

ELECTRONICS

Airborne Television

It gave the Army and Navy "eyes" in remote-controlled aircraft during the war and now promises revolutionary peacetime developments.

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► NOW IT IS "walkie-lookie". Airborne television, that gave the Army and Navy "eyes" in remote-controlled aircraft and other important weapons for victory, was demonstrated to the public with a promise of many revolutionary developments from the use of television in peacetime airplanes.

Two systems of aerial television, known during the war as "block" and "ring," were shown to the press at the Naval Air Station at Anacostia, D. C., by Navy and Radio Corporation of America engineers who worked on the projects. The official U. S. Navy photograph on the cover of this SCIENCE NEWS LETTER shows the way a moored blimp looked at a "ring" television receiving station eight miles away from the plane at the time of the transmission.

"Ring" equipment transmits clear television pictures from up to 200 miles, while a more compact unit, the "block" system, is a smaller installation for use over shorter distances.

"Walkie-lookie," the picture equivalent of the small remote voice instrument known as "walkie-talkie," will come from the "block" system's light-weight, easily portable television camera, according to Brig. Gen. David Sarnoff, president of RCA. He predicted literal eyewitness news coverage for events in the future with the small camera.

Other predicted peacetime developments from the war's airborne television equipment include:

1. Television test pilots in experimental aircraft to eliminate the risk of life. Airborne systems could not only transmit views of the plane's surroundings, but also give controllers on the ground a continuous picture of the plane's instruments.

2. Sight transmission of weather and traffic conditions to air pilots and marine navigators.

3. Television eyes for industry and science that will present pictures of operations or experiments to distant observers. Thus, dangerous work such as that involved in many phases of atomic energy investigation might be seen "close

up" by observers at a safe distance.

4. Airborne exploration of hazardous regions with remote-controlled aircraft using television.

5. Numerous commercial applications such as the use of television to provide visual stimulus to travel enterprises.

In the war, the Army and Navy used "block" and "ring" for many important life-saving duties. These television systems were used to guide both pilotless aircraft and surface boats, and explosive-laden bombers and crash boats could be sent against the enemy for "direct hits" accurately controlled by distant operators.

Television, the Navy revealed, guided free-falling, radio-controlled aerial bombs, flying torpedoes, assault drones and pilotless explosive gliders.

Eyewitness views of many hazardous positions came to remote headquarters

through television cameras in important operations, Navy experts reported. In amphibious landings, reconnaissance and gunfire were reported vividly from the spot of action by television, while observation planes for artillery spotting, gun control, map making and other important jobs used "block" or "ring" cameras.

Visual word messages, maps and charts were sent at high speed between ships and aircraft and from one part of a ship to another during battle by Navy television installations, it was explained.

The Army and Navy used visual cameras to record tests of equipment that required perilous conditions of experiment.

Both the Army and Navy used the "block" system during the war, while the long-range "ring" television equipment was produced in the latter stages of the conflict.

The names "block" and "ring" were used as code names to protect the projects, and the first work on airborne television was done under the unrevealing title "Jeepette." "Block" used on Navy gliders became "Glomb" and on over-age bombers used to fly remote control missions was called "War Weary." Navy



WASP ENGINE PROTECTED—Dr. Henry Butler Allen, secretary and director of the Franklin Institute, explains the protective refinishing of the *Wasp No. 1* engine to Lieut. Gen. Hoyt S. Vandenberg. Through the moisture-proof wrapping of pliofilm can be seen the numerous bags of protek-sorb silica gel and (lower center) a humidity indicator.