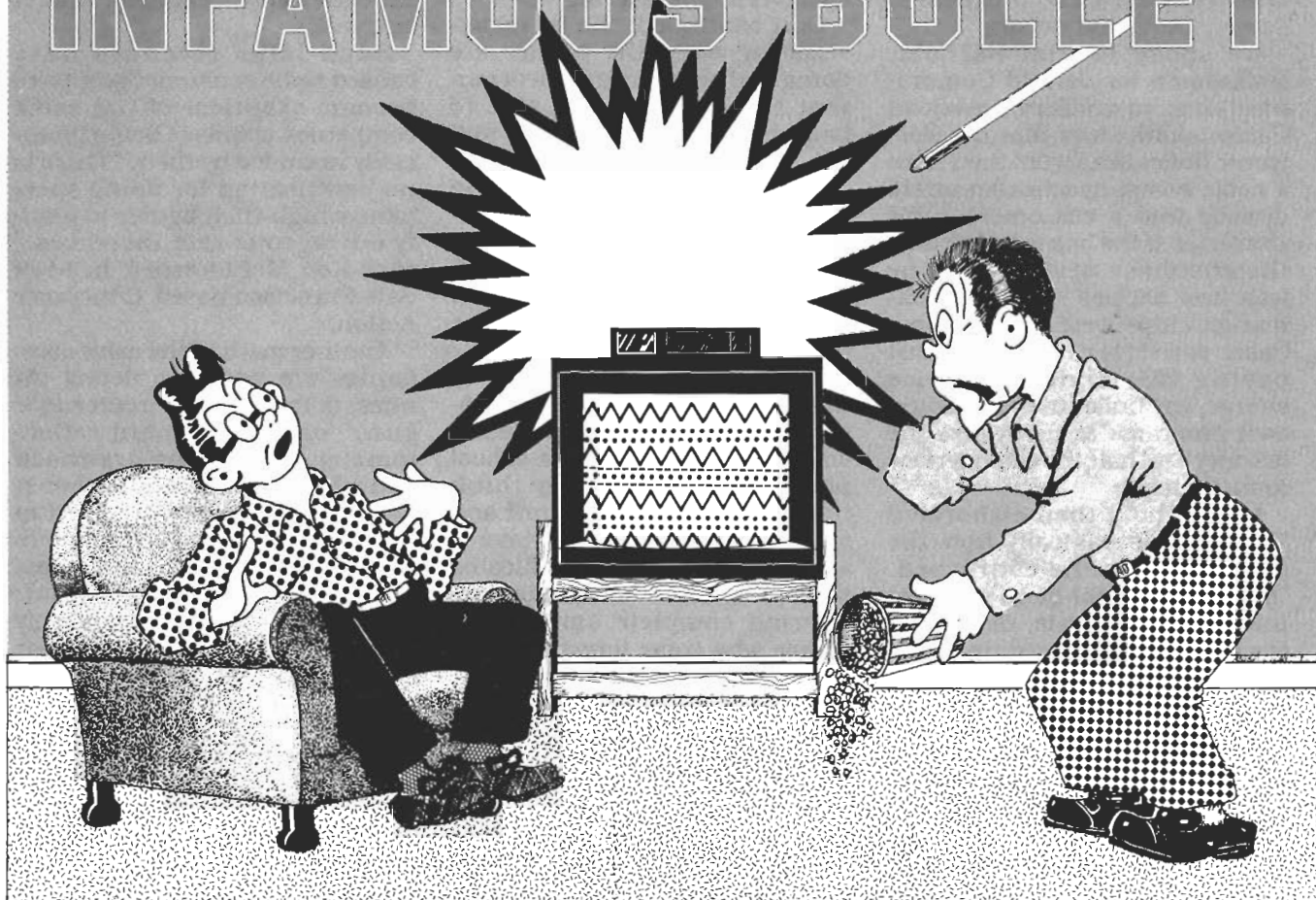


# CABLE TV'S INFAMOUS BULLET



## **How American Cablevision's "bullet" zapped signal pirates.**

KEN FOLEY

ON WEDNESDAY, MARCH 13, 1991, American Cablevision of Queens fired their first infamous electronic "bullet." According to American Cablevision, they fired a direct hit. Within minutes their switchboard was overloaded with calls from subscribers whose television sets had gone black. American Cablevision was elated—the victims had unsuspectingly taken the bait.

The next morning, American Cablevision sent armies of technicians to service the homes of the complaining customers. They replaced the cable converter

boxes, and took the dead boxes back to the electronic coroner's laboratory, performing hundreds of autopsies. According to official American Cablevision records of the mass epidemic, the "Certificates of Death" were identical—illegal chip "zaps".

On Wednesday April 24, 1991, American Cablevision filed a civil suit in New York City federal court against three hundred and seventeen alleged cable pirates. That was the first time such a large number of cable crooks had been arraigned together. American Cablevision offered the de-

fendants a deal: Pay five hundred dollars within twenty days, or face prosecution and fines from one thousand, to one hundred and ten thousand dollars.

"I think this is something that everybody's going to have to start doing," said American Cable President Barry Rosenblum. American Cablevision has approximately three hundred and thirty thousand paid subscribers in Queens and Brooklyn, and estimates it forfeits hundreds of thousands of dollars each year to video marauders, and plans to fire more bullets. The electronic

bullet is the brainchild of Jerrold Communications of Hatboro, Pennsylvania. It was first fired in 1990, by Greater Media Cable of Philadelphia.

In three separate assaults, Greater Media Cable blasted away, netting three hundred and sixty eight illegal converters, which garnered a bounty close to twenty thousand dollars.

We spoke to Jim Bathold, spokesman for Jerrold Communications, to confirm American Cablevision's story that the electronic bullet is a signal fired from a cable company's headquarters directly into a customer's cable converter. If the box is legitimate, the customer never knows he was just zapped. But if black-market chips were installed in a basic converter to circumvent paying the monthly service charge, the bullet uses the chips' own programs to neutralize the decoder and halt the cable service immediately.

Mr. Bathold then elaborated "Yes, that is basically how the bullet works," he confirmed. "But it would not be in our best interest to elaborate, or explain the operational procedure in detail. Otherwise it tells subscribers, 'Here we come.' We have not put one word out there in writing of how it works—no press packages or news releases. We especially wouldn't go into detail with electronic hobbyists," he choked out laughing.

Hoping to fare better in Jerrold's engineering division, we were fortunate to reach an engineer that was also a reader of **Radio-Electronics**. His boss' boss, technical engineering supervisor, Stan Dori, said: One of the approaches pirates have been taking for years to defeat scrambling is to physically use a decoder box to unscramble the scrambling method. That is, to reverse engineer the legitimate descrambler's software.

The bullet came into being because one of Jerrold's customers (a cable company) told them of rumors that pirates were defeating Jerrold's scrambling technology. And the cable company wanted to aggressively pursue them. So Jerrold acquired a number of the pirate devices

through various methodologies, and reverse engineered them so that a counter measure could be developed. That counter measure was the bullet, an offensive signal that Jerrold can send down the data stream to neutralize what the pirates reverse engineered. That's the bullet—double-reverse engineering.

Dori continued, "So by understanding what the pirates are doing and not doing to defeat current technology, we're able to launch a counter-offensive signal, the bullet, to defeat them."

In the hopes of discouraging customers from buying illegitimate descramblers, information regarding the bullet is being leaked from the cable industry, which claims they are losing up to three billion annually from piracy.

According to Jodi Hooper of the National Cable Television Association, "People think cheating on cable services is like a school prank. They don't really think they are committing a crime and stealing. They just don't take it seriously." Hooper also indicated that some cable companies are offering complete amnesty to people who come forward before their systems are audited and the bullet is released. She says if the culprits wait until they are discovered, they will chance the possibility of criminal prosecution and heavy fines.

Richard Aurelio, president of Time Warner's New York City Cable Group, compares cable piracy to shoplifting. "Now that we have the technology, we're going to use it to rope them in." But it's a migraine for the cable industry. Most of the cable companies began scrambling their satellites in 1986, and are now concentrating on detecting people with decoders and illegal hookups.

The National Cable Television Association says about eight million homes nationwide are linked illegally to basic cable signals. And an additional three million homes illegally tap into pay services such as Cinemax and HBO.

But from 1975 through last year, the number of basic service subscribers nationwide grew from nine million to fifty-five million. The U.S. Telephone Association reports that the average

basic cable rate nationwide jumped sixty-eight percent between 1986 and 1989.

So even though the cable companies are reporting that losses from theft have tripled during the same period, cable industry revenue has jumped about seventy percent from over ten billion in 1986 to almost eighteen billion last year.

Such large revenues have caused some consumer groups to become skeptical of the cable companies' claims of being financially wounded by theft. "There is no justification for using speculative high-theft figures to justify outrageous rate increases," says Ken McEldowney, head of San Francisco-based Consumer Action.

Another method the cable companies are using to detect pirates, is the "closed circuit radar gun," or time-domain reflectometer. The major drawback with the reflectometer is that it has to be physically attached to the cable entering each home to detect unauthorized connections or decoders. Other than that, sleuthing is still done primarily by inspectors who spend their days eyeballing exterior cables for tampering.

So naturally if the cable industry succeeds in scaring thousands into confessing, it will score a two-headed victory. First by recovering millions in lost revenue having people sign up—as was the case for Utah's TCI Cablevision in 1989 where they ran a blitz advertising campaign showing guilt-ridden signal pirates imprisoned—and second by having the option of keeping the bullet in reserve as a secret weapon and not necessarily having to pay the hefty zapper fee to Jerrold Communications.

Now Time Warner, the second largest cable company with over six million subscribers in thirty six states, is threatening to start firing bullets nationwide. Are they bluffing?

If they are not bluffing, they will undoubtedly catch more cable thieves who are foolish enough to run to their cable company to complain that their pirated cable box is not working properly.