

began on June 1st in Miami with the planned route over Puerto Rico, Brazil, Africa, Pakistan, Burma, Singapore, Australia, New Guinea, Howland Island, Hawaii, and Oakland. Still plagued by equipment problems, the aircraft arrived at New Guinea on June 30th. The leg of the trip ahead was 2,556 miles to tiny Howland Island. This was the longest and most dangerous segment of the trip.

Anchored off Howland Island, where a landing strip had been specially constructed for Earhart and Noonan, was the U.S. Coast Guard Cutter *Itasca*. The Cutter crew was manning a radio direction finder on the island so that the approaching Earhart could have her exact location verified when she established communications with the *Itasca*.

At 2:45 a.m. Earhart radioed the *Itasca* on 3105 kHz, one of her two available channels, by voice to report cloudy and overcast conditions, but static covered the remainder of the transmission. Later she again called to say that the aircraft was low on fuel. She wanted the *Itasca* to take a DF bearing on her signals, but her transmission was too brief to allow a DF fix.

At about 8 a.m. she radioed, "we are circling but cannot hear you." Forty-five minutes later she again radioed, "We are on a line of position 157 dash 337 . . . we are running north and south . . ." Amelia Earhart never made another transmission. That's when the mystery began.

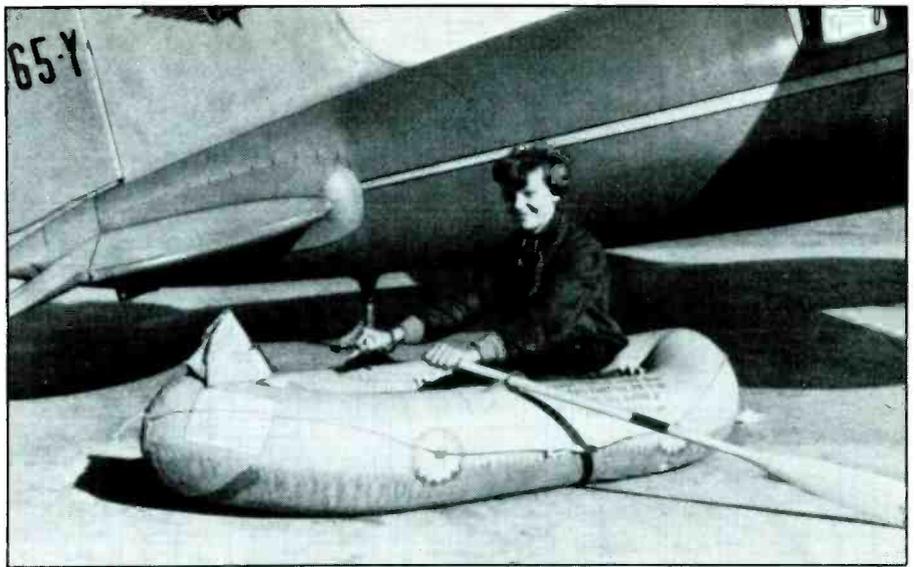
Questions Arise

In the interests of speed, Earhart had sacrificed all elements of safety, at least so far as her communications equipment was concerned. The most important communications safety factor she might have had would have been the ability to send out a CW distress call on 500 kHz. Not only was it a physical impossibility for her to operate her radio in case of a forced descent at sea, but when she took off for Honolulu she had junked the 500 kHz transmitter, trailing-wire antenna and the telegraph key.

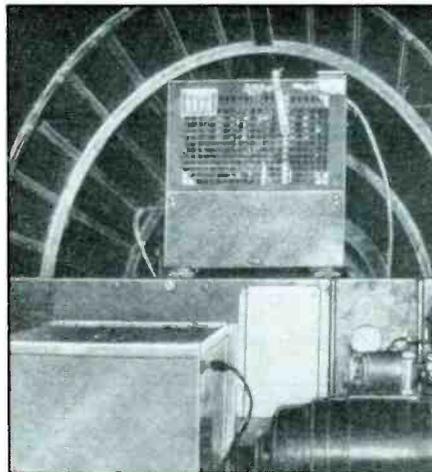
Besides, neither Earhart nor Noonan had any knowledge of CW transmission or reception. Apparently, the only knowledge of communications they had was the need to throw a switch one way to turn the equipment on and the other way to turn it off. The plane had no pontoons (Earhart said they would retard her flight speed), so even the possibilities of operating on shortwave voice would have vanished had the aircraft gone down at sea.

The *Flying Laboratory*, as the *Electra* was called, was equipped with a 50-watt Western Electric type 13-C three-channel transmitter equipped to transmit with AM voice on only 3105 and 6210 kHz. Neither 3105 nor 6210 kHz were frequencies that were constantly and completely monitored by ground stations around the world, although the frequencies were popular in the U.S. with General Aviation flyers. The third available channel slot was not used.

Earhart refused to respond clearly to the inquiries of the *Itasca* which repeatedly re-



In this 1935 photo, Amelia Earhart demonstrates some of the survival gear she normally carried during trans-oceanic flights.



The Western Electric two-way communications equipment installed in Amelia Earhart's plane was assigned the callsign KXABQ.

quested that she provide flight and frequency information; she ignored the *Itasca's* requests for flight data. She gave contradictory replies regarding her frequency usage, alternately asking the *Itasca* to transmit to her on 3105 and 6210 kHz.

The Coast Guard's RDF gear was designed primarily for use in the 270 to 550 kHz band, they weren't expecting to have to get it to operate efficiently on shortwaves. Moreover, they couldn't get a good fix on her signals because it required a continuous transmission of two minutes and Earhart was transmitting in short bursts lasting only a few seconds each. There were several ground stations that had agreed to monitor her voice frequencies but when the emergency arose none of them heard any call for help.

A Ham in Honolulu, Ernie Johnson (K6KMB), said that he did hear a distress call from Earhart on 3105 kHz when he happened to be tuning past that frequency.

Some questioned the accuracy of the claim because of the distances involved versus the time of day and the season of the year. Daylight reception during the summer on 3105 kHz would have been limited to relatively short distances. Even reception on 6210 kHz wouldn't have been very promising under the existing conditions.

Earhart could have easily obtained special permission to operate in or near the 20 meter (14 MHz) Ham band where her communications would have had a better chance of being heard by the world's Amateur operators, even with her 50-watt transmitter.

Speculation

Speculation that Earhart may have been on a spy mission to observe Japanese-held territories was spurred by her apparent radio silence and failure to properly communicate with the *Itasca*, although the poor communications were quite possibly the result of frequency selection combined with her own lack of ability to properly use the equipment. Noonan, it later came out, had been fired by Pan American because of a drinking problem. Moreover, he went on a binge while the plane was in New Guinea so he might well have been totally incapacitated while enroute Howland, or at least functioning at reduced efficiency.

Some have the opinion that Earhart lost her way and, missing Howland, crash-landed in the Marshall Islands thinking that she had come down in the British-held Gilbert Islands. The Marshall Islands, under the control of the Japanese, were the site of secret military bases and Westerners arriving there might not have been released.

Indeed, several residents of Mili Atoll claimed to have witnessed the Lockheed *Electra* landing there, its crew of two being taken into custody by Japanese military forces. The Japanese claimed that they searched for Earhart and Noonan but were unable to find any trace of them or their air-