What You Have To Know: Seven Commandments (Developing The Uncommon Sense of Computerdom)

To use an ACE properly, there are a few general rules that you should know and obey. Observing Franklin's Seven Commandments of Computerdom can save you from a lot of grief, not the least of which is the noxious horror of silicon on fire.

I. Electrical Power — Don't Change A Bulb With The Power On

The ACE is an electrical device, so never tinker with anything inside it when the power is on. Never. Never. Never. It's dangerous for you, and you can seriously damage your ACE.

Never plug in (or take out) one of the interface cards while the power is on. You'll ruin something almost every time. Unfortunately, it's easy to forget this rule, especially when you

want to try a new card or do something with your computer that requires a different set of cards.

Train yourself to be good. Make a habit of turning off the power and pulling out the plug in the back of the unit before you make any changes inside. Then, every time you touch a card, check to make sure that the power cord is disconnected. Always. Force yourself.

Someday you're going to forget. Not even computerdom is free from sin. When you do, immediately turn off the power. Look for obvious signs of damage such as smoke or glowing circuits. Whether you detect any damage or not, consider your system suspect until you or your dealer can verify that everything is OK. In particular, don't take chances with any of your important programs until you're sure that the system is functioning properly. In other words, don't use any diskettes that you can't afford to destroy.

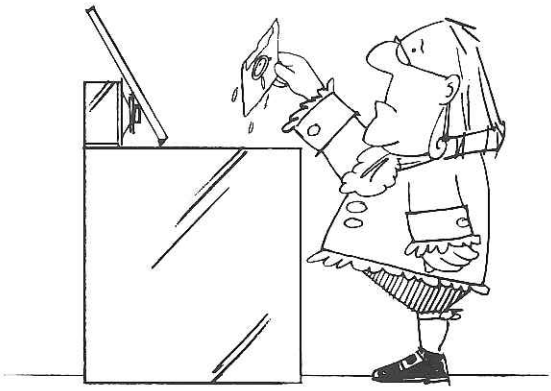
II. *Diskettes Are Not Dry Cleanable*

Diskettes are very delicate objects. Treat them gently, tenderly. Imagine damaging a diskette holding several hundred dollars' worth of programs or several days' worth of work. Unless you had a backup copy, you'd have nothing to show for your investment or your time. Here are a few rules to follow so that you won't mangle your diskettes.

1. Let nothing touch any of the exposed areas on the diskette.

2. Don't bend, fold, staple, or otherwise mutilate your diskettes. Avoid paper clipping anything to them. Don't even write on the label of the diskette unless you use a felt-tipped pen and a featherlight touch.

3. Never put diskettes in the oven or the refrigerator. More seriously, don't store them anywhere you would feel uncomfortable in a light sweater.



4. Keep diskettes away from magnetic fields. Some devices that generate these fields are TVs, some display monitors, telephones, and airport metal detectors. For this reason, don't lay your diskettes on, near, or under your display screen or your telephone.

5. Keep diskettes clean and dust-free by storing them in a case whenever they're not in use. Never wipe them off to clean them. Refrain from smoking around your diskettes or drives. The smoke contains dust particles.

III. *Reset Switches Are Your Worst Enemy*

Like most personal computers, the ACE has a dangerous little button called a reset switch. On older models (the ACE 100 line), this button is at the upper right-hand corner of the keyboard. On the newer ACEs (the ACE 1000 line), RESET is hidden from view but still easily accessible. Don't go looking for it yet, though. If you don't know where it is, you'll never have any problems with it.

What's RESET for if you're not supposed to push it? Well, there are times when a program can become so confused that it will start ignoring you. (The program seems to go into never-never land.) Why does this happen? That depends on the program, the computer, the diskette, the phases of the moon, the return of the swallows to Capistrano, all kinds of wacko things. It happens.

This is where RESET comes in. RESET forces the errant

program to pay attention to you. Regardless of whether it's gone off on its own while playing Tank Trek, figuring amortization schedules, or calculating the distance of the nearest black hole in space, it stops its wayward behavior and answers the RESET. This is where you can get into trouble.

If the program is sending any data to the disk drive for storage when you hit RESET, it will stop. This can wreak havoc, wiping everything off your diskette.

Even if you avoid this particular problem by leaving RESET alone when the disk drive's light is on, RESET can still cause trouble. For example, if you've typed information into your ACE, but you haven't sent it out to a diskette for storage yet, hitting RESET may destroy all the information you have in the machine. The effect that this has on a typical user is not pretty.

Here's a good rule regarding RESET. Don't ever touch it. If you just can't resist the temptation, hit it only when you're *completely* finished with whatever program you're using. Never use it while the computer is sending something to or receiving something from a disk drive. If you're unsure

whether or not some of your data is on the diskette, try everything else you can think of to bring the program back under control before you hit RESET.

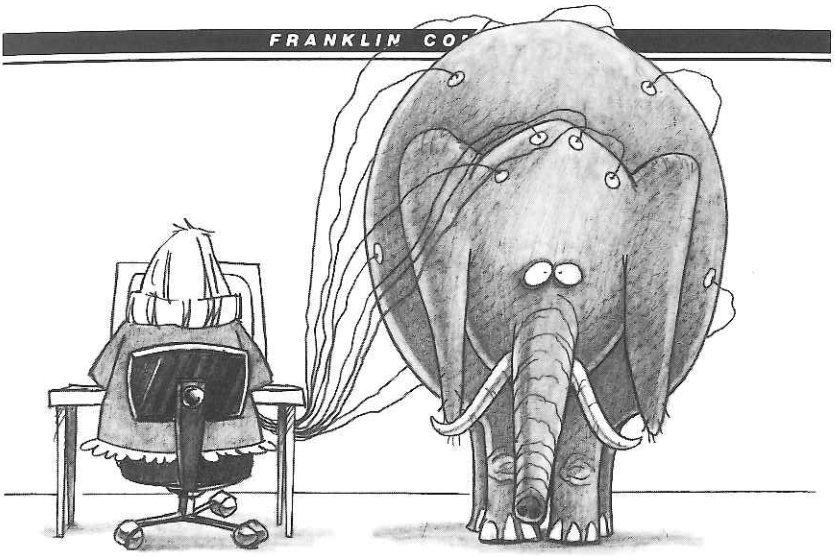
These same rules apply to the ON/OFF switch in the back of the ACE. Turning the ACE off while you're using a program or while the computer is sending or receiving a program or data from the diskette is worse than hitting RESET. Be even more strict about following the RESET rules when it comes to turning the unit off.

IV. *An Elephant Never Forgets, But You Didn't Buy An Elephant*

No matter how hard you try, you'll never make a diskette last forever. They wear out. Whenever your disk drive's red light is on, a hard ceramic surface is rubbing on the diskette as it turns in the drive. Sooner or later, ceramic prevails over plastic and the diskette wears thin in spots. In fact, the program or data will actually rub off.

Fortunately, this usually takes a long time. How long depends primarily on how you treat the diskette. It also depends on how often you use it, whether or not your drive is properly adjusted, and whether or not you keep your fingers off the plastic surface beneath the diskette jacket. Never entrust your life, your love, your data, or your time to anything as fickle as a diskette. Not unless you back it up.

Backup, in computerdom, means making copies, especially of diskettes. Once you've made a backup copy, you can rest easy. The ACE **DOS** and **CP/M** diskettes both have copying programs.



When the original diskette goes bad, you'll have nothing to worry about. Make a copy of your backup and keep right on going. As long as everything is working properly, copies of copies of copies, etc., will all be identical to the original.

The second greatest joy in personal computerdom is to reach nonchalantly for your backup diskette when your original gives up the ghost. The first greatest joy is when the backup works. In numbers there is safety and reason to act blasé.

Backup. Backup. Backup. To fail to do so is folly. A blank diskette and the time it takes to make a copy are a bargain if you compare them to the cost of replacing the data and programs on a diskette that gets damaged. Backup. Backup. Backup.

From what you know about the impermanence of diskettes and the importance of making backup copies, you may find this hard to believe, but it's true. There are programs out there designed so that it's almost impossible to make copies of them.

You can't do it unless you happen to be a computer genius with plenty of free time on your hands. With some, you can try 'til doomsday and you'll never make a successful copy. You're more in a position of being used by the program than you are of being a program user.

Program manufacturers tend to regard all customers as potential thieves. They know you're going to try to backup their program, despite their best efforts to stop you, and that sooner or later you're going to succeed. Once you do, conceivably, you could start to hand out copies of the program like candy to everyone you meet, thereby depriving the manufacturers of deserved revenues.

Many companies ask you to sign a licensing agreement that specifically prohibits you from such dissemination of the program. These licensing agreements typically stop just short of requiring you to sign away your life, your house, and your first-born child. From the manufacturer's viewpoint, though, it's all perfectly reasonable, a simple matter of self-preservation. Typically, manufacturers won't even talk to you about any problems with programs unless they have your release on file. It's tough to be judged guilty until proven innocent, but the manufacturers have some legitimate

concerns, too.

Legitimate concerns or not, some of their programs are downright diabolical! You think you've made a perfectly good copy and then just after you've typed in your 10,000th character (or some other magic number), the program checks itself to see if it's a copy. This is one program function that the programmer has tested and retested so that it works perfectly every time. When the program discovers that it's a copy, your program, along with all your data, vanishes.

Fortunately, the ACE can't explode under program control. Some programmers will stop at nothing to punish you for making a copy of their program!

There is a way to fight back, though. You might not win the war, but you can launch a strong counterattack. What you need is a weapon, a program called a nibble copier. It's a cute name, but its purpose in life is noble. It's designed to copy uncopiable programs.

The problem is that a nibble copier can't take on everything the enemy throws against it. Some programs are vulnerable to it; others aren't. There are a number of nibble programs available, each capable of copying a different group of programs. By buying two or three nibblers, you'll have a pretty good arsenal to use against these villains. You still won't be able to copy every single program that you encounter, but you'll be successful a good percentage of the time.

Nibble copiers are expensive and take time and skill to use effectively, but there isn't any real alternative, short of refusing to buy uncopiable programs. A boycott isn't practical, however, since nearly every program of any value has some sort of copy

protection built into it. Until consumer protests become loud enough to force manufacturers to stop this practice, nibble copiers are your only hope for good program backup.

V. *You Can't Fix It But You Can Make It Worse*

It's easy to pop the lid off the ACE and get at the inner workings of the machine. This "pop-top" design, like anything else, has advantages and disadvantages.

The principal advantage is that you can add a wide variety of peripheral devices very quickly and easily. The principal disadvantage is that you also have easy access to all the other internal parts of the machine that you really should leave alone unless you know exactly what you're doing.

Be strong. Resist the temptation to touch things that don't pertain to connecting peripheral devices. A computer isn't like an electric lamp or a vacuum cleaner. You won't find any loose wires that need reconnecting or any fuses to replace. In fact, you can't service any of the components, so don't even consider it, no matter how handy you may be working on a stereo. It takes special equipment to test and repair the ACE. Your dealer is the one best equipped to do computer maintenance, so leave any repair work to the experts at your dealer's shop.

VI. *Promises: Take Each With A Grain of Salt*

One of the first things you discover when you decide to buy additional equipment or programs for your ACE is that there are a lot of people out there anxious to separate you from your money. There are a staggering number of accessories available. Anything you want you can find. But purported capabilities are often different from what the program or peripheral device will actually do. You've got to try before you buy.

Some people will try to sell you anything, whether it works or not, so be prepared for hype. Marketing departments and advertising agencies know that sizzle sells units. Slick, professional-looking packaging accompanies almost every product on the market today. Don't be deceived. Leather-like binding and gold letters do not a good program make.

In general, avoid buying when performance is based on a

promise, and be leery of products if their usefulness depends on developments expected "any day now." In this industry, availability promises are, at best, hopes and, at worst, outright lies. If something is guaranteed to appear in 30 days, go back in three months.

A reputable dealer will be happy to demonstrate equipment or programs that you're interested in. Just ask.

If you want to remain friends with your dealer, though, try to limit extensive evaluations to higher priced products. Don't expect hours of explanation and demonstration for every $15 game program. However, if you're buying a $300 word processing program, you have every right to insist on a complete trial run.

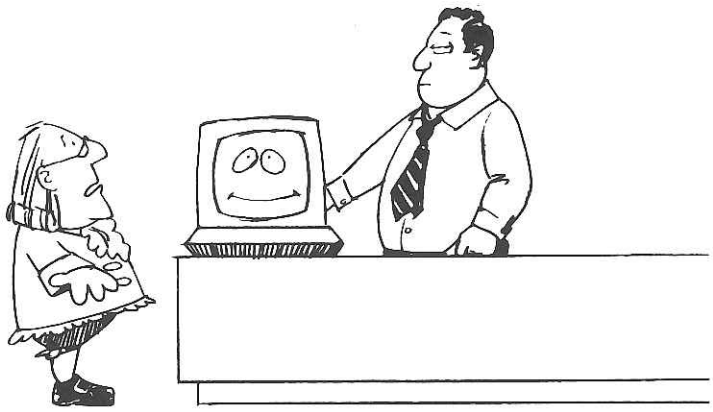
No dealer stocks every product that might pique your interest; it would take half a city warehouse district just to store them. Fortunately, there are evaluation methods other than a trial run at your dealer's showroom. Search out independent reviews of the product published in the personal computer magazines. Some of these publications are helpful for both product evaluations and general information on what's happening in the industry. Consider subscribing to several. It pays to keep up with developments in the personal computer field.

Your local computer club is another alternative. These are excellent sources of information about the quality of accessories. If several club members decide to buy the same item at the same time, they can often get a discount by placing an order together. Other times, companies simply offer special deals to club members. If the products are no good, you'll hear boos and catcalls when the programs or devices are mentioned. You might want to take what you hear as a form of counsel.

Although most advice should be taken with a grain of salt, in general, users know best.

VII. *Be Patient — It's Not A Perfect World*

As a computer user you should be aware of the "I am not crazy" syndrome. Typically, a person takes a machine into the dealer for repair of a problem, only to find that the machine works fine. The repairperson then looks quizzically at the customer, who sputters, "I am not crazy. It really didn't work before!" This happens so often in the personal computer industry that most old hands know that the quickest way to fix a problem is to try to show it to someone else.



This is stretching the facts a bit. Most of the time, if the computer doesn't work at home, it won't work at the repair shop either. But the inexplicable does happen.

Occasionally a program won't work the first time you try it but will work perfectly the next day. You may try to print something and nothing happens. Try it again and, sure enough, it prints. These kinds of occurrences are rare, but something similar probably will happen to you sometime.

Problems of this sort aren't cause for concern unless they occur consistently with certain programs or peripherals. Persevere. Try whatever is giving you the problem several times. If it doesn't go away by itself, read the manual and try again. Fiddle with it. There may be an error in the manual. Try commands similar to the ones in the documentation. If you have another program that works perfectly, try running it to make sure the problem is the new program and not your machine. Look at the manual and try again. If that doesn't work, call on your dealer, an experienced friend, or the manufacturer.