

WHAT'S ON "TAP" ?

You're attending an electronics trade show, and you know that at least 2% of the folks attending have got to be fellow phone phreaks, but you don't know how to make contact.

Well, now there is a sure way of meeting your phellow phreaks! At 4PM, phone phreaks are known to get very thirsty, so they all seem to head to the main refreshment area of the exhibit hall, turn their name badges around, and put their home area code on the back. If the conference has a bulliten board, put the area code of the hotel on the little 3 by 5 card, and where you want to gather (main lobby, bar down the corner, ect), and wear your name badge in the usual manner.

Now that you know how to greet each other at other trade shows and technical conferences, it's time to tell you about THE BIG ONE....

**TAP - CON '79 presents**  
**THE Technological**  
**Hobbyist**  
**Conference**  
**THC - 79**

The Technological Hobbyist Conference (THC-79) will be held at the Diplomat Hotel in New York City on Sunday April 22, 1979 from 10AM to 7PMEST. People wishing to give talks on a number of subjects are invited to submit an abstract to TAP by February 15, 1979. Include a contact method (mailing address or phone number) with your abstract.

Registration will cost \$5.00 by mail and \$7.00 at the door. This will generate the money we need to rent the room, rent projectors, PA's, ect. If you can't make it to THC-79, you can still get a Supporting Registration for \$3.00. This entitles you to recieve any junk that gets put on the Freebee Table which will be set up for anyone who wants to print up information for distribution. Anyone can put out a Freebee handout, print up 700 copies of your goodie and send it to TAP in time for the conference (in care of the mail drop).

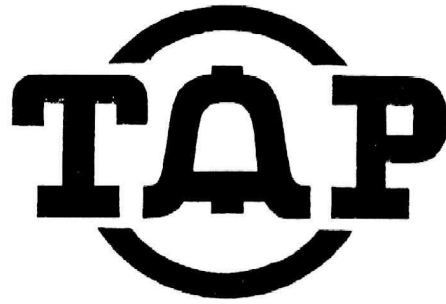
In order to maintain security (and hold down postage), your registration materials will be held at the entrance to the Diplomat Ballroom. If you want to make certain you are registered, enclose an addressed postcard (stamped) and we will scribble some archane drivell on it (having wonderful time, wish you were her).

Last, but not least, if you don't know if you're going to make it to New York for the conference, get a supporting registration. We will upgrade you at the door at the \$5.00 rate for only the additional \$2.00! Otherwise it's 7 bucks at the door. Be sure you give us a recognizable name for when you show up at the door (Bilbo under the rock near Albuquerque would only be good if all your buddies don't use it).

In case you are wondering, this conference is the Sunday before Electro-79, the international conference of the IEEE. Tell your boss you need to visit a sick friend on the way to Electro.

Dealers tables will be available if you have telephone oriented paraphernalia to sell. We do expect the folks with the funny initials, so take care. We will have people selling books, T-shirts, and, of course, back issues of TAP. See you then. (PS: Dealers tables are \$20.00)

Please make all checks payable to TAP.



SEPT.- OCT. 1978

NO. 53

COMPUTER PHREAK-OUT  
by The Wizard

A number of letters have come to my attention from people who are interested in using microprocessors to create MF tones. In my next couple of columns I am going to go over general outlines of methods of using your microcomputer as a blue box. Due to the wide variety of computers and systems I can't offer many specifics, especially when it comes to programming, but I'll do the best I can. Any specific questions can be sent to me care of TAP, and I'll answer them in the next issue out.

In order to use a computer as a blue box there are two topics that must be discussed. These are the hardware and the software needed for producing the MF tones. I'll discuss the hardware first.

There are two basic methods for producing MF tones with a computer that I have become acquainted with. These use two different types of hardware. The first method requires switching on and off two accumulators at different rates for the two frequencies. This gives you two streams of square waves of two different frequencies. These are then filtered down removing the harmonics to give you two sine waves. The sine waves are then added together using an op-amp for summing. I don't like this method very much as it doesn't give you much versatility for other functions. However, all you need in the way of hardware would be three op-amps and a handful of external components. Two op-amps would be used for filters and one would be used for summing.

The next method hardware-wise, which would be used with a number of software techniques, would be the use of a digital to analog converter. This circuit converts the digital output from the computer to an analog sine wave (assuming the computers output is equivalent to a sine wave). Operational theory and design tips can be gotten from issues of Kilobaud and Byte magazines, from the Digital to Analog converter handbook put out by Hybrid Systems Corp. and the Analog to Digital Conversion handbook by Analog Devices Inc.

In closing this column I'd like to apologize for not giving any specifics on D/A converters but due to the large number of different systems available that is not possible. In my next column I'll discuss software techniques that can be used, and I'll try to make it as specific as possible. This is a lot easier than the hardware, because the software theory is not as machine dependent. See you next time folks, and keep those cards and letters coming.

Youth Hot Line Reports, Inc. 1978 - Do not make checks out to Youth Hot Line Reports, PLEASE! Movement groups may reprint without permission if TAP's address is given with all credits. Please send us a copy of reprinted work.

HELLO. I MET ALL YOU PEOPLE OUT THERE ARE NOT REALLY EXCITED ABOUT THIS ARTICLE. I KNOW I AM NOT. THIS IS TO BE ENCOURAGE ALL OF YOU OUT THERE THAT THE PHONE COMPANY HAS MORE WAYS TO BE SCREWED THAN A...WELL, LET'S NOT GET NAUGHTY. I'LL JUST SAY THAT ALTHOUGH THE BLUEBOX MAY HAVE BEEN ITS LAST YEAR IN SOME CITIES, THOSE LIVING IN THOSE CITIES MUST NOT GIVE UP HOPE. BESIDES, YOUR FEEDBOX STILL WORKS WITH THE NEW OSCILLATOR.

SOME OF YOU OUT THERE MAY NOT SEE THE WISDOM IN SOME OF THE EDGAPADES I AM ABOUT TO RELATE. I CANNOT SAY I DO EITHER, BUT WHAT IS DONE IS DONE, THE PAST IS DEAD, AND ALL THAT CRAP, SO ILL GET ON TO MY TALE.

I WAS BORN IN DETROIT, MICHIGAN, ON AUGUST----WHAT WAS THAT??? TOO SOON? SO SRRY.

LAST SUMMER I MET A FRIEND WHO WAS AS MUCH A PHREAK AS I WAS. THIS WAS ENLIGHTENING, FOR MY OTHER FRIEND--EXCUSE ME, FRIEND--HAD HOPED TO THE EAST COAST THE FALL BEFORE THAT. WE HIT IT OFF, AND BEFORE YOU KNEW IT WE WERE GOING OUT NIGHTLY 'KAPING', BURNING, PILLAGING, AND STEALING, AS I CALLED IT. WE ALSO DID SOME CONSTRUCTIVE VANDALISM CARE OF A NICE SET OF BOLT CUTTERS I FOUND IN SEARS ONE DAY. THEY WERE JUST HANGING ON A RACK SO FORLORN AND GLOOMY THAT I TOOK THEM HOME WITH ME. MR. ROEBUCK WAS ASKING \$14.95 FOR THEM, BUT I DIDNT HAVE IT ON ME, SO I TOOK OUT A PERMANENT LOAN ON THEM. T-SHIRTS ARE SO NICE, YOU CAN CONCEAL JUST ABOUT ANYTHING IN THEM IF YOU ARE THIN ENOUGH. NATURALLY, WE WERE DYING TO TRY THE BOLT CUTTERS OUT ON SOMETHING. LO AND BEHOLD, A PARKPHONE. BY THE END OF THE WEEK MY FRIEND AND I HAD A VERY NICE COLLECTION OF HANDSETS FROM AROUND TOWN. NEEDLESS TO SAY, WE NEVER HIT THE SAME PHONE TWICE. WE MAY BE FOULHARDY, BUT WERE NOT DUMB. OTHER EXCURSIONS TO THE DOWNTOWN AREA PROVIDED US WITH A LINEAR'S TESTSET (COMPANY POLICY? LEAVE THE TRUCKS UNLOCKED IN THE COMPANY PARKING LOT?), AN ASCII KEYBOARD FROM THE FRIENDLY RADIO SHACK, A VERY NICE TEAC A-170 CASSETTE DECK FROM THE UNIVERSITY LIBRARY, MANY COMPONENTS FROM RADIO SHACK (WE MAKE WEEKLY VISITS, BUT WE NEVER BUY ANYTHING....) ROSS HEADPHONES, ETC. YOU WOULD BE AMAZED AT THE STUPIDITY OF SOME SALES PEOPLE. ONCE, AT R-BART, WE ASKED THE NICE SALES LADY TO SEE A POCKETCOM (THOSE NICKO WALKIE-TALKIES THAT CHARLIE ANGELS USE) AND SHE HANDED IT TO US AND WALKED TO THE FRONT OF THE STORE... I DONT KNOW WHAT THE HELL SHE WAS DOING, BUT WE LEFT THE STORE FAST. WITH THE POCKETCOM.

SINCE THIS IS A MAINLY TELEPHONE ORIENTED NEWSLETTER, I SHALL TALK MAINLY ABOUT TELEPHONES. UPON ONE OCCASION, MY FRIEND AND I WERE VISITING A PHONE STORE, AND WE NOTICED THAT A BOOK LEADING INTO THE BACK ROOM WAS OPEN. TISK-TSK, WE WENT TO CLOSE IT, AN WE SAW A WORKBENCH AND COMPONENT FILLED STORAGE RACK. BUT OUR ATTENTION WAS ON THE OTHER SET OF SHELVES. THERE WERE BOXES OF TRIPLINE HANDSETS ON IT. WE EACH ACQUIRED ONE. UPON LATER EXAMINATION THEY PROVED TO BE QUITE UNIQUE. THEY ARE STANDARD TRIPLINE HANDSETS, WITH AN UNSTANDARD KEYBOARD ON FRONT. THE BUTTONS ARE SQUARE, WITH AN ALUMINUM ROUGHPLATE. VERY STRANGE. UPON OPENING THEM UP, WE SAW THEY HAD NO LIGHT. WHEN PLUGGED IN (THEY USED BODILAR CONNECTORS SUPPLIED BY THE NEIGHBORHOOD RADIO SHACK) THEY LIT IN THE MOST REGULAR COLOUR. THEY WERE GREEN. AFTER CLOSER EXAMINATION, IT WAS DISCOVERED THAT THEY WERE GREEN LIGHT EMITTING DIODES, RUN OFF THE TALK CURRENT, NOT THE AC LINE. APPARENTLY BELL DOES NOT TRUST CON ED ANY MORE THAN WE DO. A MOST UNIQUE EFFECT OCCURS WHEN THE BUTTONS ARE PRESSED. THE LIDS CLINK. ANOTHER STRANGE THING IS THAT THE HANDSET IS NOT POLARIZED. IT SEEMS LIKE BELL IS BECOMING STANDARDIZED. THESE WERE ACQUIRED LAST FALL (NOVEMBER???) I HAVE NOT SEEN THIS TYPE OF HANDSET ON THE COMMERCIAL MARKET YET, SO I ASSURE THEY ARE PROTOTYPES.

THE IS RUNNING SHORT. UNTILL NEXT TIME....

**COUNTERFEITERS LOVE NEW XEROX**

WASHINGTON—A major counterfeiting wave involving millions of dollars' worth of phony documents has been spawned by Xerox's new 8500 color copying machine, federal investigators here say. The copier—which can be leased for \$25 a month—is capable of accurately reproducing money orders, payroll checks and negotiable securities. Laments one in Detroit slash. "The only limit to the uses of the machine is a crook's imagination."

Robert Neville,  
Forbin Project

**CHECK FORGER BOUNCED:** A Glasgow bad-check artist who pleaded guilty to stealing a city councilman's checkbook could not have chosen a worse victim. "In all mine shops he went into," his lawyer told the court, "he was endlessly bombarded with complaints about public services."

**IRDS PRESENTS A REVIEW OF THE NEW PAPER TRIP BY BARRY REID AND EDEN PRESS STAFF**

The New Paper Trip is a book that we cannot recommend more highly. It is a 160 page manual on the ins and outs of obtaining a new identity. Many different ways of paper tripping are closely examined.

Reid starts the book with a fascinating and frightening section called 'Meet Big Brother.' This section explains the present movement towards a 1984 type society, one that now has over 3.2 billion files on its' citizens. In a world of vanishing privacy the reasons for an alternate identity become clear.

Reid then examines each possibility for changing one's identity. Aliases, Fake ID and the Law, Counterfeit ID, Classic Paper Tripping, and Legal Name Change (the paper tripper's latest loophole in Big Brother's net of repression) are all expounded upon clearly and informatively. Other topics covered are Birth Certificates, Drivers' Licenses (including how the Soundex system for forming license #'s works), SS #'s (how they are formed), Military SPI discharge codes, Passports, and Mail Forwarding Services.

This book is solid information. It tells you first why you should take a paper trip and then in great detail explains how. The New Paper Trip is \$14.95 and worth every penny. Get it and use it now, before it's too late. Available from: Eden Press, PO box 8410, Fountain Valley CA 92708

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Shockwave Rider by John Brunner (sci-fi writer) gives us a good idea of what paper tripping and government data collection will be like in the future. It's about Nickie Haflinger, a computer phreak who worms his way through gov't data banks in pursuit of freedom and the American way. Haflinger's efforts in avoiding Big Brother's computer assisted pursuers are fascinating and entertaining. Your mission (apologies to Mr. Phelps) is to find the reference to phone phreaks in the book.

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Hey gang! It's the Information Rain Data Service research project! We have thought of a neat black box modification. The idea is to put the control of the black box into the hands of the calling party. Instead of using time consuming and confusing 'signal calls' to tell you to box the call your friends can now simply box themselves in! Here's how it works. Have a tone decoder (or decoders, but more on that later) switched across the line when the fone rings. These decoders then check (between rings) for the tones and when detected switch on the box (also sounding a buzzer on the receiving end signaling that the call has been boxed). Some things you will want to keep in mind: 1. You'll need a filter to prevent the decoders from being fried by the ringing voltage. 2. The signal between rings will probably have to be amplified. 3. # of tones: it's probably desirable to have 2 simultaneous tones trigger the box for two reasons. First, to prevent accidental activation of and secondly to prevent TPC from detecting it by ringing your line and applying a rising tone.

There's the idea - now implement it! The first reader who sends in a working schematic will receive a copy of Shockwave Rider autographed by the IRDS staff. Have fun!

Please send any comments, criticism, info or material to be reviewed to IRDS c/o TAP.

## ACOUSTING YOUR COUPLER

by

Napoleon Solo

Are you having trouble getting your tones into the phone line? There is a way without directly connecting to the phone line. It involves injecting your music magnetically and can be done much cheaper than using a speaker not to mention much quieter if someone is next to you.

This magic involves a simple magnetic loop which is inserted over the earpiece of the phone. The principle works like a simple transformer. Since the earpiece is nothing but a coil of wire which causes a diaphragm to vibrate causing sound, it acts like the secondary winding of a transformer. The primary winding is your magnetic coupler. Since the earpiece is directly connected to the phone line, you can transfer audio into the line this way without causing a lot of unnecessary distortion, thus causing your tones to meet the more stringent specs of the "Bull" System. See Fig. 1.

To make one of these educational devices take a 8 inch piece of cardboard cut into a strip about 3/4 inch wide. Bend this cardboard around the earpiece of the phone and cut off the extra piece. Then with plastic electrical tape secure the end so the it makes a loop about 3/4 inches wide that just fits over the earpiece. See Fig. 2. Take #26 wire and wrap 50 turns around the loop securing the loose end with a piece of tape. Before you start winding, it would be a good idea to strip one end of the #26 wire and solder it to one side of a piece of shielded wire, then secure it temporarily with the electrical tape and begin winding the coil. Try to spread out the wire so that it covers all of the 3/4 inch width, leaving a little space at each end so the wire won't spill over the edge. After about 50 turns or so, cut the excess wire and strip the other end and solder it to the other end of the shielded wire. See Fig. 3.

The finished product looks like a loop with an audio cable tied to it. Not only does this handy toy make a good transmitting device, but it can also be used to record directly off the phone as well. Instead of connecting it to your speaker output of your tape recorder, you can plug it into the "mike" input and record off the phone. It takes about 1 watt of audio to send a reasonable level into the line so if your tone generator cannot adequately generate at least 1 watt of audio into a 3.5 ohm load, your device probably won't work.

There are commercial pick-up loops available but they aren't as effective because they have many more turns and the wire they use is too thin, thus having more resistance. If your generating device cannot "cut the mustard", you can add on to it any small 1 watt audio amplifier with a 3.5 ohm output. The distortion can be less than 1% and in most cases, will meet any or all IM (inter-modulation) distortion specs and is the secret of how phone phreaks can generate guard band signals effectively.

So, this handy dandy little device can be used to record directly from the phone line or send audio directly into the line without removing the loop. Just plug the loop into the "mike" jack to record off the phone line or plug into the external speaker jack of the recorder or tone generating device to send into the phone line. This way, if the mouthpiece has been rotting out in the weather you won't have to search for a payphone that works. In fact the tones can be generated without the phone even being connected and you can still hear the tones through the earpiece. Touch Tone anyone?

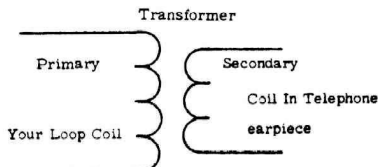
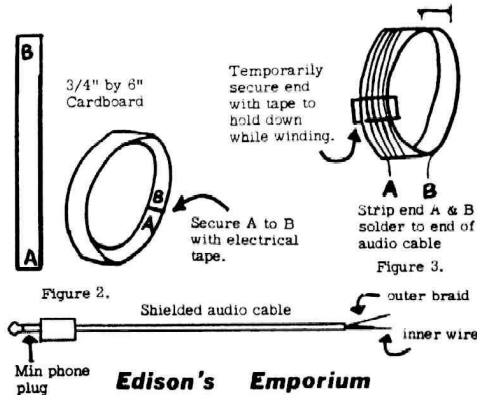


Figure 1.



Edison's Emporium

Please let me apologize for the long delay between issues 49, 50, 51, 52, 53, & 54. I had a helluva lotta problems with the lazy bastard responsible for doing our mailing labels. He has fucked me and you for the last time! I am now doing the mailing labels myself and I can guarantee that all future issues of TAP will be mailed like clockwork. TAP will be published bi-monthly with two issues sent in each mailing. So look for your copies of TAP in the mail on January 1st, May 1st, and September 1st.

TAP is looking for new writers. You know the kind of shit I'm looking for. I don't think that I have to draw you a diagram. Don't worry about spelling, grammar, or censorship. TAP is *not* the damn New York Times. TAP prints all the news that's *NOT* fit to print! If possible please type your article on a good typewriter using a column width of 5 inches. It's very important that the column width be 5 inches. If you don't have a typewriter or know how to type then send in your article in longhand but please write clearly. Better yet print it. Many of our best articles were sent in longhand and were typed up by the TAP staff.

I try to make each issue of TAP the best that I can with what I've got to work with. I don't try to make it the worst that I can, as some of you have accused me of doing. If you readers send me dynamite articles, I print 'em. If you send shit, that's what you get in return!

Sorry people, but it's time to bitch again! Now you all went to public skool so you must have some basic background in the English language (ya can't pull the wool over our eyes).

When you are a subscriber to a publication and yer sub runs out, you **RE-SUBSCRIBE**. You don't **SUBSCRIBE**, **ENTER A SUBSCRIPTION**, or anything else! You either let the sub run out or **RE-SUBSCRIBE!** Please use this word.

A number of people have gotten on the shit list by trying to **SUBSCRIBE** to TAP when they have a sub! What happens is their names are on a list of current subscribers and then their names are added to a list of new subscribers. So our computer reads FRED HEAD, 22 MAIN ST. twice and it cancels **BOTH** of them!

When you write in to re-subscribe, please state :

- A) that you are re-subscribing,
- B) your **COMPLETE** mailing label, exclude nothing! Paste an old label on for convenience.

These 2 steps will make it infinitely easier for us at TAP. And finally a work to all you morons who sub to TAP under one name and address and write to TAP about your sub using another name and address. How the fuck do you think I can process your inquiry if I don't know who the hell you are?!!! I have gone through our entire mailing list looking for "lost" readers for the **LAST TIME!!!**

**EFFECTIVE IMMEDIATELY :** Any reader who subs under one name and writes to TAP using another name will be dropped from our mailing lists! If you wanna use a pccny name to sub under, that's all right with me, but Goddammit you'd better use that name whenever you write to TAF until Hell freezes over!!

I moved to Fun City after the First Blackout and left before the Second Blackout. During the F B, many of us Libertarians fantasized about, hoped to, hear John Galt's speech from Atlas Shrugged. It tells what is wrong with The System and what can be done about it.

During the Second Blackout, I mentally kicked myself because WE COULD HAVE DONE IT! Guerrilla radio is happening right now in England (see TAP #43). It would take little effort to set up an easily moved, or even a portable, transmitter and broadcast over a "temporarily unused" frequency during a Blackout. A mobile transmitter would make it practically impossible for the Federal Communications Gestapo to locate the unit. Although they'd probably be too busy with more urgent matters to even try. People would listen (on battery-powered transistor radios) unless they were busy "liberating" merchandise from stores.

There will be a Third Blackout. And a Fourth, a Fifth, etc. until the Final Blackout - when The System collapses of its own technological complexity and interdependence. You don't believe it? Read The Coming Dark Age by Roberto Vacca and The Machine Stops, a classic SF short story written in the 1920's by E. M. Forster.

We have the technology (Where have I heard that?). IT COULD BE THE MOST UNFORGETTABLE BROADCAST SINCE ORSON WELLES' WAR OF THE WORLDS FORTY YEARS AGO. We can do it! Are we going to?

Jim Phelps

## Campus Police Warn Against Tap

The campus police report that an advertisement for TAP, a New York based underground newspaper, has recently been circulating on the UTC/Provo Campus. The activities described in TAP are illegal.

TAP describes in detail how to steal services from the telephone company.

Mountain Bell advises that using this equipment is a violation of the theft of service statute in the Utah Criminal Code.

Using electronic devices to make long distance calls is a violation of Federal Law, punishable by as much as \$10,000 in fines

and/or up to 15 years in jail.

The Bell Company now has equipment which will detect electronic devices illegally tapping to phone lines to steal services.

Security Agents at Bell Telephone advise that TAP is currently under investigation by the New York City District Attorney's Office.

With this in mind, there is an excellent chance that TAP may soon discontinue publication, according to campus police.

"Purchasing a subscription to TAP may not be a wise investment at this time, or anytime," Officer Thad Swank said.

### TAP WARNS AGAINST CAMPUS POLICE



TAP, a New York based information newsletter, has recently been informed that campus police at UTC/Provo have been circulating malicious information concerning the newsletter. TAP advises that Mountain Bull, a division of the Bull system, has been taking unfair advantage of subscribers. TAP has seen fit to distribute information and data which may be interesting to ripped-off subscribers. TAP advises that security agents of the Bull system are currently under investigation as well as the New York City District Assholes Office. With this in mind, TAP advises you to tell the campus police and security agents to fuck off and subscribe to TAP. Purchasing a subscription to TAP may be the best investment of your life.

Back Issues - \$2 each.  
Subscriptions - 12 issues - US Bulk rate \$6.  
US First Class in plain sealed envelope \$7.  
Canada & Mexico First Class \$7.  
Foreign \$8.  
IMPORTANT! Include mailing label or Xerox copy when writing to TAP about your subscription.  
Electronics Courses - \$9 each. A - DC Basics, B - AC Basics, C - Phone Basics, D - Amplifiers.  
TAP mugs - \$4.50.  
TAP T-shirts - \$4.50. Specify size and color: Small, Medium, Large, Extra Large. Black or red T-shirt with white TAP logo.  
TAP "Ma Bell is a Cheap Mother" T-shirts - \$4.50. Specify size and color: Medium, Large, Extra Large. Blue, tan, or yellow.  
Send ONLY check or money order (No Cash) to:  
TAP, Room 418, 152 West 42 Street, New York, N. Y. 10036.  
This is a mail drop only.  
OFFICE: 1201 Broadway, Room 908, New York, N. Y. 10001  
HOURS: WEDNESDAY, 5 - 9 pm.

## Lawyers Answer Nature's Call

St. George, Utah (UPI) — For several weeks, the phones in the office of a group of attorneys here would ring but nobody would be on the other end.

Finally, one of the office staff noticed that every time somebody went to the restroom, the "phantom" would call. Closer inspection revealed that when someone sat

on the toilet, the phone would ring.

Mountain Bell technicians were called and they found that the telephone system in the office was grounded to a water pipe on the floor below. When someone sat on the commode, the circuit would be broken and the phone would ring.

## Thieves undaunted

PORTLAND, Ore. — Police decided a grocery store on the city's southeast side was a candidate for an armed robbery, so officers installed a surveillance camera in the store last month. A policeman went by to check on the camera this week. The camera had been stolen.



"Don't let your million dollar goof worry you, Raftery. We'll increase the rates a dollar a month on all our customers' bills!"

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