

TOMORROW'S TELEPHONE

Peacetime applications of GI portable communications equipment will help keep civilians in touch with their homes and offices.



Plans are already afoot to put these battlefield devices to work in everyday life on the home front.

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THERE are jobs waiting in the post-war world for your old combat friends—the walkie-talkie, the handie-talkie and the tank intercom. Civilians are already eager to put these battlefield devices to peacetime use, and after some hesitation the Federal Communications Commission has told the big telephone outfits they can prepare to peddle "general mobile telephone service" after the war.

The Bell Telephone Company, which would like to sell or rent and install radiophone equipment for New York City's 500 ambulances, 100,000 commercial delivery jobs and 20,000 cabs and busses, thinks that before 1955 at least 10,000 vehicles will have mobile transmitter-receivers.

The Bell engineers have made with the slide rule and figured that office-to-truck or dispatcher-to-cab communications would save enough in fuel, wear-and-tear on tires and dead mileage to pay off quickly the \$500 equipment cost (that's the present price; it's expected to come down later) and toll charges on calls.

If the FCC were moving as fast as Bell thinks it should, there would soon be a land-line relay station every 17½ miles on main highways. By dialing central and giving the approximate position of your company's truck, you would be able to talk to the driver and tell him that Mrs. McDade in Hoboken wanted only one case instead of two, and please come back by way of Yonkers and try to shuck off the extra on Old Man Peebles. Your voice would travel by standard telephone line to the relay station closest to the truck and then spray out via radio waves to the driver's receiver.

The telephone people see special value to physicians in this kind of communications service. They say the mobile phone will enable Doc Jones to start out on his rounds in the morning and keep in touch with his nurse back in the office at all times, in case of emergency calls. The FCC doesn't share Bell's enthusiasm, probably having a sneaking sympathy for the harried big-city sawbones who in pre-war non-intercom days was able to duck out to sun himself on a park bench or go for a furtive drive to Blue Creek for a half-hour of fishing.

If Bell has its way, Doc will be a gone gosling. If he rips the phone out of his car or stealthily tosses his handie-talkie on a Salvation Army tambourine, Nurse can still send out a book message, or general alarm: "Call for Dr. Maw-riss. Wearing a pin-stripe suit and a blue tie with potassium permanganate spots. Look for him. He is want-ted in sur-jurry." Then somebody else

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"... the utility of radio in mobile situations."

with a handie-talkie can be counted on to spot the doctor and turn him in to his patients.

There are 15,000 doctors in New York City alone, and there and in Boston this mobile telephone arrangement is already in operation on a limited experimental and emergency basis. If the idea catches on, Bell foresees the post-war day when doctors in many cities will be demanding the service. The company also proudly reports that several large business concerns in various parts of the country have written to say that they hope to see this mobile phone stuff in operation.

For several reasons, however, it hasn't been easy for Bell's engineers to sell the FCC on the idea. The commission has felt that the additional aid to communications was planned almost entirely for large metropolitan areas without regard for the greater needs of rural and remote regions. But the big rub is technical.

Wartime advances in electronics have opened up a lot more space in the radio spectrum, but when it comes to passing out frequency allocations to standard broadcast, FM, television, police calls, aviation communications, coastal radiophones, etc., the FCC is still somewhat in the position of the manager of a 100-room hotel trying to satisfy 1,000 would-be guests.

One factor that helped persuade the FCC to allocate space to the telephone people was the belief that servicemen returning to civilian life would be used to handie-talkies and such.

"That's one of the things that is going to give us the biggest headache," said Lawrence L. Fly, then FCC chairman, at a hearing called to hash over allocations of radio frequencies for post-war broadcasting. "Those fellows are coming back from abroad thinking they are going to have radio communications in their vest pockets."

"I feel," spoke up F. M. Ryan, radio engineer for the American Telephone and Telegraph Company, "that a lot of our men in the service who have experienced the utility of radio in mobile situations abroad will be rather surprised not to find the same convenience over here."

That did it. Or, at any rate, Mr. Ryan's crack about the surprised and presumably indignant veteran seems to have helped spur the FCC to set aside 31 channels for "mobile situations." The FCC, however, didn't go all the way with the telephone industry, which had asked not for 31 channels but for 200.

Under the FCC's ruling, several frequencies were specifically assigned to something called the



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Citizens' Radio Service, which is to occupy a space in the broadcast spectrum reserved for the "general mobile telephone" experiment. As we get it, this service will eventually handle things like enabling a farmer to call in the hired hand from the plow without resorting to the banging-on-the-dishpan method of signalling. The hired hand is presumably to carry a transmitter-receiver about the size of a plug of chewing tobacco in his hip pocket.

The assignment of even 31 frequencies was plainly regarded by the FCC as a major concession to the spirit of Buck Rogers. Chairman Fly, for example, made it clear that he was not convinced that the need for vehicular telephones and personal handie-talkies was important or urgent enough to justify the use of valuable radio frequencies, particularly in cities where there's a drug store with a pay booth on every other corner. To one engineer who kept harping on the convenience of mobile communications, Fly said: "I'm not talking about convenience. I'm talking about urgent need."

"Well, we can get along without bathtubs, you know," the engineer said.

To which the chairman replied, perhaps too hastily, "A lot of people do."

Apparently this retort caused all the FCC men to look at each other and turn a little pink, because soon afterward they dug up those frequencies for the telephone people to play around with.



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