As you get accustomed to other people's programs, you'll probably come up with ideas for simple tasks that you'd like to write programs for yourself. Then, if you want to get down and dirty, you'll have some basis from which to learn to program. At that point, you'll find dozens of books on the market to teach you how to do just that.



What Can The Computer Do, Anyway?

A lot. With a "spread sheet" program, you could easily manage budgets for, let's say, a real estate office, a little league team, a suburban high school, or the average household. With the same computer, you might go into the office or come home from work (depending on whether you're coming or going) and read the financial pages of six newspapers from around the country.

You might write a letter or a report and be reluctant to let anyone read it until the spelling was checked. The computer could do that for you, too. When you were finished, you could play chess or find out about the weather or get a list of recommendations for wines to serve with Terrine Maison.

Then the computer could help you plan a banquet. Or a diet.

Or compound interest. The list goes on and on. Whether you want to find out the price of wheat in Kansas or gold in London, a personal computer can help you do it instantly.

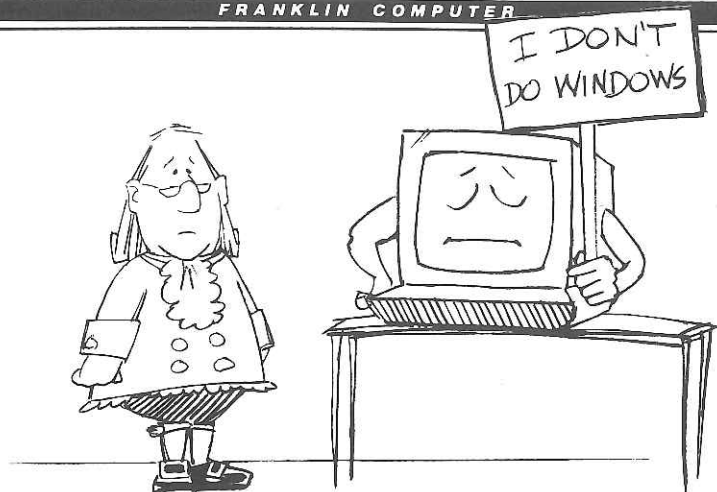
In general, if you can imagine it, someone, somewhere has already figured out a computer program that will do it for you. Since the Franklin ACE is compatible with one of the most widely used personal computers in the world today, there's a vast library of programs available to use on the machine.

A good rule of thumb to keep in mind is that you shouldn't buy a computer unless you know of at least two things that you can use it for *before* you buy. Using the packing box as a planter for your petunias shouldn't be one of the two uses for your new acquisition. But even if it is, you're sure to find more.

Virtually everything you can do with paper and pencil, you can do with a computer in a fraction of the time, with a fraction of the effort. The machines are durable, relatively inexpensive, and thoroughly adaptable to the needs and preferences of small businesses and home users.

What It Can and Can't Do

Lest you be misled, a personal computer is NOT designed to do all your work for you. The computer's role is more that of a helper; it will take care of the tiresome jobs that bore you to death. The computer's strengths lie in its ability to perform miserably dull tasks endlessly and accurately, leaving you free to think about solutions to the real problems at hand.



Since a computer won't think for you, expect no miracles. If you don't already know how to do something, then there's absolutely no way that you'll pull it off just because you're using a computer.

If you can't write a novel with a pencil or a typewriter, then you'd better hire a ghost writer, preferably one who knows something about word processing, before you buy a computer. The computer can take much of the mechanical drudgery out of any task, but it can't think or organize all by itself. Not yet, anyway.

Besides what it can't do, there are certain things you wouldn't want it to do even though it could. Just as you wouldn't take out your calculator to add five plus three, you shouldn't use your computer to write down a shopping list of five items. The pad and pencil will be faster every time. You'd look funny carrying an ACE to the supermarket with you, anyway.

Bear in mind, too, that personal computers can do only one job at a time. Suppose that you have computerized your



appointment book. Further suppose that you're using a spread sheet program to organize your bookkeeping. The phone rings. The IRS wants to make an appointment with you for an audit. You're in trouble, not just because of the audit, but because your appointment book program isn't available. What to do? Miss the appointment or destroy the records that could save you? Either way, you're lost. Always keep the availability factor in mind when deciding whether or not to computerize.

Personal computers also have certain physical and functional limitations. The ACE, for example, will choke very quickly if you try to feed it the payroll information for a Fortune 500 company. It just doesn't have the capacity for such a task. The system for storing information is too small, and the computer itself can't hold enough information at any one given time to perform the necessary calculations efficiently.

Imagine a filing cabinet with four drawers. You could probably store all of your family data in that cabinet with room to spare. It could hold all of your canceled checks, your medical records, your kids' old report cards, insurance

policies, and the like. But if you were filing the customer information for your local electric company, you'd be lucky if all of the information on customers whose names begin with "A" would fit in one cabinet.

So too with a personal computer like the ACE, except that instead of a filing cabinet, you have a floppy diskette, a sort of electronic filing cabinet. It stores information that you can bring into the computer to review, update, and manipulate. Theoretically, you could store an electric company's customer files on a floppy disk system. Practically, it would be a disaster. You'd need several thousand floppy diskettes (file cabinets) to hold all the information. And because a personal computer's memory size is also limited, you could only do a few calculations at a time. It's like using a shovel where you need a bulldozer.

Generally, if your data is of a personal or small business nature, you should be able to use a personal computer effectively.

What You Have to Remember About Memory: Size Counts

If you make the mistake of talking to a salesperson or a computer expert about memory size, you might find yourself descending into a hole from which you have no hope of returning. The only thing you really have to know is that 64 is larger than 48 and that 48 is larger than 32. The K and the reference to RAM that invariably accompany these numbers are right at the edge of the precipice you want desperately to avoid. (The fatal question is, "What are they?") All you really need to know is that the numbers are associated with RAM, not ROM or a combination of the two.

In order to use some programs you need at least 32, and for others you need at least 48. Others take only 5. The "at least" is very important. It usually means "barely." Programs that take 32 usually work better on 48, and those that take 48 often work better on 64.

Better in what sense? Let's say you're using a data base management system that takes at least 48. You're working up a report that covers information gathered and entered over several months, and you want the computer to compile the data for the entire period. It may not be able to. Perhaps it will be able to do it for one month and then another month and then a third month. You'll have to put the three sections together yourself. With larger memory capacity, the computer could probably do the whole job for you.

Speed is another factor. The machine can pull data from memory much faster than it can retrieve the same data from a diskette in a disk drive. If you were using a word processing program, you'd be able to go through the text, editing and moving paragraphs from one place to another much more quickly if your computer had 64 instead of the 48 that the program manufacturers recommend as a minimum. With a long text, a computer with a smaller memory would be constantly moving text to and from the diskette in the disk drive. It gets cumbersome.

There's also the future to consider. Programmers are constantly writing programs that are bigger and better than those that came before.

A Good Time To Be Interested In A Personal Computer

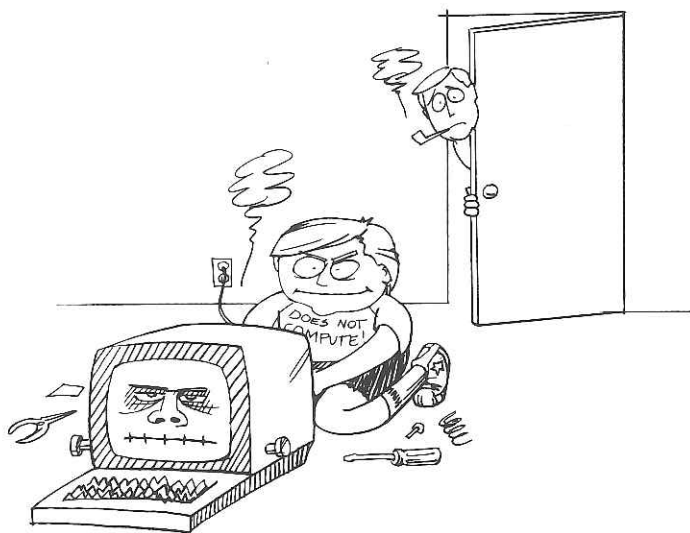
Within the last decade, computer systems that might have filled a small room with board after board of transistors, tubes, and integrated circuits have been reduced in size to where they fit easily into a desktop case. Systems that once cost tens of hundreds of thousands of dollars are now affordable for the home or small business. The sheer speed of the advances in computer technology makes all other advances in the history of technology look like molasses in January.

In the early seventies, Hewlett-Packard and Texas Instruments came out with the first programmable calculators. Suddenly it was possible for the average person to carry an instrument that would do simple arithmetic, chart biorhythms, and provide the calculations needed to navigate by stars.

Some people became so enamored of these devices that they lost sleep playing with them. A few were so overwhelmed that they quit their jobs to learn about computers and programming. Some went to school unabashedly. Others hid in garages, basements, or dusty attics. Eventually, most emerged to take high paying jobs in a booming industry desperate for people with technical expertise.

Not long after that, build-it-yourself computer kits became available. Otherwise sensible people bought soldering guns and began to attach electronic components to plastic-like boards riddled with tiny holes.

Exactly what they were doing was a mystery to all, even



them. These kits seldom had anything approximating complete instructions. Untold hours were invested with minimal success. There's no telling how many dining room tables were marred by scorch marks from soldering irons left glowing by sleeping fanatics whose own fervor had already burned out for that evening.

It's all different now. The machines come assembled and, for the most part, with adequate instructions. They're relatively inexpensive, reliable, easy to use, and remarkably versatile. There's also enough competition in the marketplace to keep quality high and prices stable.

It's definitely the right time to buy. Being overcome by fanatical fervor is still a possibility, but burn marks in the finish of fine furniture are no longer a likely result of the affliction.

Compatibility — The Good, The Bad, And The Ugly

Today there's some controversy in personal computerdom over what constitutes compatibility. You'll probably hear something about it when shopping for a computer. Usually compatibility means something different to the manufacturer than it does to the computer buyer.

To the buyer, it means that if something — a program or some attached device — works on one computer and another is compatible with the first, then that program or device should also work on the second computer. Very simple. The buyer thinks compatible means "the same as." But the manufacturer means that the program or device was *designed* to be 100% compatible.

Did the manufacturer succeed in his design? Well, almost everything works. Does the manufacturer know of anything that doesn't work? Well, there are one or two programs that don't quite work. Watch out! You're about to confront Murphy's Law of Compatibility: If the manufacturer claims it's compatible, the purchaser assumes all responsibility for determining whether or not the manufacturer is right.

Franklin, for example, doesn't claim that the ACE 1000 line is 100% compatible with comparable APPLE® computers. Because the ACE has features not found in the APPLE, it's different. Perfect compatibility is lost.

A good example is the keyboard. It produces upper and lower case characters, a definite advantage to the user over the

APPLE, which has only upper case capability. This means that ACE owners confront a problem now and then if they use a few of the programs specifically designed for the APPLE.

Take solace in the fact that the advantages provided by the ACE's unique design more than make up for any problem you might encounter. Whenever possible, reliable companies warn you about compatibility problems and try to offer solutions.

Be Choosy About The Company You Keep

When you buy a personal computer, you're getting more than just a machine. You're really establishing a relationship with a company, so it's important to choose carefully. Every computer company has a somewhat different attitude toward its customers.

Unfortunately, that attitude is seldom readily apparent before purchase and sometimes only too painfully clear afterwards. In an industry where the oldest company may have been manufacturing machines only a few months longer than the youngest, relative longevity isn't necessarily a reliable indicator of quality.

Probably the best way to judge a company is to determine whether you, the customer, are of primary importance or if you're merely incidental to the marketing scheme.

To see where you fit in, check the instructional manuals provided with the computer. Are they cute but short on practical information? Are they written in computerese by technicians totally blind to the realities of the English language? Does the company acknowledge the limitations of the technology or were the manuals written by some ad agency bent on creating an image of corporate perfection? Some of the largest, most

powerful companies in the marketplace take their customers for granted. It shows in the documentation they provide.

Does the company have service centers available or are repairs strictly the customer's problem? Some companies can't be bothered. They don't even provide warranties. Give the main office a call to see if there's a customer service department.

The Dealer

Another important relationship you'll establish is with your dealer, probably your most valuable ally if you want to get the most out of an ACE or any other personal computer. What kind of help do you get when you walk in the door? Do you get good, clear, objective advice or sales hype? You'll probably need a lot of help making initial and future purchases, so find a dealer that you feel comfortable with and can trust. If, when you walk into the store, the salespeople seem more interested in the computers than they are in you, look for another dealer.

Many dealers offer evening courses on how to use personal computers. Sit in on a session and see if the instructor is a good communicator, sensitive to the needs of the class. These classes are usually available for a minimal charge, but the quality of the teaching varies. A good dealer will be concerned that customers learn how to get the most out of their computers.

Often, dealers provide repair service for machines. Check to see if other customers have been satisfied and see if the company provides training for dealers' technicians. This is the case with Franklin, but not so with every company. Look for evidence of teamwork between company and dealer.



True Grit: The Adventure Of Mail Order

If you decide to buy a computer from a catalog, best of luck. You can find some tremendous bargains, but you'd better know what you're doing before you even consider it. The principle of caveat emptor applies here more than anywhere else.

What are you going to do if the computer you ordered comes disassembled, all the parts in plastic bags, the electronic components stuck in chunks of styrofoam? You have no dealer to rely on for help. Assuming you get it all together, what will you do if it doesn't work? One of the components may be bad. How are you going to know which one? Maybe you can send it back to the company, but you'll have to anticipate a long wait before you get your new computer back.

It's awfully hard to know exactly what you're ordering unless

you're very familiar with personal computers. Although mail order prices can be tempting, the safest way to buy a computer is through a company authorized dealer. This is your best guarantee of getting the kind of support you'll probably want.

Clubs

A good source of information and bargains in computers, accessories, and programs is the users' club. Generally, these clubs are groups of people using the same or similar computers. They're interested in sharing information and programs, as well as helping one another solve problems that arise when using new technologies.

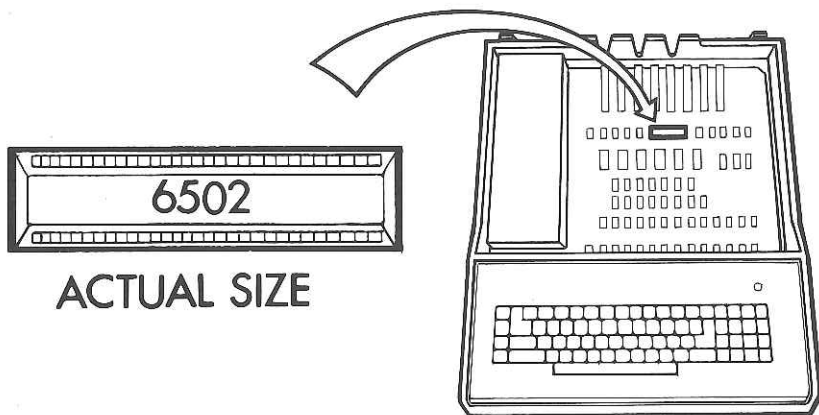
Often the clubs have a general meeting once a month with a speaker or special presentation. Between general meetings, groups of people with special interests frequently get together to help one another or just discuss what they're doing. The atmosphere is usually convivial and people have a chance to meet others who share their interest.

The companies and dealers also find that these clubs provide a good medium of communication. Dealers announce special prices to club members and companies let the groups know about new products. It's a good way to keep in touch.

There's More To It Than Just The Computer- Additional Equipment

If you thought the computer was expensive...

Inside an ACE and similar computers is a little electronic device called a microprocessor. How small is it? The one that runs the ACE is only about as big as the **SHIFT** key on the keyboard. But it's the heart of the system. Without a microprocessor, you wouldn't have a computer.



Everything else in the case is there to help the microprocessor do its job. You have the power supply to convert and regulate the electrical current going to the computer and its support devices. You have some devices called memories that hold information in the computer while you use it. You have some slots at the back that allow you to plug in devices that expand the capabilities of your machine. You have the keyboard. The microprocessor can't do anything by itself. It needs all the elements of the system to do its job.