

Electronic System Aims to Guide Drivers on Trips

General Motors Research Laboratories recently demonstrated a new experimental road-vehicle communications system that would remind the motorist of speed and traffic signs, enable him to summon help in an emergency, and provide automatic routing for trips.

Dr. Lawrence R. Hafstad, vice president in charge of GM Research Laboratories, pointed out that the new system, known as Driver Aid, Information and Routing System, is the most comprehensive yet developed for highway communications. It includes:

1. Coded emergency messages from car to automatic recorders in a service center, with voice acknowledgement from the center, and voice traffic signs, enable him to summon help in an emergency, and provide automatic routing for trips.

2. A roadside-to-vehicle communication system that transmits a radio signal. These voice messages to the driver can include emergency traffic bulletins about the road ahead, as well as information on upcoming accommodations and service facilities.

3. A visual sign minder, triggered by road signals either as a single package or as separate compatible building-block units.

In the demonstration, GM Research Laboratories used two 1966 cars with the complete equipment. They were driven over a condensed version of an interstate highway system at GM Technical Center, complete with an information center for two-way radio communication, coded magnets buried in the pavement and low frequency roadside repeater transmitters.

In each of two test vehicles

was a special console, consisting of (1) A small microphone for voice communication with the information center. (2) A telephone-type dial for sending out coded messages. (3) A slot for the route minder punch card.

The visual sign minder was mounted over the instrument panel in line with the driver's vision.

For the route minder, the driver uses a special card punched for his destination. The card fits in a slot in the console. The routing equipment is activated by signals from magnets buried in the road at each major intersection, and compares the signals with the punched instructions on the card. Panel lights tell the driver whether to turn left, turn right, or go straight through.

With all major intersections coded, it would be possible to travel across the U.S. by the system's direction.

A modified Citizens Band transceiver provides communication with a service center. The motorist can dial coded requests for road or travel information, police, an ambulance, a fire

truck, or a tow truck with gasoline and a mechanic.

Small roadside repeaters located every three to five miles relay the message; a base station operator acknowledges direct by voice and dispatches the aid requested.

The coding system would protect the driver and his family, since it would be difficult for unauthorized persons to receive information on the standard car's location. And, the Citizens Band transceiver can still be used for voice communication—both with the service center and other operators—in the regular manner.

Audio signs are transmitted on one of two proposed highway safety channels in the Citizens Band. Low-power roadside units transmit information on the road ahead, upcoming accommodations, and service facilities. The units contain taped messages and also can be activated for transmission of live emergency messages from a control center.

The sign minder is designed to supplement, rather than replace existing traffic signs,

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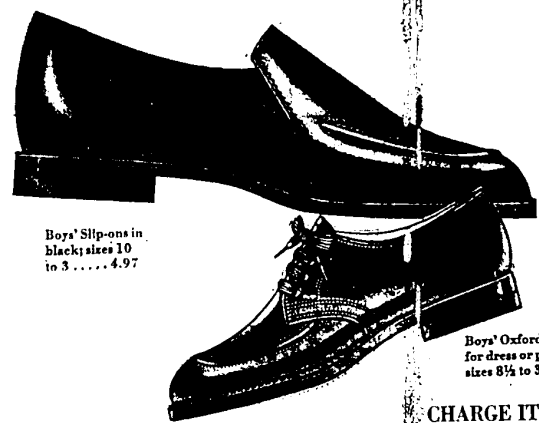
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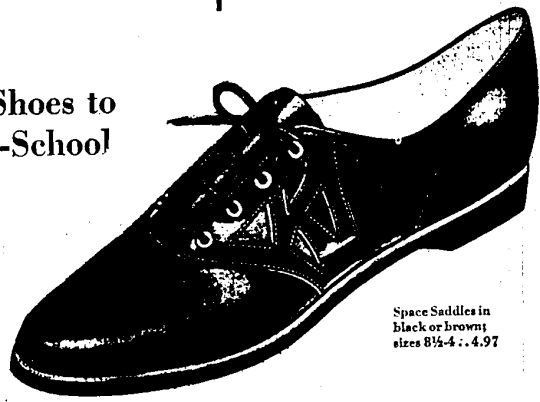
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