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SCIENCE NEWS LETTER

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Supersonics
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A SCIENCE SERVICE PUBLICATION

Life hangs by such threads



WANTED: Something to keep flyers from freezing. So engineers developed electrically heated goggles, shoes, suits... Something dependable to guide pilots in fog and dark. So engineers devised electrically driven gyroscopic instruments... Something automatic to keep engines from overheating or cooling. And now comes an electric control the pilot needn't touch.

Working day and night, G. E.'s research and engineering staff has solved hundreds of such problems. The pictures here show how a few have been met. Through research come better electrical products and processes—in war or peace. *General Electric Company, Schenectady, N. Y.*



Flyers' lives often depend on their instruments. G-E workers use only tweezers to handle these precious parts of electrically driven gyroscopic instruments, dry them with air jets, oil them with hypodermic needles. They've got to be accurate.

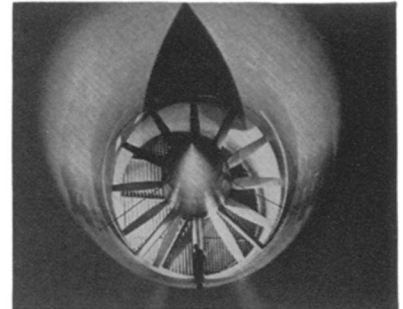
Hear the G-E radio programs: *The G-E All-girl Orchestra*, Sunday 10 p.m. EWT, NBC—*The World Today* news, Monday through Friday 6:45 p.m. EWT, CBS—*The G-E House Party*, Monday through Friday 4:00 p.m. EWT, CBS.

FOR VICTORY—BUY AND HOLD WAR BONDS



Eyelids can freeze shut when you're 7 miles up! Electrically heated goggles, developed by G-E engineers, have fine wires embedded in plastic lenses. With G. E.'s electric blanket as a start, G-E engineers designed electrically heated flying suits, heated gloves and shoes being made in three G-E plants. Toughest problem was to devise heated gloves with thin wires strong enough to stand constant flexing.

Before it's built, they know how it will fly! 18,000 horsepower of G-E motors blow winds faster than a pursuit plane can fly. Testing model planes and parts *up to full size and speed* in wind tunnels like this helps get new airplanes perfected quicker.



Making nightlandings safer. Engineers adapted the G-E "Sealed Beam" auto headlamps into war use—G-E airplane landing lamps 20 times brighter than those on your car. Sealed against dust, dirt and salt water damage, they cut down the peril of high-speed landings.

GENERAL  ELECTRIC



RCA radio-relay towers—like those phantomed above—will leap the hurdle of *distance* in post-war television.

Coast-to-Coast Television...through "Radio-Relay"

For a long time it looked as though post-war television might be confined to local stations. Only persons within a fifty-mile radius of New York, for example, would see the important television broadcasts from NBC's pioneer station WNBT, atop the Empire State Building.

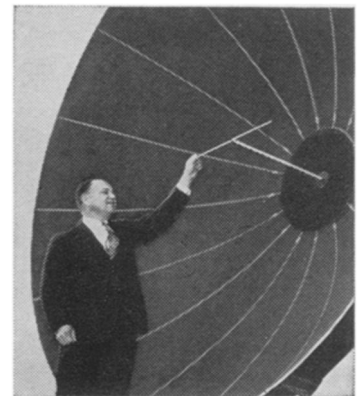
That was because the ultra short waves that carry television do not bend with the curvature of the earth. They go in a straight line out to the horizon—and then keep on going into the sky.

But today, television's big handicap of short range has been completely overcome—by RCA scientists and engineers.

The *radio-relay* was developed—a tower that "bounces" television programs to the

next tower 30 to 50 miles away. Through a network of these automatic, unattended, radio-relays, coast-to-coast television is made practical.

This is but one more example of how RCA research constantly "makes things better." Such research is reflected in *all* RCA products. And when you buy a television set, or radio-phonograph, or anything made by RCA, you enjoy a unique pride of ownership. For if it's an RCA you can be sure it is one of the finest instruments of its kind that science has achieved.



C. W. Hansell, RCA specialist in transmitters and relays, is shown here with a radio-relay reflector that can "bounce" radio messages, radiophotos and Frequency Modulation programs at the same time that it relays television!

RADIO CORPORATION of AMERICA

PIONEERS IN PROGRESS

