

RADIO & TELEVISION NEWS

JUNE
1949
35¢

M-687

WTMJ's MOBILE TELEVISION UNIT

Page 53



WTMJ's Mobile TELEVISION UNIT



Mobile TV truck, costing \$10,000, houses all equipment necessary for remote pickups. (Left) The rear part of the truck is a complete television control room.

Remote pickups are not simple—it takes a crew of five to ten men and two tons of equipment and cable.

By **JOHN E. HUBEL**

WHEN WTMJ-TV, The Milwaukee Journal station, does a remote broadcast, such as a football game far from studio transmitters, it's a speedy, efficient, though big, operation. During the weeks of trial period before going on the air on December 3, 1947, however, it was a difficult task to get the TV equipment to "location." Several trucks were used to carry the heavy units to the spot, and the programs were put on with all the attendant difficulties of gathering together and loading the TV broadcast facilities.

Now, the WTMJ-TV mobile unit is often a familiar sight; it's on the spot and on the job just as soon as anything worthwhile turns up, no matter how far from the studios. This unit, a Chevrolet truck, was ordered months ago, especially constructed for television by RCA at Boyertown, Pa. It cost \$10,000 and weighs 9500 pounds.

To the weight of the truck, itself, is added about two tons of television equipment when taken out on location. When covering an assignment, one and one-half tons of equipment stay in the truck, and a half-ton of equipment is on cables 1000 feet long, so that it can be moved at will to the place where the pictures are to be taken. The truck has a hole in the

roof on which there is a deck reached by a ladder from inside, and when necessary, television cameras can be moved to the top.

Three portable cameras may be used with this mobile unit. They are assembled before each broadcast and dismantled when it is over. The inside rear of the truck is a complete

television control room, with wide panels of glass installed on three sides to permit broad vision from inside the control room. Television cameras are set up on a table stretching across the room, with three revolving seats provided for WTMJ-TV engineers. Above the table is a shelf for sound equipment, while down in front there is room for the cables to be run to the scene of the pictures.

In the central part of the truck are numerous cabinets to house equipment for amplifying as well as for television equipment not being used for the particular picture in work. There is also space for the microwave transmitter used to send the picture back to the microwave receiver at station WTMJ-TV, and space is also provided for the metering equipment used to measure the amount of electricity consumed.

Before a broadcast, the microwave transmitter must be set up on a roof or some other high point and be lined up with the microwave receiver on the tower of Radio City in Milwaukee on a line-of-sight basis. The sound portion of a television broadcast

(Continued on page 153)

Gordon Thomas of WTMJ-TV does an interview at the Wisconsin State Fair Park.



Mobile TV UNIT

(Continued from page 53)

reaches the home station through the use of telephone circuits. On most remote broadcasts, a crew of 10 or 11 men is needed. In addition, personnel are needed in the TV control room and at the transmitter at Radio City.

Before the new mobile unit was received, two portable cameras had to be transported to the scene on ordinary trucks. As they were the only cameras for television which were owned by WTMJ-TV, it was quite a problem for the engineers to set up the portable cameras for both studio and remote broadcasts. Now two studio-type RCA cameras for television work have been received, making more extensive programming possible. Until the new cameras arrived, studio and remote broadcasts could not be scheduled in the same broadcast segment.

In the mobile truck, the following special equipment for TV operation in the field is installed: A complete 7000 megacycle microwave transmitter and its four-foot parabolic antenna; three complete television camera chains with synchronizing generators and master monitor switching and power supplies; complete remote audio amplifiers, with cases containing six different types of microphones for various types of broadcasting; compartments for camera tripods, announcers' video monitor and view finders; camera cable, 500 feet, on reels, 250 feet of power cable, and 500 feet of microphone cable. A complete power distributing panel with power metering and voltage regulators.

In November, 1948, the mobile unit made its longest trip to do a remote broadcast. This was to Wrigley field in Chicago for the Green Bay Packer—Chicago Bear game. Most broadcasts from Chicago are network programs, but this particular one was exclusive with WTMJ-TV and, therefore, all operations had to be handled by the station. At any rate, the mobile TV truck proved itself in the test. —50—