



ENGINEERS AT RCA TEST TIROS SATELLITE BEFORE LAUNCHING
 270-pound instrument is 42 inches in diameter; 19 inches high

SATELLITE TIROS

Big Eye on the Weather

'Secret' Film Made in St. Paul

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Tiros, the whirling weather eye in space, is going down in history on film made in St. Paul.

While the "big eye" whirls in orbit taking pictures of the earth and sending weather reports in satellite beep-talk, vast audiences of ordinary mortals on this planet are learning about Tiros from the film.

Tiros is a seeing eye satellite with two miniature television cameras aboard. It was named from initial letters of its assignment: television and infra-red observation satellite, one sequence in the film explains.

Sent aloft April 1 to photograph the earth's cloud cover, it is considered an important weather instrument as well as a significant demonstra-

tion of peacetime use of satellites and rockets.

Within minutes after the government's announcement that Tiros had been fired successfully into an orbit about 450 miles from the surface, sealed film canisters were taken out of locked cabinets in New York, Princeton, N. J., Washington and St. Paul.

The Tiros show was on the road in a 13-minute color film produced by Reid H. Ray Film Industries, 2269 Ford Parkway.

The St. Paul firm made the film as the official record for RCA, which produced the weather satellite.

Reid H. Ray, president of the company, estimated that up to this week three to four million viewers had seen the film on the 17 prints in existence. These audiences were chiefly government weather personnel, scientists and engineers interested in professional aspects.

The President of the United States in a reported private showing at the White House and this reporter, sitting alone in the Reid Ray projection room, were among viewers in the early moments after release of the film.

Later that day countless millions saw cuttings from the film on television news

broadcasts.

But that was only the beginning. Two days ago Reid Ray Industries received an order to make 125 copies of the color film which will be shared by RCA and the national aeronautics and space administration (NASA). The additional copies will increase the audience potential many times over.

Wednesday the company also received orders for the first major revision of the film, to include pictures of the actual launching of Tiros. That will mean still more copies of the movie in the months ahead.

A second revision is expected, Ray said, when some of the television pictures transmitted by Tiros are ready to be incorporated into the movie.

Detailed technical aspects of the Tiros development are being put together in St. Paul for scientific instruction film that will run about 50 minutes, Ray also revealed.

The 13-minute movie which made its debut the day Tiros was fired shows various steps in assembly of the satellite and use of its information by the weather bureau. A few scenes were shot in the office of Minneapolis weatherman P. W. Kenworthy.

Other "live" sequences were filmed in RCA's laboratories and plant at Princeton, N. J. Official pictures taken at the launching from Cape Canaveral, Fla., will now be spliced into the record.

Sequences using animated cartoon techniques were made in the Reid Ray studios under supervision of Gordon Ray, the firm's art director. Robert Winter was film director using a script written by Robert C. Bruce, the company's chief writer. Roger Krupp, Twin Cities radio announcer, was the narrator.

The film shows such things as assembly of the cameras and other instruments in a 270-pound, 40-inch drum.

Tiros is still transmitting weather information and pictures to monitoring stations at Fort Monmouth, N. J., and Kaena Point, Hawaii. It is expected to continue doing so for several months, drawing power from solar cells which capture the sun's rays on mirrored surfaces that make up its skin.

Because the satellite is whirling on its own axis as well as moving around its orbit, the cameras are not always aimed at the earth. When conditions are considered favorable for photography, it is commanded by

signal to aim the cameras and start filming the clouds.

Its pictures are recorded on a tape developed by Minnesota Mining & Manufacturing Co. and its guidance system was made by Remington Rand Univac division, both of St. Paul.

From its orbital height—varying from between 435½ and 468.28 miles—Tiros takes pictures that show a 700-mile patch of the earth's surface at once. Four or five such patches span the United States.

Speculation already has arisen that in addition to photographing the cloud cover for weather information, Tiros or its successors with refined instruments might provide photographs of military importance from areas behind the Iron Curtain.

Pictures already released have shown the entire Gulf of St. Lawrence area and large sections of Lower California and Mexico.

Ray said production of the basic Tiros film was accomplished with a budget of about \$35,000.

New sequences and preparation of additional copies could increase the value of the contract substantially.