

RADIO

Old Bulbs and New Tubes

Bands of interference across center of television set may be due to an old-fashioned light bulb. Fluorescent lamp causes radio noise.

► IF YOUR television set has a band or two of interference across the middle of the picture, an old-fashioned light bulb may be the trouble-causer. And if your radio gives out with a low pitched buzz, the culprit may be a fluorescent lamp.

These reasons for TV interference and radio noise were suggested to members of the Illuminating Engineering Society meeting in Washington.

The straight wire incandescent lamp—it has not been manufactured for home use since 1925—can cause interference patterns on a TV set as far as two city blocks from its location, Harry E. Schultz and Delmar D. Kershaw of General Electric Company, Cleveland, said.

There are about a million of these lamps scattered around the country. They can be spotted by the clear glass bulb, by a very pointed tip at the top of the bulb and by the filament shape. They are used mainly in attics, closets, fruit cellars, etc., where they are turned on only infrequently and usually only for short times, so that pinpointing the interference source is very difficult. Since modern light bulbs do not interfere with TV reception, the old fashioned lamps are often overlooked, the engineers stated.

The patterns on a TV picture caused by interference from straight wire incandescent lamps are typical and do not look like those caused by small motors, shavers or automobile ignition systems. They do resemble the interference patterns given off by diathermy machines or other similar high frequency equipment manufactured before 1947.

The main channels affected are 2, 3 and 4, since the lamps produce oscillations in

the frequencies used for these channels. The lamps will also interfere with the sound portion of the program. Recommended solution: "Find and replace the guilty lamp."

Radio noise falls into two general classes, J. Warren Culp of Sylvania Electric Products, Inc., Bayside, N. Y., told the engineers. One type is caused by gaseous discharges, such as atmospheric lightning, electric motors and the sustained discharge that is found in neon signs and fluorescent lamps.

The other type is caused by diathermy machines, television receivers and occasionally incandescent lamps, he said.

"Radio noise due to radiation from electrical wiring," Culp reported, "can be effectively eliminated by well known methods but radiation from a fluorescent tube cannot be prevented so easily, since the ionized gas in the tube acts as a transmitting antenna."

Science News Letter, September 8, 1951

MEDICINE

Blood Tests for Cancer Disappointing

► FOUR BLOOD chemical tests for cancer, hailed within the past four years as very promising for earlier detection of cancer, are termed not accurate enough as diagnostic tests for cancer in a report to the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION (Sept. 1).

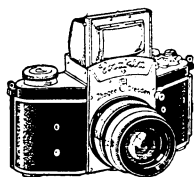
The report is by Drs. Richard J. Henry, Sam Berkman, Marshall S. Little and Richard J. Winzler of the University of Southern California, Los Angeles.

One of the tests, a mucoprotein test, was developed by Dr. Winzler. The other three were the methylene blue and heat turbidity tests of Dr. M. M. Black of Brooklyn, N. Y., and the iodoacetic test of Dr. C. Huggins of Chicago.

Each of 226 patients was given all four tests. None of the patients was so sick he had to be in bed and therefore none presumably had very far advanced cancer.

Of the 226 patients, 77 were known to have cancer while 149 did not have it. The persons making the tests, however, had no knowledge of the patients' case histories.

The tests gave correct results in only about 60 to 70 per cent of the cases, the four scientists report, "and thus cannot be regarded as accurate diagnostic tests for cancer."



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Even when the four tests are run as a battery, and interpreted as positive if at least two individual tests are positive, the results are not much more accurate.

Science News Letter, September 8, 1951

● RADIO

Saturday, Sept. 15, 1951, 3:15-3:30 p. m. EDT
"Adventures in Science," with Watson Davis, director of Science Service, over Columbia Broadcasting System.

Rear Admiral Calvin N. Bolster, chief of the U. S. Navy's Office of Naval Research, will discuss "Research Pays Off for Defense."

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