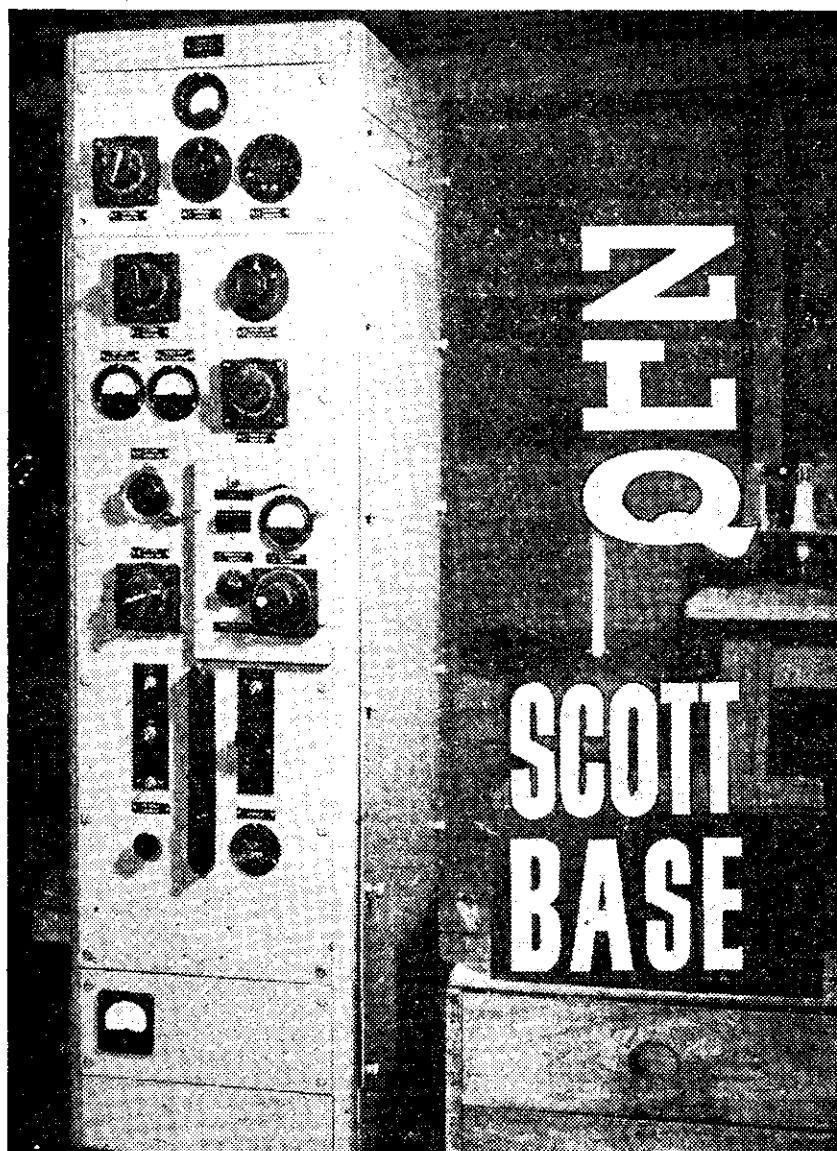




THOSE who make the "physical expression of man's intellectual urge to know," and go out to explore, leave themselves open to one of man's greatest fears—the fear of isolation. It may be the fear felt by Columbus's sailors, leaving the warmth of home for an unknown sea; or perhaps the fear of a single being irrevocably separated from his kind, alone, out of touch, out of contact.

It may also be true that this fear is part of the fascination of exploration; so the explorer's ideal is that compromise between contact and isolation: a way back, a stout ship, and in our modern world—radio.

Between all the units of modern Antarctic exploration, radio offers an efficient, expanding link. But for this link to be effective months of preparation, testing, and co-ordination are necessary.

When the ship Endeavour leaves for the South in December, included in its cargo will be 30,000 lb. of radio and power generating equipment, every ounce of which has a place and purpose in New Zealand's Antarctic operations.

The first main radio problem in the South will be erection of the masts at Scott Base. The site chosen for the base is a rubble and gravel morainic terrace frozen to within a few inches of the surface, even in "summer," and trenches have to be dug or blasted in this surface deep enough to embed railway sleepers as "dead men" to hold the mast stays. But to do all this and to erect the masts the expedition must have an estimated two weeks of clear weather with an absence of wind. This is asking a lot in a region noted for its sudden ferocious storms.

A total of eleven masts are to be erected at Scott Base, nine 62-footers, and two I.G.Y. masts 80ft. high. These masts are the same as in use at the Australian base at Mawson.

Once the masts are up, there is still a doubt that they will stay up; for they will be subject to gales of anything up to 150 miles an hour, with temperatures of a possible 70 degrees odd below zero icing up the stays and masts. Because of this, the masts will be erected well clear of the huts, and constant inspection will be needed. The two main reception points in New Zealand for transmissions from the expedition station ZLQ are Awarua Radio (Invercargill) and Makara, New Zealand in its turn will transmit South from Awarua and Himatangi, which normally beams its transmissions to London over the Poles.

In addition to the main transmitting and receiving gear, Scott Base will be equipped with two facsimile transmitters, for the transmission of radio-telephotos to Makara Radio. To send these photos, conditions must be very good, at least equal to those required for voice transmission. The time taken to transmit a photo varies with the size, and the definition required; in this case the general size will be about 6½ by 7¾ inches, and the time taken about seven minutes.

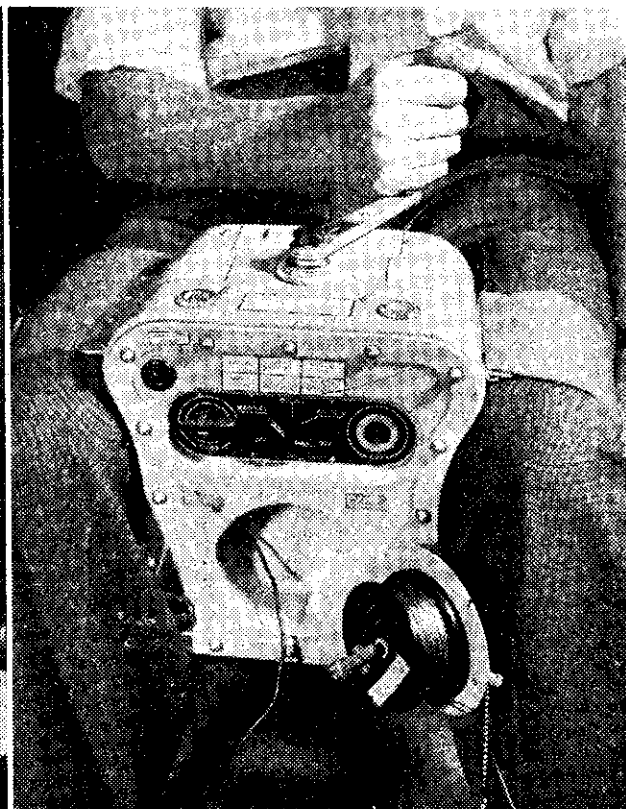
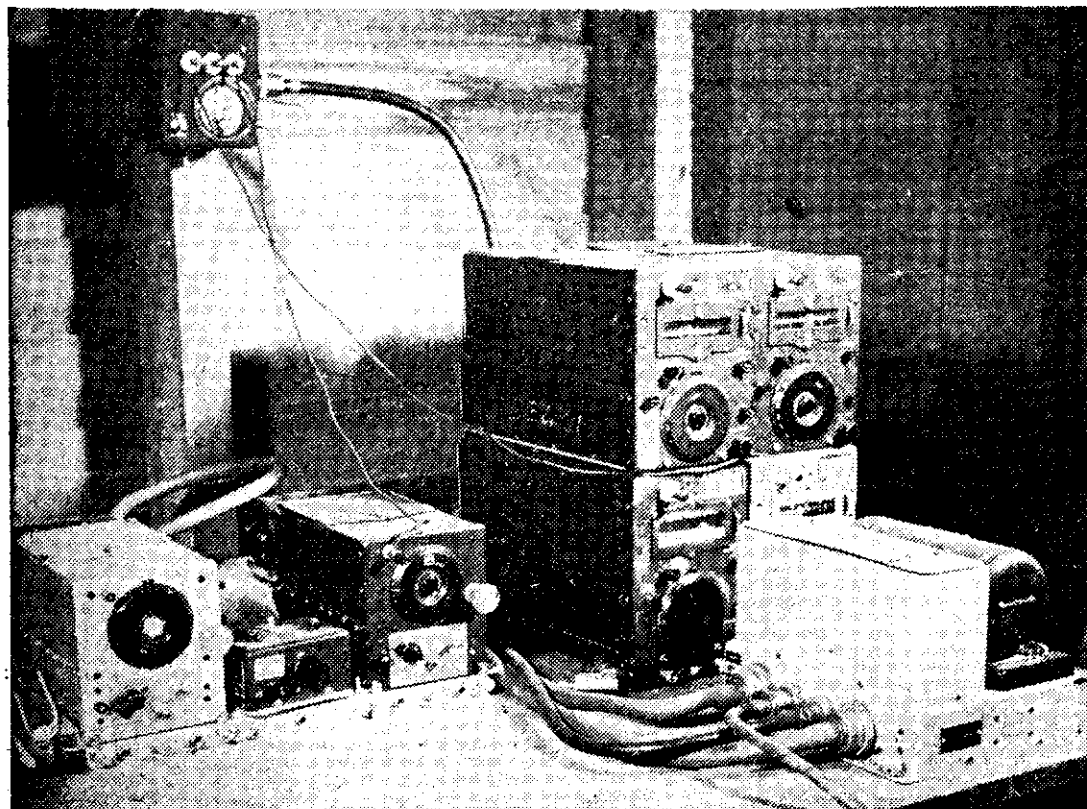
About an half-hour after receipt in New Zealand, the photos will be available for classification and subsequent release.

That is a brief picture of Scott Base's communications external to the Antarctic; the more important business is the day-to-day contact of the units working in the South.

ZLQ will be in contact first with the expedition's forward party. This party will be at the advanced base in the Mt. Albert Markham area (Depot 300), which will be equipped with a portable, battery-powered transmitter, and a 36ft. light ladder-type mast. Depot 300, like ZLQ, will have the same call-sign as was used in the recent tests of the radio equipment (between the Alps and Wellington)—ZLR.

The other contacts of ZLQ are the expedition's ship Endeavour; the Americans at Little America, and at Hut

(continued on next page)



TRANSMITTING equipment which will go to the Antarctic: At top, one of the three main transmitters for Scott Base; below, left, the transmitter for the advanced base; right, a "Gibson Girl" field transmitter