

"Electronic Smog" Adds to Pollution Woes

If your toaster breaks into a song, it points up a fact of growing concern: America's airwaves are jammed—and confused. Dangerous, too.

A form of pollution that cannot be seen, felt, smelled or heard is inundating the nation, and scientists consider it a major concern for America in the years ahead.

It is electromagnetic interference, caused by the proliferation of low-level radiation from radio and television-broadcasting equipment, microwave ovens, citizens'-band radios, garage-door openers, power lines and radar installations.

Many scientists maintain that this "electronic smog," which virtually blankets the nation, is far too weak to harm humans or animals. So far, most complaints center on a scrambling of signals that often causes radios and other electronic equipment to go haywire.

A growing number of environmentalists and medical experts, however, believe that electronic pollution will worsen and begin to pose health problems ranging from behavioral irregularities to cataracts and cancer.

EPA warning. Government officials already are concerned. The Environmental Protection Agency considers electronic smog a "major concern," and in a recent report the General Accounting Office said the stream of electromagnetic radiation with which Americans are constantly bombarded is a "potential harm to public health."

Radiation threatens to become so pervasive that Ernest Ambler, director of the National Bureau of Standards, the federal agency attempting to determine its extent, said recently that it could no longer be ignored.

"Electromagnetic interference is a problem of vast dimensions, one with complex technical, legal and social components," he said. "It won't go away. It will only grow worse as electronic devices become even more widespread, and sources [of the interference] continue to multiply."

Already, some signs of health problems are appearing. Studies

in Russia and Czechoslovakia have suggested that exposure to electromagnetic radiation from consumer products causes disorders of the central nervous system, including headaches, dizziness, emotional instability and loss of memory. As a result, radiation-emission standards in those countries are far tougher than in the U.S.

Tests on animals in this country also suggest that constant exposure to the radiation can cause chromosome damage that could lead to birth defects.

Another study at the Veterans Administration hospital in Syracuse, N.Y., suggests that animals and humans exposed to the radiation near high-voltage power lines may suffer stunted growth and blood problems.

Although the radiation has always existed—even the human body is a minor source—it was not until after World War II that the increase in man-made electromagnetic signals became worrisome, accelerated in the past decade by the revolution in consumer electronics. One measure of growth: At the end of the war, there were only six TV stations in the country. Today, there are more than 1,000 stations transmitting to 120 million sets.

Adding to the blizzard of electromagnetic radiation are 8,000 radio stations, 15 million CB radios and more than 35 million sources in manufacturing plants.

With the popularity of electronic devices on the increase, electromagnetic interference is proving increasingly troublesome. Stray electronic signals sometimes interfere with TV and radio reception, household appliances and lifesaving equipment in hospitals.

Because of this, the Federal Communications Commission receives more than 100,000 complaints of such interference annually, and that number is increasing. Commission officials believe that fewer than 10 percent of all interference prob-

lems are reported and estimate that 9 million viewers will experience television interference from CB radios in the year ending June 30, 1979.

Tuneful toaster. Other effects of electromagnetic interference can be more bizarre. For example, one homeowner who lives in the vicinity of a powerful radio station found that his toaster had started broadcasting music.

In Chicago, when a new \$100,000 electronic scanning microscope was installed at the Illinois Institute of Technology, scientists were unable to make the machine work. The manufacturer had no explanation. A faculty member finally determined the cause of the problem: interference from a television station.

Electronic braking systems on trucks and buses also have been triggered by CB radios. As a result, about 18,000 trucks have been recalled, and a Department of Transportation regulation that required the braking systems was suspended.

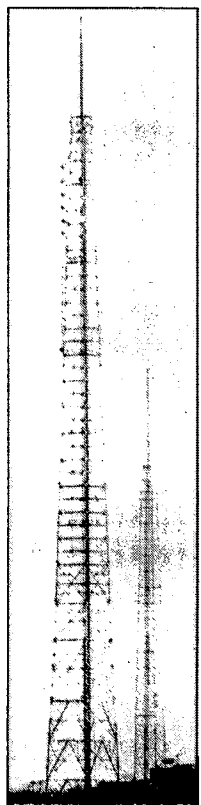
Although at least nine federal agencies are grappling with the problem, some critics charge that the government has tried to whitewash the potential dangers from the interference.

One critic, Representative Elizabeth Holtzman (D-N.Y.), charges that the government "has failed to conduct adequate research on safety levels, monitor radiation levels systematically and set safety standards."

Congress is considering bills that would extend the FCC's authority to require electronics manufacturers to install devices that reduce interference. The legislation is far from enactment, however, mainly because there is no unified approach on the part of the many federal agencies that deal with the problem.

Another difficulty is measuring the number of interfering signals. If there were just one signal, "it would be easy to tackle," says Charles K. S. Miller, manager of the Bureau of Standards' measuring program. But the "phenomenal number of different signals" makes even learning the size of the problem all but impossible, he says. □

Power lines, CB radios and microwave ovens are all sources of "electronic smog," which has become focus of health controversy.



also brought a happy ending to the problems of Greg Rose. His suburban Atlanta home had a whole raft of problems, including a crumbling chimney and defective air conditioning. A HOW policy paid \$13,000 for repairs that the builder was unable to make.

The National Association of Home Builders hopes that the HOW program will become such a marketing plus that builders will have little choice but to join. That's the case in England, where a similar program has been in effect for many years. There, it is virtually impossible for a builder to sell a home unless he offers a 10-year warranty.

New Jersey law. Besides the HOW program, several states and some localities have passed or are considering legislation ordering builders to provide better warranties on homes. One of the toughest is a New Jersey law that requires builders to be licensed, to offer written warranties and to join either the HOW program or a similar insurance setup run by the state.

In states where written warranties are not required, many legislatures have passed implied-warranty laws that require builders to repair structural defects in a home. Court rulings, such as one this past May by the Colorado Supreme Court, have lengthened the number of years during which builders are obligated to do such work.

In another move to protect home buyers, the Federal Trade Commission is stepping up its investigation of home defects. Last July, the FTC ordered Kaufman & Broad, Inc., one of the nation's biggest home builders, to make repairs on defective homes built as far back as 1972 and to offer better guarantees on future homes. The builder signed a consent agreement without admitting any violations of the law.

Next year, the FTC will survey hundreds of new-home buyers to find out what the most prevalent defects are and how well builders are responding to complaints. Officials say that the agency wants to make sure, before pushing for stronger warranties, that the benefits that come from greater buyer protection will outweigh the extra costs of providing it.

Despite these steps, many experts say that the biggest safeguard against shoddy home building may well be the current upturn in mortgage-interest rates—a development that is certain to dampen home sales and slow building.

Observes Aaron Machnik, a building official in Michigan: "Most builders seem to realize that the boom can't continue because of the high interest rates. This corrects a lot of ills because builders are interested in developing good reputations now." □

7 Tips for Home Buyers

In a seller's market, it isn't always easy for consumers to be sure that the house they buy is a well-built one. Still, experts point to several steps that home shoppers can take to avoid getting stuck. Among the safeguards recommended:

1. Know the builder. House hunters should talk to people who already own homes that were built by a company from which they are interested in buying. These owners should be asked about the quality of construction and about how well the builder responds to buyer complaints. Inspecting subdivisions where the builder has been active also is valuable.

2. Call consumer agencies. Buyers should consult the Better Business Bureau, local building departments and consumer-protection agencies to find out what complaints may have been lodged against a builder. It also is wise to ask the local planning department what uses are being planned for property near the home that is being considered.

3. Get a detailed contract. Don't rely on verbal promises. Buyers should insist that features promised by the builder but not included in the basic home package be noted in writing in the sales contract. For added assurance, a homeowner may want a real-estate lawyer to inspect the sales contract before it is signed.

4. Ask for a warranty. One of the best safeguards is to deal with a builder who has a written warranty, such as the 10-year plan offered through the Home Owners Warranty Corporation, which has chapters in most large cities. If the builder's warranty is limited to one or two

years, buyers should make sure that requests for repairs are made well before the expiration date.

5. Hire an inspector. All homes must pass inspection by local building-code authorities, but this does not guarantee that the home will be free of many minor defects—and sometimes major ones. Builders also usually conduct a walk-through inspection of their own with a buyer, taking note of items to be completed or repaired. For further protection, it helps before going to settlement with the builder to hire an independent construction inspector to examine the home. This service normally costs \$100 to \$150, but it can save the buyer many times that later on.

6. Follow through on defects. Experts point out that even expensive, well-built houses are almost certain to have some problems. The important thing is how promptly and efficiently a builder clears up those defects. After moving in, the buyers should put all their complaints in writing to the builder. If he fails to respond in a satisfactory way, subsequent letters should note that a record of the complaints is being sent to the local building inspector and to consumer agencies. More pressure can be brought to bear by joining with others who have bought homes from a particular builder.

7. Keep accurate records. The homeowner should keep records of all correspondence with the builder, as well as receipts for repair work, motel bills or other costs incurred because of the failure to clear up problems. These documents will be valuable if legal action is necessary.

Many builders hold a walk-through inspection for buyers before settlement, but experts recommend that an independent inspector also examine the home.

