



Exploding The Phone

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Title **The Phone Freaks Who Can Call Anywhere -- Free**

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Abstract Overview of phone phreaking, including what pheaks do, how they use blue boxes, and how they started. The reporter spent time with Captain Crunch and some of his protoges while they were phreaking.

Keywords Captain Crunch; blue box; phone phreaks; AT&T; AUTOVON; San Jose, CA; whistle; 2600; Josef Engressia, Jr.; International Telecommunications Union (ITU) Blue Book; stacking tandems

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The Phone Freaks Who Can Call Anywhere - Free

By Maureen Orth

INSIDE a phone booth at a gas station in northern California an electronics student was shedding his not so mild-mannered guise to become Captain Crunch, super-blue-box commander. Able to leap whole continents at a single bound and get his dime back.

A few minutes later, Crunch started shrieking to his partner: "Get in here, get in here, I've got the American embassy in Moscow on the line."

"This is the American embassy in Moscow," said the male voice with a faint mid-western twang. The connection was beautifully clear.

"Are you the night guard?" Crunch's partner asked.

"Yes, sir."

"What time is it there?"

"It's seven minutes after 4 in the morning."

What kind of small talk do people make to the night guard at the U. S. embassy in Moscow?

"How's the weather?"

"It's about 65, it's warming up."

"Do you get American newspapers?"

"Yes sir, they come in on ticker tape."

"What did the Russians think of our last space shot?"

Klunk. Instantly the conversation was cut off.

"Don't hang up, don't hang up," yelled Crunch, "I'll lose my dime."

"It was probably the Russians," he added nonchalantly. "They monitor incoming calls. They'll die when they find out their phone system is as vulnerable as ours."

Captain Crunch is one of California's heavy "phone freaks" — a group of 200 or so pranksters concentrated up and down the West coast and scattered throughout the United States — who, with the aid of "little blue boxes," command illegally the worldwide telephone network, for free.

In the mid '60s, nearly every phone company in the world decided to convert billions of dollars of telephone equipment to a compatible system based on 12 tones. Ever since, groups of college students high on electronic circuitry, freckle-faced teen-agers and blind kids with sensitive hearing have kept up with the latest telephone technology. They call themselves "phone freaks."

They have discovered American Telephone and Telegraph's fatal mechanical flaw: All the "control signals" — telephone tones — which activate most telephone equipment come over the same circuit we speak on. This means phone freaks can send control signals down the wire just like operators do.

Little Blue Box

Armed illegally with a little blue box, an ingenious electronic device which duplicates the 12 tones, with an expert knowledge of tandems, test boards and cross-bar switching, and a repertoire of other secret telephone techniques passed on by friendly phone company personnel, phone freaks win radio contests by calling in first, listen to local baseball games from anywhere in the world, and even know how to call the President on his private line.

"I have Nixon's number in Key Biscayne," one freak revealed, "and the number of one of his private lines in the White House. It's hooked up to the military phone system, Autovahn. I can call him whenever I want, but that would just be inviting trouble. It would be easier to tap into whoever he's calling if that's what you're into."

Five young phone freaks from suburbs near San Jose, Calif., including one blind boy, had come to study Captain Crunch as he performed on the world's largest technological playground. They explained why they preferred phone freaking to hobbies like ham radios or hot rods.

"The phone company's a monopoly, isn't it?"

"Phones fascinate me, and I like bugging technology."

"I just dig having a hobby."

These teen-agers admit to C's and D's in algebra and calculus but spend hours every day figuring out the phone network.

They all arrived carrying customized MF'ers — multi-frequency tone signals — the phone freak term for a blue box. The homemade MF'ers varied in size and design. One was a sophisticated pocket transistor built by a Ph. D. in engineering, another the size of a cigar box with an acoustical coupler attaching to the phone receiver.

The boxes, blue and black and grey, cost an afternoon's work and anywhere from \$15 to \$30; they can be made from materials available at radio supply stores or "liberated" from the local phone company.

So far, these phone freaks had devised 22 ways to make a free call without using credit cards. In case of a slipup, the phone freaks also know how to detect "supervi-

'I know one of the White House private lines'

sion," phone company jargon for a nearly inaudible tone which comes on the line before anyone answers to register calling charges. As soon as phone freaks detect the dreaded "supervision," they hang up fast.

Captain Crunch was still in the phone booth pulling the red switches on his fancy computerized box. He got his name from the whistle found in the Cap'n Crunch breakfast cereal box.

Crunch discovered that the whistle has a frequency of 2600 cycles per second, the exact frequency the telephone company uses to indicate that a line is idle, and of course, the first frequency phone freaks learn how to whistle to get "disconnect," which allows them to pass from one circuit to another.

Crunch, intent, hunched over his box to read a list of country code numbers. He impersonated a phone man, gave precise technical information to the overseas operator, and called Italy. In less than a minute he reached a professor of classical Greek writings at the University of Florence. It was the middle of the night there, and the professor was motto affable as Crunch's partner talked to him.

'Don't Hang Up'

"Always call me at this hour, Signor, it is a good time to find me at home."

"Don't hang up," Crunch screamed again to his partner. So far he was still on the same dime.

"Here," said Crunch to one of the other freaks, and handed him the receiver to listen to Dial-A-Bedtime story in London, where an im-

peccable Oxford accent was reading all about some creatures called Harem Scarem and Little Yo-Yo.

"The British are great," the blind boy whispered. "You can Dial-A-Disc, Dial-A-Dish, or find out what's on in London this week."

Crunch pocketed his dime.

With his eyes still blazing from his transatlantic triumphs, he explained his favorite method for calling free:

"First, I call a number with an 800 area code; you know, the kind hotels have so you can call free for reservations. Personally I prefer the Army recruiting 800 number. I dial direct and just before it rings Army recruiting, when I hear I'm into the long-distance equipment, I either whistle off 2600 cycles or release "start" on my MF'er.

'Key Pulse'

"The 2600 disconnects me from Army recruiting but still leaves me in the long-distance circuit. Then I press another switch on the box, 'key pulse,' and pulse out the number.

"I can dial anywhere."

After school that day the phone freaks met at the blind boy's house near San Jose to trade tales of their adventures and swap technical information. Being blind may mean lonely hours inside all day with nothing to do; being

a phone freak means fun and friends who appreciate your acute powers of hearing, perfect pitch and encyclopedic knowledge of how the entire phone system works.

"The farthest out thing I ever did," began the blind boy, "was to call myself around the world. I had two phones right next to each other. First I called Hertz Rent-A-Car, whistled off, then MF'ed to London, Paris, Athens, Tokyo, Sydney and home. You get an echo on the line and about a three-second delay.

"I pressed both receivers to my ears and said 'Hello, Hello,' and the other phone would echo 'Hello, Hello.' Then I started screaming into the phone and doing all this weird stuff; it was blowing my mind.

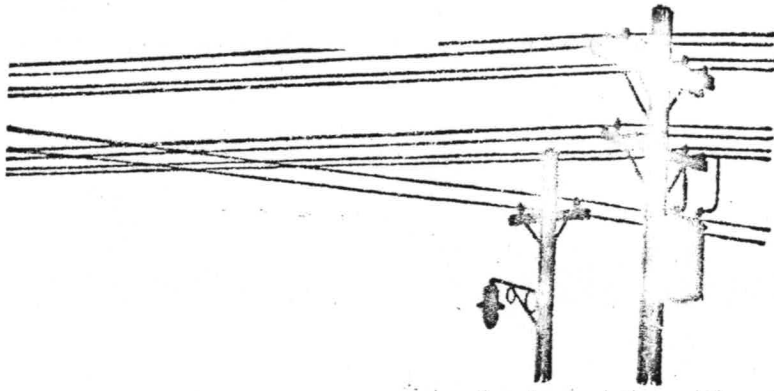
The operator in Sydney must have been listening because she broke in, 'Sock it to me, Baby! Sock it to me!'

He suddenly stopped.

"Hey, cool it gang, cool it. I hear my mom coming."

Young electronics wizards at America's top technical universities got their first inkling of phone freaking in 1968 from reports of the arrest of Josef Engressia Jr., 22-year-old blind phone genius.

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Complete Details

Professors and students at major institutions pounced on telephone technical journals in their libraries. Especially coveted was the International Telecommunications Union's Blue Book, published in 1966, which gives complete details on how the worldwide telephone system works.

Phone freaks also ran technology seminars, courtesy of Ma Bell, often meeting 10 or 12 hours on huge nationwide conference calls (including Alaska and Hawaii). Sometimes a group of people would simultaneously call the same number, the busy signal would diminish and everyone talked on one big party line.

A couple in San Jose who met on a busy signal were married recently, and some phone freaks serenaded them with the "Wedding March" on their blue boxes.

Some of the cleverest phone freaks work for the phone company and constantly contribute to the common data bank by feeding in secret information. Phone freaks know how to tap phones, although they rarely do so. Their code of honor forbids listening to other people's conversations.

But the "heavy number" in phone freak circles isn't tapping into lines or even calling the President. It means

stacking tandems, an elaborate and spooky technical process that can tie up millions of dollars worth of long-distance circuits by interlocking for "stacking up" long-distance trunks to each other.

A tandem is a piece of equipment which ties two long-distance trunks. It is possible for two phone freaks to tie up all the long-distance circuits from a medium-sized city and "busy out" the city so that no one can call in or out.

"Oh, sure," said a phone freak casually. "I could kill a city. With a lot of precalculation, I could kill a city the size of Bakersfield (Calif.) in 45 minutes."

L.A. Times Service

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