BLIND DATES

By W. E. Hill

She was his day nurse at the hospital and when, later, he called her on the phone and asked her to meet him for dinner, she accepted. She's wondering if they will recognize each other. Because she never saw him except in pajamas, and he only saw her in her cap and uniform. Street clothes make a difference.

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I'm your old friend Bill's college roommate, and he asked me to look you up as soon as I got in town," etc., etc. Showing man in phone booth trying hard to convince a girl friend of his pal's that they have mutual friends.

"Oh, yeah? Well, how was I to know that her sister would be mouse-faced?" (Just the usual post-mortem after a blind date with the plain sister of a good looker. The friend suspects trickery.)

Mabel is very nervous, for this is her first blind date. Meets a girl chum and can't remember the new boy friend's name and can't introduce him. Which is awkward because her girl friend will broadcast that "Mabel was so afraid I would steal her beau, she wouldn't introduce me!"

Their dancing date was arranged by mutual friends. They said he was a regular Fred Astaire on a dance floor. And he was led to expect a second Ginger Rogers—only with more pep and charm. They're both making the best of it, though the same thought is running through their minds, "Can this possibly be the person I've heard so much about?"

Joe had been telling Mary what a grand guy his friend Bert was. So Mary said, "Fine, bring him along and I'll ask Dottie to meet him." And here's Bert. Mary, who wonders how friend Dottie will take to him, is hoping that he has lots of money or social position, or something, to offset lack of personal charm.

This is Harry's sister's roommate at college and sister arranged a blind date for her to attend junior prom with Harry. "You'll simply be mad about Elsa," wrote his sister. "So sparkling and so clever." Elsa is specializing in biology, zoology and such, and *will* talk shop. So Harry, who has a weak stomach, has to hear all about the reflexes of the frog they cut up in "lab" last week.

"How tall is he? Does he really dance well or just so-so? Has he a car? Where will we go for dinner?" Showing girl who has been fooled too often, getting the low-down.

The blind date following a phone flirtation. "I'll meet you at the store entrance," she said. "I'm wearing black, with a little black hat and a short face veil." And he said he would be wearing a white carnation. He's right on hand with the white carnation, but it seems as though every girl in the city had stepped out in a little black hat with a short veil.

What's New in World of Air Transportation

Safe Flying Depends on Radio

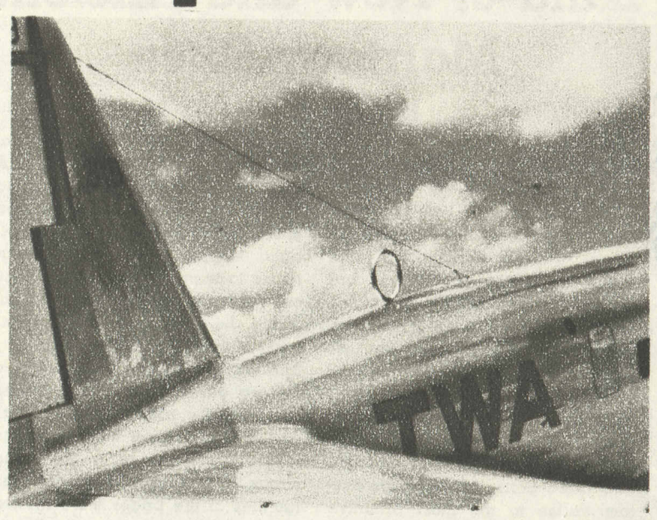
By WAYNE THOMIS

OFTEN the difference between a routine safe flight and disaster depends solely upon radio. One illustration clinches this point:

A brand new Douglas DC-3 airliner bound for New York and export crashed in Arizona mountains on April 4 only because the plane, which was one of the finest machines of its type, lacked radio equipment to receive signals from American stations.

The young pilot disregarded this lack of radio aid, became lost, and attempted to descend through the clouds.

The irony of this tragedy lies in the fact that a dozen other Douglas airliners, equipped with radio capable of receiving signals on American frequencies, went through that same bad weather with perfect safety about the time the export ship was destroyed. The pilots were able to guide themselves on the beam and keep themselves informed about other ships in the air and on the weather conditions ahead of them.



By remote control from the cockpit, loop antennas such as this one, fixed near the tail of a Douglas DC-2 airliner, can be turned through 360 degrees so that a bearing may be taken on the station from which they are picking up signals.

At this time there are three main radio aids to airmen: the air commerce bureau radio beam transmitters, air line short-wave stations which permit voice communication from ground to planes, and the long-wave commercial broadcast stations, which can be utilized by radio compasses or "homing devices" and also for taking bearings or "fixes" with rotatable loop antennas. The department of commerce stations and also the air line operators' short-wave stations can be used for these purposes as well.

Ordinarily airmen fly the radio beams, which send out signals that create aerial highways as definite as the pavement over which you drive your automobile. Using these beams as their fundamental aids, they receive orders, reports on weather and conditions of airports ahead of them from the ground, and also report to the ground their progress on any given flight.

All the major air line operators are experimenting at this time with the rotatable loop antennas and radio compasses. The air commerce bureau has ordered that every airliner be equipped with some such device by next Nov. 15. The problem of the operators now is to find the best type of equipment upon which to standardize.

Radio compasses are instruments which when tuned to a given station are so constructed that an electrometer needle will indicate on a dial when the airplane is pointed directly at the station from which the signal is emitted. Deviations to the right or left also are shown.

In using the rotatable loop an airman tunes to a given station and then by turning the loop antenna determines the direction of the station from the airplane as the machine is flying through the air. This gives the pilot a bearing on the station and is an operation very quickly completed. Having obtained one bearing, he rapidly tunes to two or more stations, obtaining bearings on these.

The bearings then are all plotted on a map and the point at which all the bearings intersect is the position of the plane.

This is an important and positive check on position and one which in the future will play an increasingly large part in all aerial navigation. All efforts at this time are bent on simplifying the needed apparatus and discovering an antenna which will function equally well by day or night, in snow, rain, and dust static conditions.

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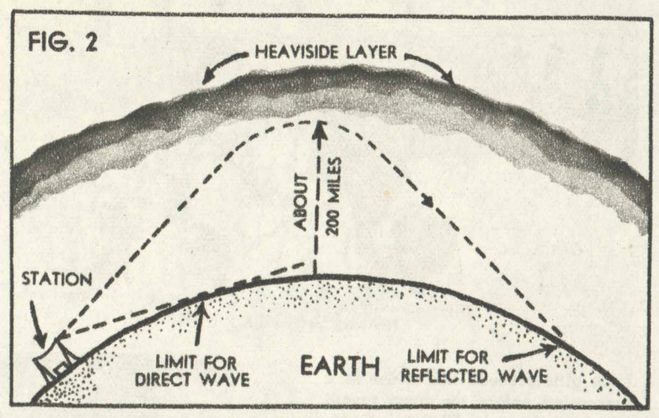
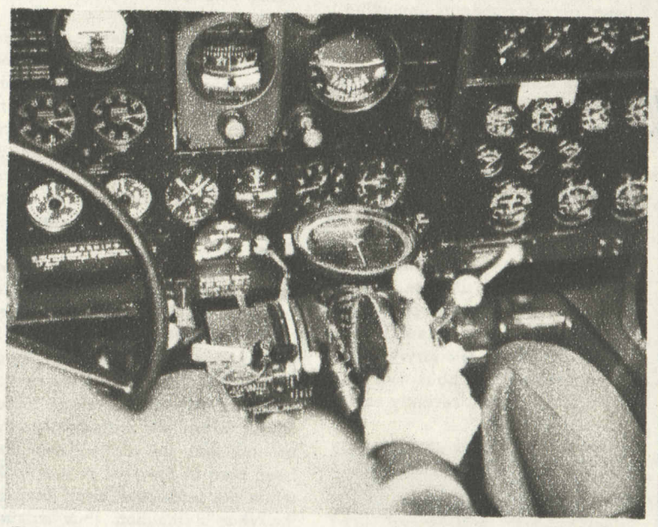
United Air Lines, in conjunction with engineers from virtually every large radio manufacturer, is carrying out a series of experiments to determine how to minimize the effects of rain, dust, and snow static and how to overcome the wavering of radio beams, their fading, and night effect peculiarities.

Night effects are caused by the invisible but apparently impenetrable Heaviside layer of ionized particles in the sky. This layer lies close to the earth at night but farther away by day. The distance varies from 25 to 200 miles, it is estimated, and the time of year, the temperature, humidity, and other factors affect the layer.

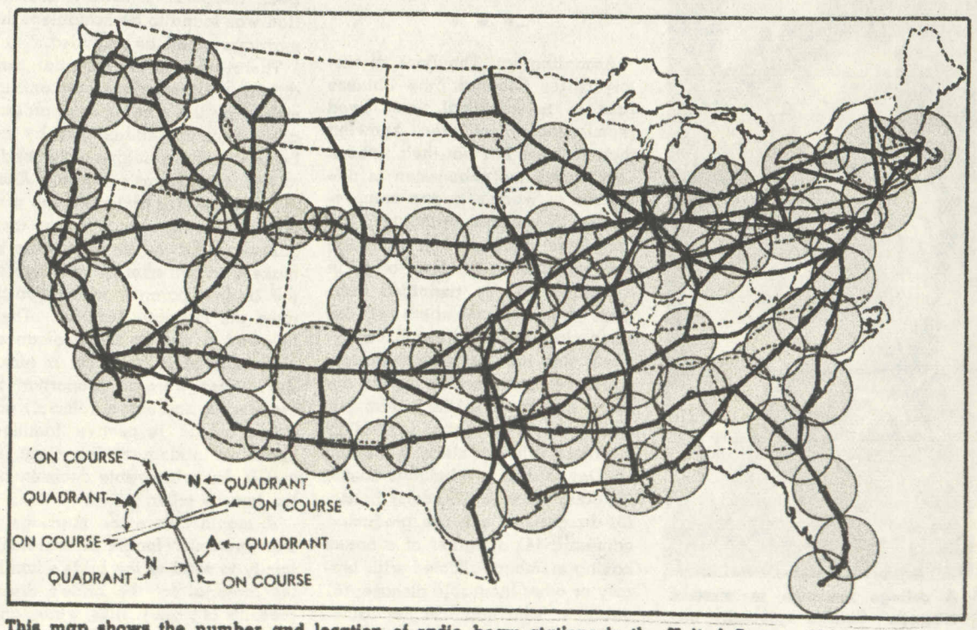
All radio signals are reflected from the Heaviside layer and back toward the earth, but, because the distance they go before reflection constantly varies, it is impossible as yet to design transmitters and receivers which will operate in exactly the same way at all times.



All radio signals travel in straight lines but can be heard around the earth because they are reflected off the Heaviside layer. Long-wave, low-frequency signals apparently are reflected from low altitudes, while higher-frequency short waves penetrate the layer farther before being bent back toward the earth.



This is the apparatus through which airmen obtain bearings on radio stations from the cockpits of airliners. This particular unit is on a Transcontinental and Western Air plane. There are other types which differ only in details.



This map shows the number and location of radio beam stations in the United States. Note that most of the station zones overlap. These form the invisible roads of the air.