### Church Service Broadcast

## Company Thanked

## THE value of broadcasting sermons

as a means of extending the Kingdom of God was acknowledged by the General Assembly of the Presbyterian Church at its sitting in Wellington on June 4.

The Rev. R. Howie thought it would be fitting if the Church were to thank ing planes in the air.

We have become so accustomed to the Radio Broadcasting Company of the use of radio for all manner of New Zealand for affording facilities for relaying the sermons from churches, and thus extending the Kingdom of God. He moved to this effect, and the motion was carried.

# Radio in the Air

# Ensuring Safety of Travellers

modern radio outfit with which the aeroplane is equipped. Indeed, just as wireless has ensured the safety of ships at sea, so it is now safeguard-

communication that we may not perhaps realise that each application of radio communication has its own peculiar difficulties, and this is especially so in the case of radio communica-

PERHAPS the most important aid tion between an aeroplane and the in the safety of air travel is the ground or between one aeroplane and another.

Probably the most comprehensive radio equipment carried on commercial aeroplanes at the present day is that fitted to each plane flying over the famous air routes between Chicago, Oakland and San Francisco and be-tween Seattle and Los Angeles.

The Boeing Company, which controls these services, has carried out over a number of years its own special radio experiments and has developed an aeroplane radio equipment which meets all the requirements of these particular routes.

#### The Pilot's Enemy.

PILOTS on these routes can now carry on direct conversation with ground operators from an altitude up to 12,000 feet and at a distance of 200 miles. Ground stations for transmission and reception have been established every 100 miles along the routes and in this way all pilots are kept constantly informed as to weather conditions and other matters of importance.

Everyone knows that bad weather is the great enemy of the aeroplane pilot; in fact it is now almost his only serious enemy. The pilot's task is made much simpler, however, if he can be kept constantly informed of weather conditions ahead of him and be given precise instructions with regard to the position of the landing ground, and how he is to make his landing.

All this and much more is now pos-

sible by means of the very much simplified radio equipment available for The equipment used in aeronlanes. the machines, on the routes mentioned above, weighs about 100 pounds and is practically automatic in operation; it requires no adjustment on the part of the pilot, whose full attention therefore may be given to the flying of the machine.

Before the final form of the radio equipment was settled, a large number of experiments were carried out in order to determine the most suitable wavelength; eventually it was found that a wavelength of 90 metres was suitable for all required altitudes and also for day and night operations.

#### Some Special Problems.

SOME of the special technical problems encountered are extremely interesting. It is found necessary, for instance, to "bond" the aeroplane completely; that is, to connect electrically

together all metallic parts.
The bonding of the aeroplane is necessary not only in order to reduce interference, but also to prevent the possibility of the aeroplane catching fire, since an insulated piece of metal, if of proper size and character and in a certain position, may pick up a sufficient electrical charge to produce sparks.

The ignition of the aeroplane engine must be very carefully shielded, otherwise the interference from it will render radio communication impossible.

If you were to listen with a radio receiver in an aeroplane, in which the motor had not been properly shielded.

## Radio Advertising

#### Menace in Italy

THE radio advertisement germ seems to be biting the Italian broadcasting authorities. Amateurs all over the country are gravely perturbed by the possibility of this abuse of the microphone, and strong petitions are being addressed to the authorities, pleading for care in the introduction of any propaganda in the transmissions. It is pointed out that one never hears advertising in the British, German, or Austrian programmes; only the Latin countries, like France, Spain, and Rumania, have succumbed to the rempta-

all you would hear would be a terrific storm of crashes, these, of course originating at the make-and-break contacts in the distributor, from the magneto and from the actual sparks in the sparking plugs.

This type of interference is overcome by encasi: all the spark leads in flexible copper armour, and even this apparently simple operation must be carried out in such a way as not to interfere with the efficient working of the motor and of the aeroplane.

In the equipment used on the abovementioned routes the radio apparatus is mounted behind the pilot.



## The Radio Owl will guard your set

When you go out or go to bed at night you can quite safely leave your set switched on if it's guarded by the Radio Owl. All you do is to adjust the Owl for any time up to two hours ahead. He watches till the time is up and switches off your set automatically.

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