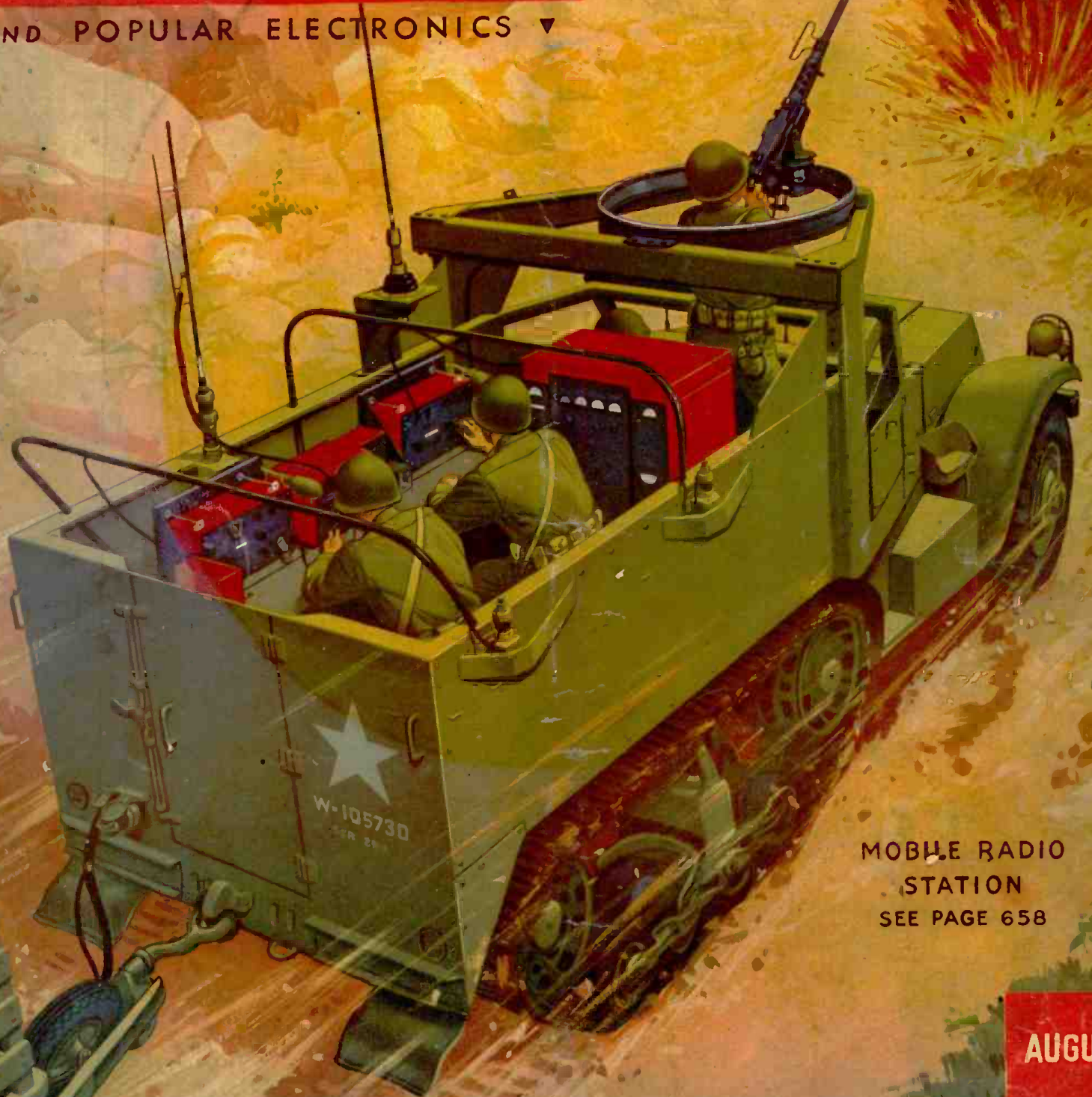


HUGO GERNSBACH, Editor

RADIO CRAFT

▼ AND POPULAR ELECTRONICS ▼



MOBILE RADIO
STATION
SEE PAGE 658

ALEX
SCHOMBURG

AUGUST

1944

25¢

CANADA 30¢

RADIO-ELECTRONICS IN ALL ITS PHASES

COVER FEATURE

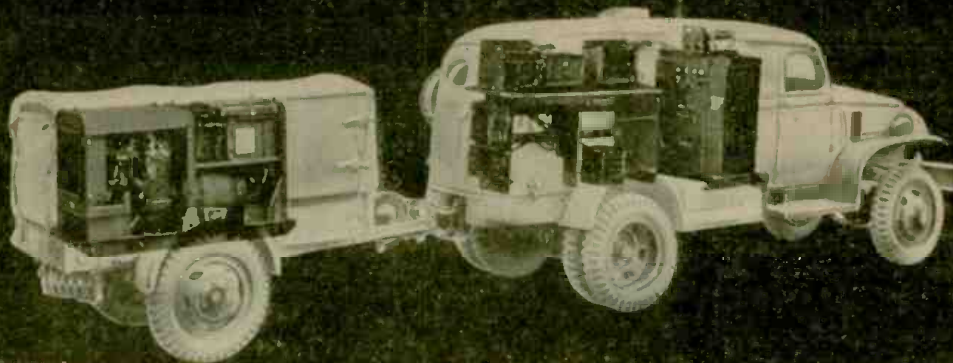


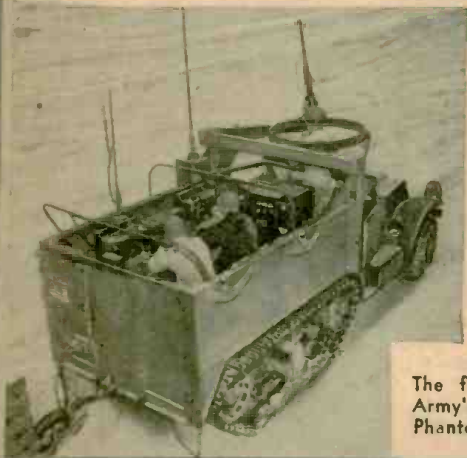
Photo courtesy Tho Hallicrafters

MOBILE RADIO STATION

THE "Mack Truck Portable" is a term which has come down to us from the earliest attempts to build radios that could be carried. Some of these were so bulky and heavy that the idea of a truck to carry them suggested itself automatically. It remained for the present global war to make such a "portable" a reality. And reality it is, in the Signal Corps mobile radio station, SCR-299, illustrated on our cover this month. The SCR-299 is normally carried in a 1½-ton army truck, and also appears in other conveyances, such as the motor trailer shown in one of the accompanying illustrations. It has been mounted on a caterpillar half-track for use on the sands of Africa and may yet turn up on a propeller-driven sled for use in a Northern winter. In a word, the SCR-299 is the ultimate in mobility and power. The transmitter is the Hallicrafters HT-4,

modified to meet the exacting specifications necessitated by its work as a mobile radio. It is a 450-watt voice and C.W. set, which had been thoroughly tested and proved as an amateur rig before being drafted into the service of the country. It is powered—as are the receivers and an electric heater also installed in the truck—by a 117-volt Onan generator in a trailer behind the truck. The equipment includes two stan-

(Continued on page 701)



Signal Corps Photos

The five illustrations show several views of the Army's SCR-299 in various types of conveyances. Phantom above is a good view of the power plant.



MOBILE RADIO STATION

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standard receivers, the Signal Corps BC-312 and BC-342, and a speech amplifier.

Two field telephones with a mile of wire are also included, so the truck can become part of a liason network with wire and radio communication, using only its own apparatus. The truck provides space for accessories not easily carried with more compact rigs, so we find a complete set of tools and spare parts and a Signal Corps frequency meter as permanent equipment.

The range of the 450-watt transmitter is said to be over 100 miles in daylight, using either voice or code, and travelling at full speed. A special type of antenna transformer was required to match the output of the transmitter to the 15-foot whip antenna used in the truck, and range is, of course, somewhat reduced by this limited radiation system. Where the set can be used in a permanent or semi-permanent position, a more suitable aerial is erected, and the range is greatly extended.