

# MURPHY'S LAW

IT HAS LONG BEEN the consideration of the author that the contributions of Edsel Murphy, specifically his general and special laws delineating the behaviour of inanimate objects, have not been fully appreciated. It is deemed that this is, in large part, due to the inherent simplicity of the law itself.

It is the intent of the author to show, by references drawn from the literature, that the law of Murphy has produced numerous corollaries. It is hoped that by noting these examples, the reader may obtain a greater appreciation of Edsel Murphy, his law, and its ramifications in engineering and science.

As is well known to those versed in the state-of-the-art, Murphy's Law states that "If anything can go wrong, it will". Or, to state it in more exact mathematical form:

$$1 + 1 \star 2$$

where  $\star$  is the mathematical symbol for hardly ever.

Some authorities have held that Murphy's Law was first expounded by H. Cohen when he stated that "If anything can go wrong, it will during the demonstration". However, Cohen has made it clear that the broader scope of Murphy's general law obviously takes precedence.

To show the all-pervasive nature of Murphy's work, the author offers a small sample of the application of the law in electronics engineering.

## Engineering

- I.1 The more innocuous a design change appears, the further its influence will extend.
- I.2 Firmness of delivery dates is inversely proportional to the tightness of the schedule.
- I.3 Dimensions will always be expressed in the least usable term. Velocity for example, will be expressed in furlongs per fortnight.
- I.4 An important Instruction Manual or Operating Manual will have been discarded by the Receiving Department.

## Mathematics

- II.1 Any error that can creep in, will. It will be in the direction that will do the most damage to the calculation.
- II.2 All constants are variables.
- II.3 In any given computation, the figure that is most obviously correct will be the source of error.
- II.4 A decimal will always be misplaced.

## Prototyping

- III.1 Any wire cut to length will be too short.
- III.2 Tolerances will accumulate unidirectionally toward maximum difficulty of assembly.
- III.3 Identical units tested under identical conditions will not be identical in the field.
- III.4 The availability of a component is inversely proportional to the need for that component.
- III.5 If a project requires  $n$  components, there will be  $n-1$  units in stock.

III.6 If a particular resistance is needed, that value will not be available. Further, it cannot be developed with any available series of parallel combination.

III.7 A dropped tool will land where it can do the most damage. (Also known as the law of selective gravitation.)

III.8 A device selected at random from a group having 99% reliability, will be a member of the 1% group.

III.9 When one connects a 3-phase line, the phase sequence will be wrong.

III.10 A motor will rotate in the wrong direction.

III.11 The probability of a dimension being omitted from a plan or drawing is directly proportional to its importance.

III.12 Interchangeable parts won't.

III.13 Probability of failure of a component, assembly, sub-system or system is inversely proportional to ease of repair or replacement.

III.14 If a prototype functions perfectly, subsequent production units will malfunction.

III.15 Components that must not and cannot be assembled improperly will be.

III.16 A dc meter will be used on an overly sensitive range and will be wired in backwards.

## General

IV.1 After the last of 16 mounting screws has been removed from an access cover, it will be discovered that the wrong access cover has been removed.

IV.2 After an access cover has been secured by 16 hold-down screws, it will be discovered that the gasket has been omitted.

IV.3 After an instrument has been fully assembled, extra components will be found on the bench.

IV.4 In an instrument or device characterized by a number of plus-or-minus errors, the total error will be the sum of all errors adding in the same direction.

IV.5 In any given price estimate, cost of equipment will exceed estimate by a factor of 3.

IV.6 In specifications, Murphy's Law supercedes Ohm's.

The man who developed one of the most profound concepts of the twentieth century is practically unknown to most engineers. He is a victim of his own law. Destined to a secure place in the engineering hall of fame, something went wrong.

His real contribution lay not merely in the discovery of the law but more in its universality and in its impact. The law itself, though inherently simple, has formed a foundation on which future generations will build.

In fact, the law first came to him in all its simplicity when his bride-to-be informed him that his boss had "gazumped" him to the altar.

This hitherto unpublished photograph is just after he had heard his ex-fiancée's news.



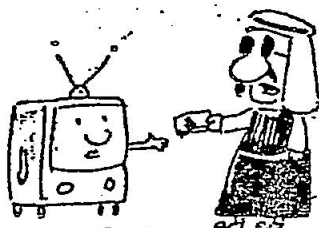
Edsel Murphy's photograph was taken just after he had heard his ex-fiancée's news.

# THE CONZO GLOSSARY OF VIDEO TERMS

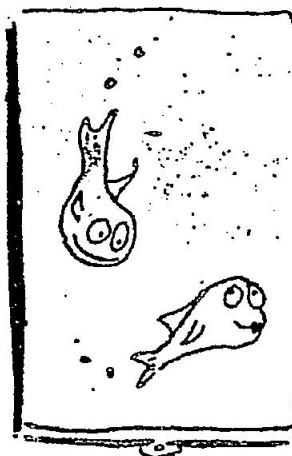
By Randi Hacker, Dai Kornberg  
and David Sheft



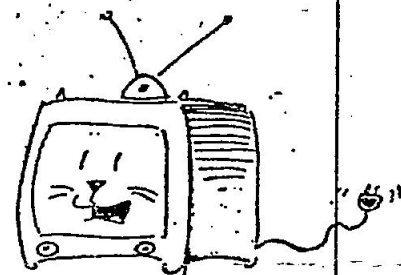
**Beta**  
What Italian gamblers do.



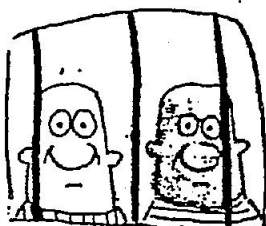
**BetaScan**  
An FBI entrapment operation.



**C Mount**  
Fish making love.



**CATV**  
A television set that meows.



**Color Bar**  
An integrated jail.



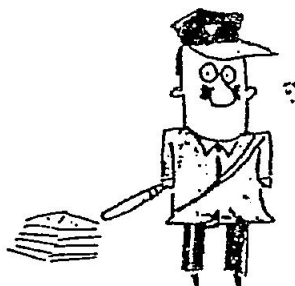
**Color Burst**  
A rainbow-hued sausage.



**Condenser Mike**  
An Irish editor.



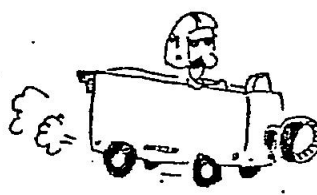
**Control Track**  
What Scotty used to beam people up to the Enterprise.



**Copy Guard**  
A uniformed enforcer of copyright laws.



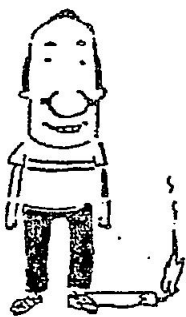
**Decibel**  
A device used for calling the star of a famous 1950s TV sitcom. See also: Lucibel.



**F Stop**  
Where high-speed cameras are tuned up.

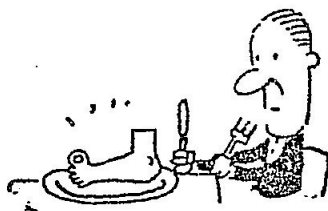


**Focal Length**  
The condition of having a long neck.



### Footcandle

A great way to give a hotfoot.



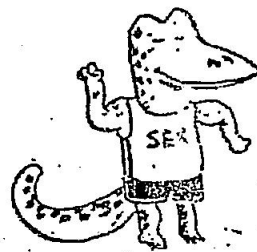
### Footlambert

A cut of meat similar to a legoflambert, only bigger.



### Helical Scan

A secret of faith healing.



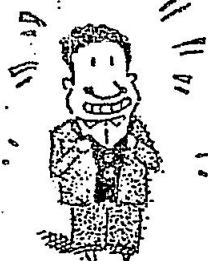
### Holredyne

A macho alligator.



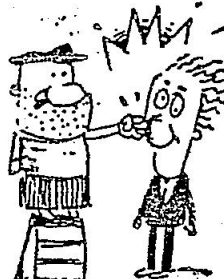
### Horizontal Resolution

Deciding to stay in bed all day.



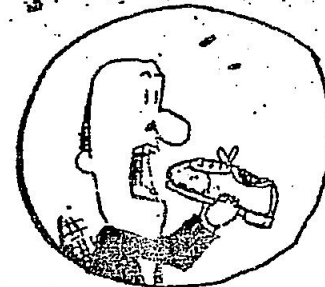
### Image Enhancement

Buying a new suit.



### Interface

Where big guys usually punch you.



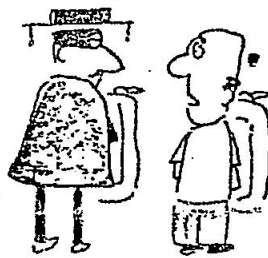
### Kinescope

A cross between a shoe and a mouthwash.



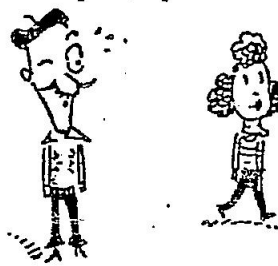
### LCD

A digital readout that expands your mind.



### LP

What Zorro did at a urinal.



### Manual Iris

A Latino eyeball.



### MHz

Short for MegaHertz—an enormous pain.



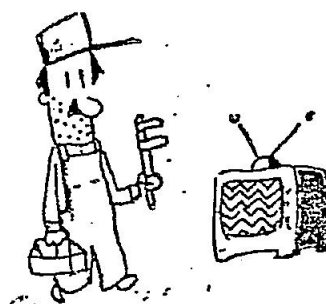
### Modulator

A TV game-show host.



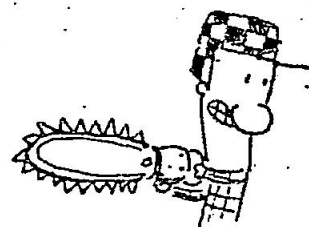
### Multiburst

What you get when you stick a multipin in a multiballoon.



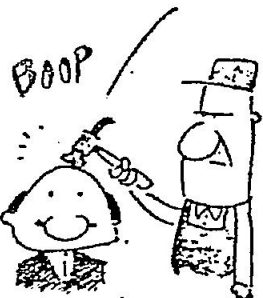
### Plumbicon

An electronic handyman.



### Rapid Access

Chainsaws.



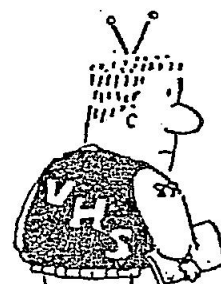
### Software

Rubber tools.



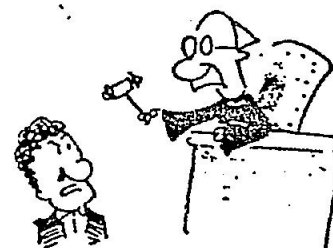
### Vertical Interval

When you take a break from your Horizontal Resolution to go get a sandwich.



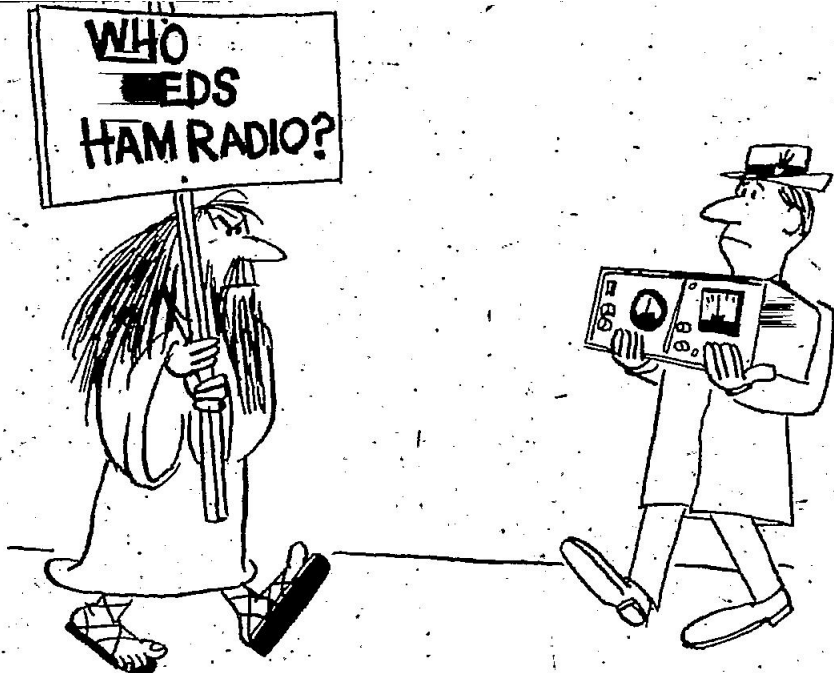
### VHS

Video High School.



### White Balance Control

A Supreme Court ruling.



# HOW I KICKED THE HAM RADIO HABIT

By NICHOLAS ROSA  
ex-W1NOA, ex-WB6JTJ

STAND by for the farewell of a ham who quit,  
after a quarter-century in amateur radio.

What's more, this farewell will have some *good* things to say about Citizens Band. Plug that into your final and try to tune it. Even the FCC sometimes has nice things to say about CB. Some of you hams may not have noticed but your hobby is in jeopardy.

Or rather, *our* hobby is in jeopardy. You see, I'm writing this because, somehow, I still care. A psychiatrist friend once called me a communications nut. "Busy as you are," he said, "you find time to be a writer. And talk to people. What's more, you even *listen* when other people talk. You dabble in languages. And you always tell me your girl *says* this, but *signals that*. Communications is an obsession with you."

At the moment he said that, all my ham equipment was crated and stored. When license-renewal time came up, I figured, it would still be crated. I would lose my license.

The doctor flicked his cigar. "When renewal time comes up," he prophesied, you'll find a way to renew even if you're frozen in a crevasse in the Antarctic."

Well, he was right. I threw a station together, strung an antenna on skyhooks and logged the required number of contacts just in time to renew—with the clock (not just the calendar) running out. Five years later, though, I literally forgot about it. A quarter-century of hamming just dribbled to an end. My license—the Advanced-Class ticket that I got ages ago when it was called Class A—went down the drain. Why?

I suppose the Alaska earthquake of 1964 was the last straw. Did you listen on the bands that week end? Cacophony! Great crackling patches of silence alternating with clots of gabble, gabble, gabble. Half the VFO champs in the country were piled up around the distress frequencies, just making big small talk about earthquakes and probing each other for news. What news could there be with the earthquake traffic smothered in the QRM?

Not to mention the W6 I heard on 75: "I don't care what's going on. I've



worked this frequency every night for thutty years." And sad to say, some hams would even require an explanation of the outrage of this remark even though the frequency in question was carrying distress traffic.

While this kind of sore-headed irresponsibility has become the bane of the amateur bands it certainly is nothing new among hams in my experience. Back in 1950, when the New England states were battered by a near-hurricane and shoreline communities were flooded with ocean water, the hams in my town were just getting an Amateur Radio Emergency Corps started. We managed to dispatch three mobiles to the flood zone. None was more than 3 mi. from our base station (which I was operating) but we couldn't read them.

We could read some rag-chewing W5s in Texas, though. And how did they read us? "Some nuts up in W1 are haying a silly drill and want us to get off this frequency. I say the heck with them." The W5s didn't move and we couldn't move. The mobiles were rockbound.

It worked out all right. Anywhere the ham mobiles could go, the police cruisers could eventually go, so all messages got through. But it sure made us look silly. Of course, my old AREC should never have been using ten meters for local emergency work in the first place. Two meters had long proved itself the optimum local band. But too many people in the outfit were at least ten years behind in their thinking.

It wasn't always thus. A dedicated handful of hams have transoceanic QSOs on two meters and higher—by moonbounce. They are showing what can be done by careful work. A few hams are building superb low-noise receivers, using a variety of approaches: parametric amplifiers, phase-lock circuits and

so on. Such projects pay off—in personal satisfaction as well as in improved performance, better DX and more QSOs. Another inspiring minority is the Project OSCAR bunch. I knew many old-timers who sneered at the whole idea. But three OSCARS have flown in orbit and they worked fine. Pound for pound, watt for watt, they were several orders of magnitude cheaper than professional communications satellites.

It's time to put dreams back into amateur radio, the way the OSCAR and moonbounce people are trying to. It was amateurs' dreams that opened up the high frequencies (short waves) to world-wide communications—and amateur dreaming that opened up VHF and UHF, too.

Amateur dreaming also helped open up the important science of radio astronomy. Credit has to be shared here between the young amateur Grote Reber (now a noted radio astronomer) and the young Bell Labs engineer Karl Jansky,

both working at the same time back in the 1930s. Reber, also an engineer but working alone as an amateur, had built a steerable, parabolic-reflector antenna (perhaps one of the very first) and was already mapping radio stars on VHF.

If hams of today claim that there are no new worlds left to conquer, hams in the 1930s were saying the same thing, since the oceans had been spanned a decade earlier. Meanwhile, Reber and Jansky were tuning in on the universe. At the same time, another handful of dreamers was taking the bases off the clumsy tubes of the day to get short RF leads so the tubes would oscillate and amplify at 60 mc. In short order, these hams were discovering tropospheric skip and other VHF propagation effects—all highly useful today. And they had conquered another world.

If our reservoir of ham talent—something over a third of a million in this



country—could produce results like this every year it would have nothing to fear from the commercial and government interests the world over who covet its choice frequency bands. At every conference of the International Telecommunications Union (ITU) there is increased pressure to eliminate amateur radio entirely and let other interests move in. We have been saved every time but with each session the rescue gets cut finer.

What are the majority of hams doing to justify their occupancy of valuable frequencies? With so many hams, there should be no lack of facilities for communicating with any place under any conditions: storm, flood, fire, earthquake. Yet when disaster strikes, the hams on the scene are often stymied. This is because there is no pre-organized local network for gathering the information that has to go out. And local officials, needing help in a hurry, tend to turn to police radio, the National Guard, anything that has organization and method.

Here is where Citizens Band is proving its worth. It was several years ago that FCC officials—commissioners, mind you—began to note in public that CB men were quicker than amateurs to join Civil Defense nets, where they performed effectively. And as CB has grown its adherents have formed more and more service nets of their own for all kinds of emergencies.

The CB people, in and out of their nets, are great for rescuing stranded motorists. This is no small thing. I wonder how many red-faced hams, their cars crammed with high-powered gear that can't reach anybody who will lift a finger, have been rescued by CBers—as I have, myself.

We hams always laughed at the 10-4 jargon. But CB jargon is no more ridiculous than ours and (unlike ours) gets useful things said with a minimum of fuss. We also tend to sneer at CBers as would-be hams who couldn't make it. But within the restraints imposed by their licensing conditions they manage to accomplish a great deal.

Hams are spoiled. They can go on yapping all they want; nobody turns them in to the FCC even if they yap right on top of earthquake traffic. In fact, hams are as close-mouthed about each other's shortcomings as the Mafia.

The example of CB is the final argument that sells me, for one, on incentive licensing. Perhaps if a full set of today's amateur privileges could only be won through increased technical proficiency and evidence of service ham radio would get moving

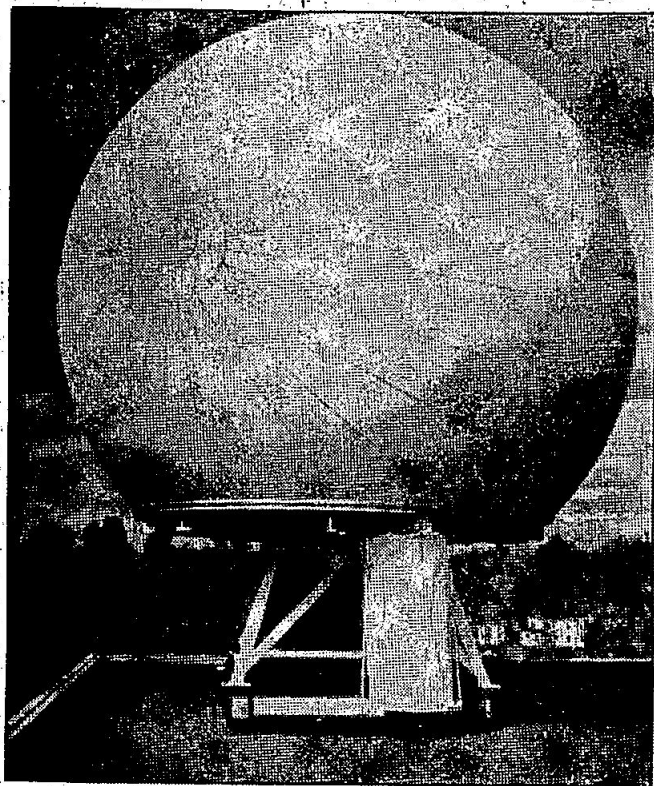
again and put CB back in the shade. Remember the old FCC watchword, PICON (public interest, convenience or necessity)? If amateur radio doesn't make an effort to bring back PICON as a way of life the public interest, convenience or necessity may find better things to do with the ham bands.

I can hear the ham majority yelling now: "This is a hobby! We're in it for fun!" Golf is a hobby, too. I haven't met a golfer yet who didn't want to be a good golfer. The same goes for fliers who, like hams, have to take a government exam. Only amateur radio of all hobbies is plagued by such a sourbellied spirit. ("A champ is a pain in the neck—he shows me up.")

Just thinking about all this has me so riled I'm tempted to get licensed again and start fighting—from the inside. But who needs ham radio? I don't certainly. No, I don't. I don't. . . .



# PULLING PLUG



## Big Round Things

THEY'RE BIG, they're round and, of course, they're wholly useless for any practical purpose, but they're available now, and we wouldn't be surprised if they became the next great fad. Available in twelve sizes, all about fifty feet across, and in a wide variety of colours (bloody kids and their spray paint), these huge spheres will make you the talk of the neighbourhood, the toast of your friends, and the laughing stock of anywhere you go. And, for a limited time only, anyone buying one of these spheres will receive, at no extra charge, a truckload of dead livestock and five, yes five, rusty old Fords to use in any way they see fit.

Can you afford to pass up a deal like this? Well, to sweeten the pot a bit, consider the features of these amazing spheres. Each one utilizes a shape originally devised by the ancient Fungalorian tribesmen of Northwestern Crete for reasons now lost in the mists of time, but believed to be the technological predecessor of many of our modern developments, including the golf ball and the Shepherd's caster. These revolutionary devices are capable of being looked at, walked around, pushed off cliffs, burned, blown up and shot at with elephant guns, all without the purchase of any additional accessories. They make attractive gifts for people you really despise, and great lawn ornaments for wierdos and esthetic vegetables. Made of all sorts of durable materials too numerous to mention, these spheres are guaranteed to last a lifetime or your money cheerfully retained.

Start a sphere club. Form a user's group and publish a news letter. Organize sphere parties. We'll provide you with free information on how to plan sphere fund raising drives to buy more spheres so we'll get rich faster. Spheres are bigger than frisbees, more useless than pet rocks and even less attractive than Mongolian mouse eating swampweeds. They're just perfect for the man or woman who has everything and doesn't know why.

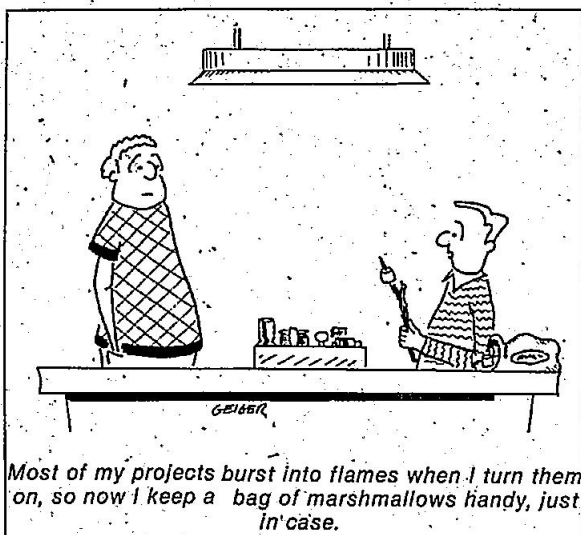
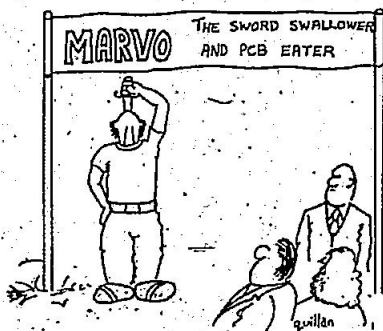
These spheres will be available for a limited time only (until we either sell them all or are forced to flee the country). You can buy your sphere(s) by sending \$305,000.69 plus \$1500.00 postage and handling (we accept VISA) to:

**Spheres**  
**Abominably Stupid Sales Co., Ltd.**  
**P.O. Box 69**  
**Android, Nova Scotia**  
**T5R 9B8**

Allow six to eight weeks for delivery, but please be patient. Packages do become lost in the mail from time to time.

Pulling the Plug is a digest of the most up to the minute inaccuracies, delusions and falsehoods in the fast moving world of technical navel contemplation. As such, much of it may prove unsuitable for situations requiring the truth.

BE



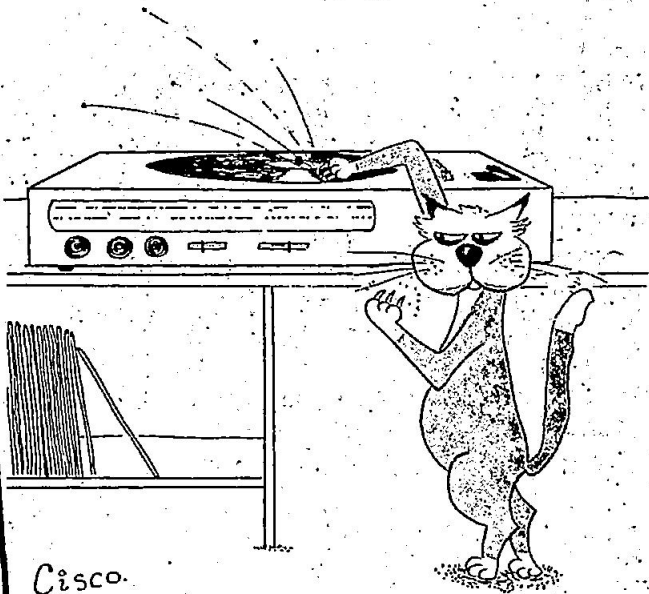
Most of my projects burst into flames when I turn them on, so now I keep a bag of marshmallows handy, just in case.

I DO FEEL ATTRACTED TO YOU; IT'S JUST THAT I THINK IF WE GOT TOGETHER NOTHING WOULD COME OF IT!



~~F~~BACKWELL





Cisco.

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*Johnson's Law of Auto Repair*

Any tool dropped while being used to repair an automobile will roll on the floor to the exact geographic center of the vehicle's undercarriage.

*The Harvard Law.* Under the most rigorous controlled conditions of pressure, temperature, volume, humidity and other variables, the organism will do as it damn well pleases.

*The Army General's Law* (also *The Admiral's Law*). Nothing is impossible for the man who doesn't have to do it.

*The First Two Rules of Work.* Rule one: The boss is always right. Rule two: When the boss is wrong, refer to rule one.

*Adler's Law.* Warranties cover only things that don't break down.

*O'Brien's Principle* (the \$357.73 theory). Auditors always reject any expense account with a bottom line divisible by five or ten.

*Nienberg's Law.* Progress is made on alternate Fridays.

*Cahn's Axiom.* When all else fails, read the instructions.

*Luce's Law* (attributed to Clare Boothe Luce). No good deed goes unpunished.

*The Executive Umbrella Law.* A businessman needs three umbrellas—one to leave at the office, one to leave at home and one to leave on the train.

*Meyer's Law.* If the facts don't conform to the theory, they must be disposed of.

*Rowe's Rule.* The odds are five to six that the light at the end of the tunnel is the headlight of an oncoming train.

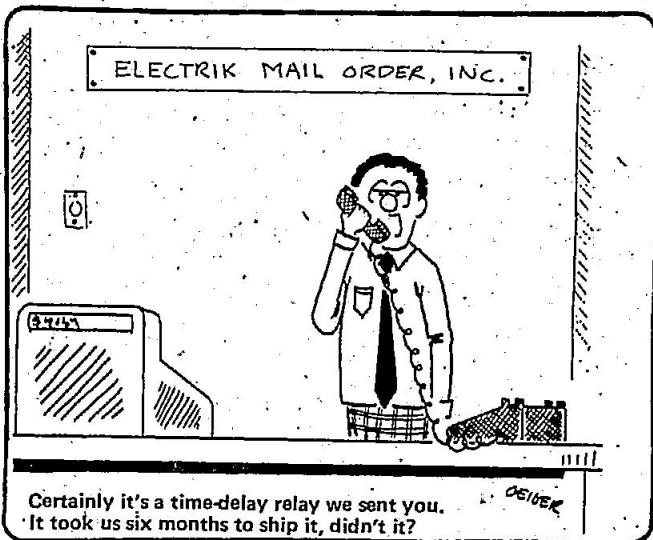
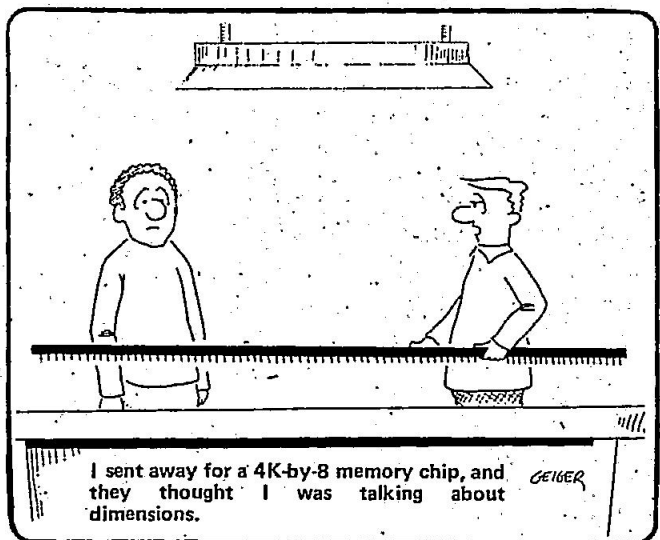
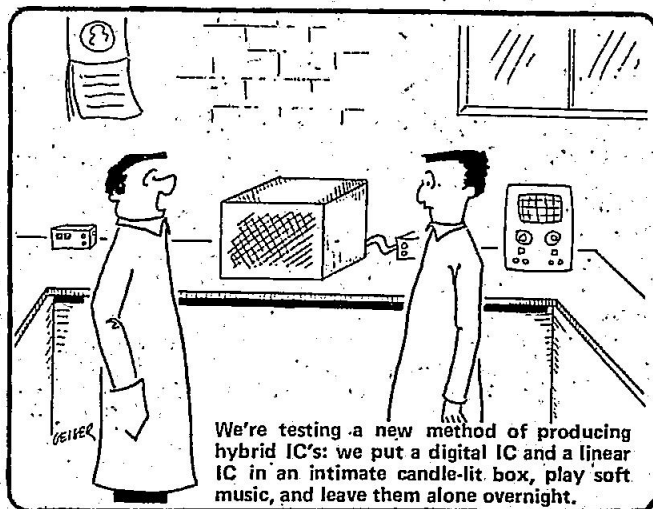
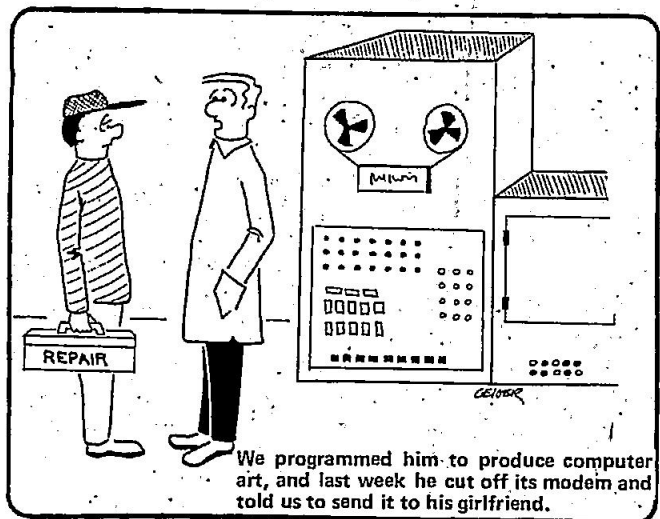
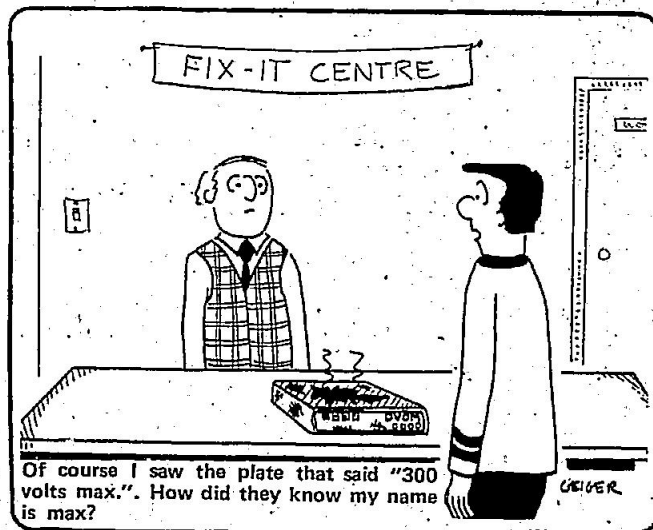
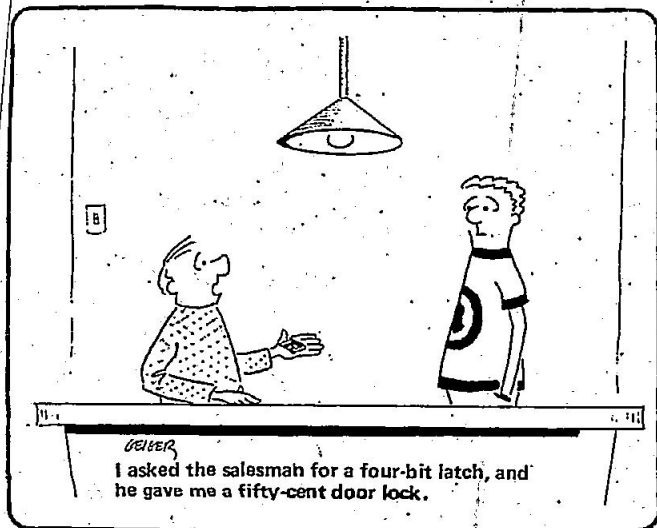
*Weaver's Law.* When several reporters share a cab, the reporter in the front seat pays for all.

*Doyle's Corollary.* No matter how many reporters share a cab, and no matter who pays, each puts the full fare on his expense report.

*Horner's Five-Thumb Postulate.* Experience gained is proportionate to the amount of equipment ruined.

*Man's Law.* No matter what happens, there is someone who knew it would.

Anyone wishing to amend Dickson's list should write to the editors of this magazine.



## Who? Me?

The leisured, microprocessed society of the '90s, in which the mere utterance of the word 'work' will mean cancellation of one's annual holiday in the nearest factory, can't come too quickly for the average A-level school leaver, if a recent essay competition in the *Guardian* is any guide. Most of the essayists — school leavers and their teacher-advisers — are of the opinion that a career in industry is, if anything, slightly less attractive than a life stretch at the Scrubs, and intend to devote their attention to finding alternative ways of scraping an existence.

What a refreshing attitude! They're not going to be forced into anything, they don't like, these youngsters. Any suggestion of being made to perform "boring" tasks in exchange for their daily bread is obviously going to be met by an offended stare. They're absolutely right, of course; why on earth should anyone who has been freely provided with an education up to the rarified atmosphere of A levels be required to spend his time doing anything but medicine and law? There are, after all, masses of ill-educated, dull, unimaginative and probably dirty work-people available who are only too happy to do the necessary, mundane, productive work (sorry! — a slip of the pen) to keep the bright young minds supplied with life's necessities.

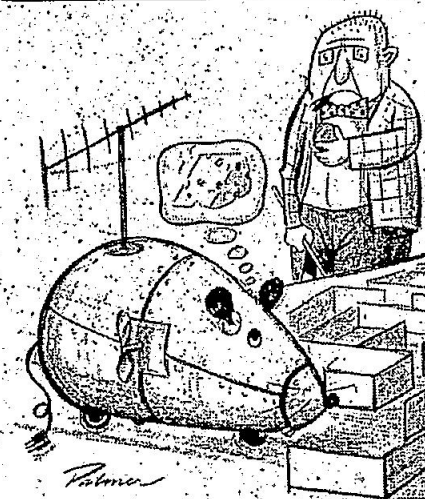
One of the prize-winning essayists makes the valuable point that no industrial talent scout has thought fit to approach him and attempt to entice him into any particular dark mill, satanic or otherwise. I do so sympathize with this kind of predicament. I suffered from that same lack of interest in me, as an asset to an employer: it even became necessary to find out for myself about my prospective career and eventually, I came to realize that I was going to have to abase myself and apply for a job. The R.A.F. showed every sign of being interested in me, to the point of insistence, but that only lasted a short time and doesn't count.

So, to all school-leavers, I would say: stick to your principles — and for heaven's sake don't give anyone the impression that you're alive, or they'll get you into a job, sooner or later.

## Tricky Mickey

Well, it's happened. We've been to the brink before — heard the rustlings in the snake pit several times and once or twice our collective toes have been over the edge, but I can now reveal, as they say, that our collective lid has thoroughly and irretrievably flipped.

It's all the fault of these infernal computer contraptions. I've complained before that I have trouble finding out what they all do, and it seems now that the sooner I learn to keep my mouth shut, the better. I should explain myself, and I can do no better than



to quote from a press handout lately received. "New York, June ... Entries have been received from approximately 6,000 engineers worldwide, for the first running of the "Amazing Micro Mouse Maze Contest" sponsored by both Spectrum Magazine of the Institute of Electrical and Electronic Engineers, IEEE, and Computer Magazine." It goes on to explain that the robot creatures have to negotiate a maze without remote control and with no wires. They don't have to look like mice, apparently, which is just as well because they aren't allowed to fly or jump over the walls.

Six thousand engineers! One hopes, assumes even, that the research and development needed to build these distracted rodents will be done in time not otherwise occupied by gainful employment. The thought of some vital project grinding to a halt because the lab is ankle-deep in panic-stricken beasts is one I, for one, don't care to contemplate. Last year, we are told, 54 people entered, but only six official mice (lovely phrase, that!) made it to the starting gate because the other 48 couldn't be made to work. I dare say they were being fed on the kind of cheese that comes in aluminium foil and were suffering from short-circuited guidance mechanisms.

## Sight and sound

London Bridge, far from falling down, is being rebuilt. The station, that is. It's now a mass of bright yellow girders, brown tiles and natty little yellow

cabins for the ticket collectors to lurk in. When it's finished, it will probably look very nice indeed — they've even given the bit where the trains come in a lick of paint. There is a brand-new public address system too, and that's where I stop being quite so delighted. Straining to hear where the Epsom Downs train was, last evening, all I could catch was the usual, grotesque Bill and Ben double-talk, like Stanley Unwin with a head cold, translated into Urdu and articulated through a roll of roof insulation.

It must be very difficult, in a great echoing vault like a main-line station, to provide a decent p.a. service, what with the noise of locos and the vast area it is necessary to cover, but it must surely be possible to design something that is at least intelligible. I did notice that the lady announcer was a sight more readable than the man, who mumbled, so maybe a course of training in microphone technique would be a help.

But it seems to me that sound is perhaps not the best way of letting passengers know that the 17.38 to Epsom Downs has just become the 18.12 to Brighton, calling at every tenth sleeper on the way. There is already a good deal of racket in there and, unless the threshold of pain is to be approached, it is difficult to see how an audio message can be certain of competing successfully. So why not sprinkle a few v.d.u.s about the platform, as they do in airport lounges, so that those of us who can read run less risk of ending up in Brighton when our slippers are warming in Croydon? I dare say the words are already forming on the chairman's lips — something to do with cost and the likelihood of disgruntled Celtic supporters potting at the displays with empties. It isn't my job to sort out details like that, however — I just get the ideas.

## Series of events

When Free Grid, of fond memory, was writing this page, it was a poor month indeed when he didn't have a gentle poke at the technical language we use. I can't pretend the same easy familiarity with Latin and Greek displayed by my predecessor (the classics master at my old school would be very happy to confirm that) but I am tempted to join in this programme/program argument, if only because it strikes me as almost unbelievably idiotic. The Concise Oxford prefers the mme spelling, and that is good enough for me. It may be inconsistent with diagram and all the others, but who's talking about consistency? The argument seems to be that a computer programme is somehow different from any other kind of programme and should therefore look different: this is sophistry and is unworthy. Computers are confusing enough without inventing difficulties. In any case, does anyone seriously mean that either spelling is difficult to understand?



## π-test

Embarrassing moments experienced by television and film "personalities" can't be the same kind as those I have — they always seem so delighted to tell anyone who asks them all about the grisly faux pas and face-burning ineptitudes they've committed. I can't bring myself to tell anyone about mine, but I'm always happy to hear of other people's. The only time I've ever been able to see one of my own episodes as even remotely funny was when I sidled up to my wife, who was trying on a hat in a shop and said "You can always use it as a flower-pot when you're tired of it" and yes, you've guessed it, it wasn't my wife. The woman wasn't trying on hats, either; it was her own.

"What's all this to do with electronics?" I hear all my readers ask, both at once. Well, it's just that we were talking, this morning, about Chairman's Visit time, from which many of us have suffered. You know what I mean; the one day a year that makes it all worthwhile. White lines are painted on the factory floor, guards are put on machines and all design engineers are told to wear their clean shirt and tie and have a shave if they can possibly manage it.

Our chairman used to come round the labs. and demonstrate that democracy was still a force to be reckoned with by speaking to us. Actually, he usually directed his questions to us by way of the chief engineer, and didn't bother listening to the answers, but the intention was there. We always had to show him the newest bits of gear we had prised out the buying officer during the year so that the management could show him how forward-looking they were and, this year, we had bought an oven for environmental testing of components. It was a big metal box, with lots of terminals and leads sprouting from them and any amount of meters and generators clustered round it. The chap who was using it explained what it was for but seemed a bit reluctant to



open the door. It would upset the test run and probably spoil a lot of hard work and other protestations, but the Man wanted a look inside, so, with a dramatic flourish, the door was opened. There were three shelves inside and nothing else at all, except that right in the middle of the centre shelf was a very small pork pie, gently steaming.

Not a word was spoken. The group moved on and the only sign of anything amiss was that our chief engineer was abstractedly chewing his tie. I don't remember what happened to the chap with the pie — he's probably a permanent lab. assistant now.

## Timeo Danaos

It seems we're about to be saved. You can all come back in off the window ledge, because Whitehall has decided that the electronics industry could do with a hand and is intent on injecting £50m or so to revitalize, rejuvenate and rekindle the sparkle in our eyes.

Well, that's great, but you will, I hope, forgive me if I don't instantly leap to my feet and turn cartwheels all the way along Stamford Street. I'm too old and frail, for one thing, and the other is that I have this sudden presentiment of

doom. I put it down to the SADIM syndrome, so named because of a Greek character — a king, as it happens — who had a regrettable tendency to turn everything he touched into clay; he could have made a fortune in the china industry but he had no marketing sense. There he sat all day, strumming on his bouzouki and surrounded by little piles of pure gold; every now and then he would snatch a pile of gold and, calling on his training as an alchemist, transmute it into base clay. (His old prof. used to say that the lad had never seemed to get the point of the subject).

The striking thing about all this is, though, that not only did we learn our democracy from chaps like that, but some of his financial expertise seems to have rubbed off too. The cream of our society at Westminster have, it seems, only to take a passing interest in an industry for it to become a disaster area. There is no need to plod wearily through the list of victims, but if you kick off with the Brabazon and doff a mental hat at the TSR2 and the Hovertrain, finishing up with British Leyland (or whatever they call it these days) and Strathearn you'll see what I mean. It isn't a view of life to make one happy at the sight of Ministers bearing gifts.

Still, the china industry could have a rosy future.

## Byter bit

Among the faults of David Bligh, excessive faith in I.S.I. was very probably the worst; though in this field he was the first. He gathered chips from every source, attended every single course and ultimately he was known as Dai the Sums, and stood alone. As hardware goes, it came and went (around a thousand pounds he spent) but gradually, he amassed sufficient gear, and stopped his fast. Computers large, computers small, Dai knew the workings of them all. His own could indicate, at speed with all the confidence you need the contents of its ROM, in clear on a v.d.u., and bend your ear with cacaphonic sounds of bytes in battle for their storage rights. When Dai was asked if this was what his monster did, he waxed quite hot and instantly applied his mind to write a programme of a kind to show quite positively that computing's really where it's at. His friends all gathered round to stare being sure he'd finished with hot air. He ran the tape — the display flashed, the printer rattled — keys were bashed. Then, on the screen in letters twee was printed "Pawn to King's Knight Three".

The move was made, but all in vain, because a rook in wait had lain; it sidled gently up and said "Checkmate, old son, afraid you're dead!"

