

Pan Am's First Crash

Pan Am's first crash and the beginning of modern radio navigation. *The Loss of the General Machado*, by historian John Johnson.

It was August 15th, 1928 - less than a year since The Aviation Corporation of the Americas, operating as Pan American Airways, launched its mail and passenger service connecting Key West Florida with Havana Cuba. The airline was depending on sturdy trimotors built in New Jersey by Dutch aircraft manufacturer Tony Fokker.

(Below: Pan Am's F-7 "General Machado")



Fokker F-VII

The F-VII "General Machado" was fueled for about three hours' endurance, more than enough for the 100 or so miles between the two airports, but that was not an issue on that afternoon when pilot Robert Fatt, accompanied by mechanic Angel Alfonso, two paying passengers and young radio engineer Hugo Leuteritz, on temporary loan from RCA to Pan Am, boarded the plane for the flight north back to Key West.



(Radio Engineer Hugo Leuteritz)



Captain Fatt (*left*) was his usual confident self.

He disdained the idea that his skills and experience were in need of any artificial aids such as the radio navigation techniques Leuteritz was working on.

Fatt had told him: "I've thrown better radios off airplanes than you can build."

He would live to temper his scornful attitude, but one of his passengers would not.

THE LOSS OF THE GENERAL MACHADO

by John Johnson, Jr.



Loss of the General Machado * -- carefully researched by historian and aerophilatelist John Johnson, uses original documents to chart the events of that flight, which ended in tragedy.

The "General Machado" was lost that day, but the accident helped pave the way towards a much more secure future for commercial aviation.

LOSS OF THE 'GENERAL MACHADO By John Johnson, Jr.

On 15 August 1928 Pan American Airways lost an aircraft. Having taken off from Habana, Cuba, bound for Key West, FL, on FAM Route 4, the aircraft drifted off course and was forced to attempt a water landing in the Gulf of Mexico.

The Crew: Captain Robert H. Fatt, pilot, Angel Alfanco, mechanic and Hugo C. Leuteritz-radio. At the time of the crash Leuteritz was employed by RCA. He would later become Chief Communications Engineer, PAA.

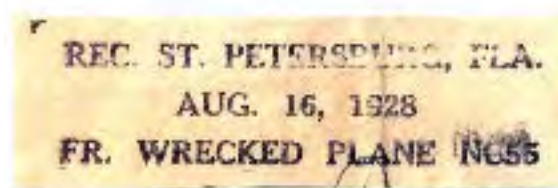
Passengers: Norman Ageton-Iost, William Mallon-rescued.

The Aircraft: Fokker F-VIIa/3m. This aircraft had originally been purchased from Atlantic Aircraft Corporation, Hasbrouck Heights, NJ by Colonial Air Transport but not accepted. Returned to AAC the aircraft was refurbished. She was then sold to PAA on 19 August 1927.

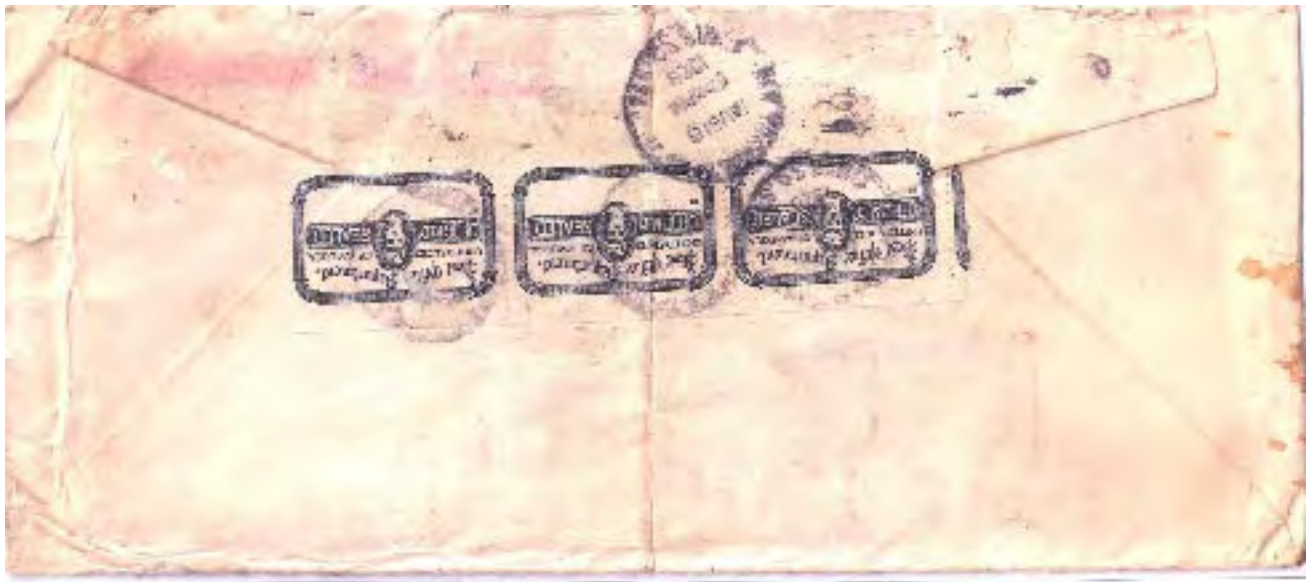
Copy of article from a St. Petersburg Newspaper:

A BAG of air mail containing approximately 5,000 letters which was salvaged from the ill-fated tri-motor airplane General Machado from Havana, which crashed in a forced landing more than 100 miles off the Florida coast yesterday, (August 15) was brought to the local post-office (St. Petersburg, Fla.) this morning by officers of the coast guard craft that rescued the survivors. The mail pouch was locked and sealed when it was taken aboard the plane in Havana and was not unlocked until this morning (August 16), under the direction of Robert Fortson, superintendent and Chester Williams, assistant superintendent of mails at the local post office. The letters were water soaked and in some instances the stamps had come loose from their positions but most of the writing was still legible, Mr. Fortson said. The mail was directed to all parts of the United States and most of it was consigned to the east. Electric fans and heaters were hastily pressed into service to dry out the mail, and a special stamp made telling the date and time received here and also that the mail was from ill-fated plane NC-5. The letters will be sent by train this evening. While some of the stamps were loosened from the letters, Superintendent Fortson declared that probably all the stamps would be located in the bottom of the bag, for it was not opened until it was received at the local post office. Post office headquarters were informed through this office and Jacksonville this morning that the lost mail had been received at St. Petersburg. Moves to dispatch the mail tonight were also outlines. The East coast post office wired that the usual mail was not received and thus the procedure of the lost mail was accounted for.

NOTE: The mail was re-dispatched from the St. Petersburg Post Office and it bore a special cachet in black ink.



COVER CARRIED ON ILL_FATED FLIGHT OF "GENERAL MACHADO"



Posted 1500, 15 august 1928, Habana, Cuba w/1730, 18 August 1928, Times Square Station, New York, b/s

COPY TAKEN FROM RADIO LOG AUGUST 15th,
 RELATIVE PAN AMERICAN PLANE.
 "WAX" MIAMI RADIO STATION.
 AUGUST 15th., 1928.

August 15th.

- 3:55 - 5:45PM. Did not listen for plane account not having been advised that a test was scheduled for this date.
- 3:45 - 6:10PM. FOLLOWING Message received from Key West by Radio.
 "PAN AMERICAN PLANE LEFT PWA 3:55PM--at 5:58PM 45 MINUTES OVER DUE. PAN AMERICAN RECEIVING STATION AT KEY WEST SAYS THEY HEARD PLANE AT 5:45P.M. SAYING THEY ABEAM SHIP ALSO HEARD BASH AT 5:50PM ALSO SAID AT 5:53PM THAT THEY WERE UNABLE HEAR WAX LOCAL REPRESENTATIVES AT KEY WEST HAVE SENT SCOUTING PLANE TO TRY LOCATE PLANE; IF LOST PSE MAKE CONTACT AND ASK THEM IF THEY LOST AND PLEASE FORWARD POSITION REPORT TO PAN AIR KEY WEST".
- 5:45 P.M. Commenced listening for and calling plane but do not hear him, now keeping constant watch.
- 6:45 P.M. Heard Mr. Leuteritz on phone tell Key West "BE SURE HAVE MRS. LEUTERITZ GO ON TO NEW YORK, THEY WERE GOING TO STAND BY THE SHIP, OR WORDS TO THAT EFFECT. PLANE UNANSWERS OUR FREQUENT CALLS.
- 6:48 P.M. Note: SOURCE AT WAX RELIEVES OPERATOR WRIGHT WHO HAD BEEN COVERING PLANE FOR OTHER WORK IN OFFICE.
- 6:48P.M. Plane on voice, called Key West said there was a boat ahead and said something about landing or dropping a note.,WAX called plane on CW but no answer.
- 6:52 P.M. Plane on voice, called Key West said they had sighted a boat and was dropping a note.,WAX again called plane on CW, but no answer. Plane in again on phone says, looks like an oil tanker, we are dropping altitude now--will get ship to head ship to beach for direction, will try drop note on deck of ship, if ship is over 100 miles from beach we may land and climb aboard. (Note: signals on voice from plane at this time were comparatively strong and easily readable, modulation good, strength R5).
- 8:55 P.M. Plane on voice called Key West, but could not get what he said, as his signals seemed to become weaker very suddenly, evidently due to reeling in his antenna getting ready to drop note on deck of the tanker as they flew closely over the ship.
- 6:50- 9:00P.M. Plane was not heard again after 6:55P.M. although a very vigilant watch was maintained until 9:00P.M., we also broadcasted information to all ships to keep close watch for plane that was believed to have landed in the water alongside some Oil Tanker, and to advise quickly of any information obtained regarding it.
 STATIC DURING THE ABOVE WAS HEAVY JOLTS, RECEIVER USED RADIOLA TWENTYEIGHT.
- 8:30 P.M. Our Marine Operator informed me the KTD was trying to get us with information about plane, but interference was so bad here he had considerable difficulty getting the message that the plane crew and one passenger had been picked up, one man named Ageton still in ship trying to get him.

Hugo C. Leuteritz account of happening of 15 August 1927

Radio In Aviation

Through the Co-operative Agreement of the Pan American Airways and the Radio Corporation, the Engineering Department were to install on the Tri-motor Fokker planes of this company, radio transmitters and receivers in order to obtain data for the future design of aircraft radio equipment and to demonstrate its possibilities in aircraft operation.

In accordance with this arrangement two transmitters were taken to Key West for installation on the planes, flying in daily service between the this point and Havana, Cuba.

The small 10 watt set was installed on the General Machado plane NC55, call letters 4XN, and the 100 watt set on the General New NC 3314, call letters 4XM. These two transmitters were tested over a period of one month when the following accident occurred.

The General Machado left Key West on the morning of August 15th on schedule and arrived in Havana at 9:15 A.M. It left Havana at 3:55 P.M. that same afternoon, bound for Key West, with two passengers and 50 lbs. of mail. Before leaving Havana the weather reports showed broken clouds at 2000 feet and a SE wind of 34 miles per hour at 3500 feet; visibility was 20 miles. Twenty minutes after leaving Havana the visibility decreased to approximately two miles and, as our altitude was 3400 feet, we descended to 1800 feet and found the same conditions, but thought nothing of it.

We continued on the course as set by the pilot, which was such as to compensate for the wind velocity reported. After flying one hour and thirty minutes nothing was sighted although we usually noticed a change in the color of the water when nearing Key West, due to the numerous coral reefs and keys extending westward from Key West to Dry Tortugas. It was normally

assumed that the pilot had set the course too far to the east and that we were in the Atlantic Ocean east of the Florida Keys. On this basis he changed the course to the northwest.

We flew on the new course for forty minutes without sighting anything, during all this time Key West was kept advised by radio as to our plight. No facilities were available on the ground to assist in locating the plane.

He again changes the course to the northeast and, while flying on the new course we sighted an oil tanker at 7:10 P.M. after having been in the air three hours and twenty minutes. A logical question comes up here as to why he did not turn south and head for Cuba. This was impossible as our normal gasoline supply was three hours and a half and after being out two hours and ten minutes our chances of getting back to Cuba were much less than our sighting the Florida mainland.

After sighting the tanker it was endeavored to drop a note to them in a paper bag which was weighted with Very pistol shells. The note read as follows:

“We are lost; which direction is land and if less than 100 miles head ship in direction of land and if over 100 miles make a large circle and we will land alongside.”

The Very pistol was fired to attract the attention of the tanker and we noted the activity of the crew in bolting down hatches to prevent one of the Very shells dropping in one of the tanks and setting fire to the ship. We passed over the ship at about 100 feet and dropped the note which unfortunately landed in the sea due to the high wind. Another note was dropped but it

also fell overboard after passing the hand of one the sailors by a scant two feet.

An effort was made to see the name of the ship but this was impossible. If the name of the tanker could have been seen we would have been able to advise the Key West airport of this fact and we could have obtained our position in this way. The Tropical Radio Station at Miami heard the plane say that it was circling an oil tanker and they immediately broadcast a call asking its position but this call was answered by many ships.

While circling the third time the gasoline supply was so low that the motors began to sputter and finally stop. While the second circle was being made life preservers were given to the two passengers, put on and adjusted, and the emergency exit in the top of the fuselage behind the wing was ripped. When the motors stopped the Key West airport was advised that we were going to land alongside the tanker.

The next few minutes were ones of suspense and speculation as to what would happen when the plane struck the water. The two passengers were placed directly below the exit and I stood in the cabin behind them holding to the door jamb. We were not kept in suspense very long as we felt the tail skid strike and then the wheels. The two passengers were thrown on top of me and we were all in a heap in the cabin. I was knocked unconscious and on coming to found myself held against the top of the cabin in an upright position with the water up to my neck and rapidly rising. I saw the two passengers in front of me and the exit about 10 feet away and shouted to the two passengers to hold on to me as I was going to try to make the exit. Whether they were conscious or unconscious I cannot say as the water suddenly rose to the top of the cabin. I managed to take a deep breath before being submerged and opening my eyes reached out for the coat rack on each side and struggled toward the opening. While doing so I struck something below me with my left knee and managed to hook my foot into it,

dragging it along. When I reached the opening the life preserver pushed me through the exit into the fresh air again; after taking a deep breath I noted that the pilot and mechanic were on the wing looking for me. I told them that I had someone below me; the mechanic reached down and pulled one of the passengers out by the back of the coat collar and then handed me onto the wing. We carried a rubber air boat to which had been tied an inflated life preserver; this came to the surface and we managed to get it and inflated it for emergency use in case the plane sank. The sea was very rough and the waves washed over us as we struggled to hold on while searching for the other passenger. Looking up I saw that the tanker was the S.S. Ligonier.

A lifeboat from the tanker came over to us and we requested them to pass us an axe; the pilot started cutting a hole through the wooden wing into the cabin so that we could continue the search for the passenger. They also passed us a hawser which was fastened to the plane by slipping it over the right hand propeller. After an hour of search the plane was pulled alongside the tanker and we were taken off by the lifeboat and brought on deck.

I told the pilot that I was going to the radio room to advise the airport as to our location and plight, while he continued the search with the aid of the tanker's crew. An endeavor was made to lift the plane but the motor to which the hawser was attached broke and the plane sank to the surface of the sea.

The Radio operator, Howard or the Radiomarine, who is on the S.S. Ligonier, conducted me to his shack and laid me in his berth while I gave him a message for Key West. Captain Johnson of the tanker called for volunteers to go over the side and search the plane and one man was selected. He was lowered to the plane and after enlarging the hole in the wing searched the cabin until he sprained his foot. Another man was lowered and he continued the search but without success. Due to the heavy sea and the pounding of the plane against

the ship's side, the fuselage tail section broke and hung by the fabric below the surface. Cargo lights were lowered over the side and the search continued until 9:45.

The one passenger that was saved had a scalp wound that looked quite serious while I had severe pains of the back and left arm. The captain advised us that he was bound for Port Arthur but, due to oar conditions, would return to Tampa Bay. While returning he sent a radiogram to the Coast Guard Base at St. Petersburg and requested a doctor meet him at Edgemont Key.

We were transferred to the Coast Guard cutter at 2:30 A.M. August 16th, and rushed to St. Petersburg, arriving there at 6:30 where the doctor and ambulance meet the cutter. We were surprised to see the papers in St. Petersburg with 3" headlines stating that one of the Havana airlines had crashed in the Gulf.

Fortunately, the scalp wound of the passenger was not very serious, while I got out of it very luckily with a sprained back and shoulder.

On returning to Key West we were normally obligated to prevent another accident if possible so work was started to develop a radio compass to aid the navigation of the planes across this particular stretch of the Gulf and after several days succeeded in demonstrating that radio could play a very important part in this respect.

The system devised has been operating since August 19th, without a failure of any kind. Mr. Henry Carroll of the Radiomarine is now located at Key West operating the compass and guiding the planes from Key West to Havana and return, while Ray Green is at Miami guiding the planes between Key West and Miami.

The wavelength used on the planes is 132 meters, while the transmitter on the ground, used for communicating with the planes, is operated on 850 meters.

A note concerning the registration number carried on the GENERAL MACHADO.

In the early 1980s the National Air and Space Museum commenced a project on Pre-1946 U.S. Civil aircraft registry. Richard Saunders Allen headed the project and while going through old Fokker records discovered that the aircraft had received the wrong registration number, NC-53, when sold to PAA. The error was corrected in April 1928 and the correct registration, NC-55, was applied. Prior to release of this information the NASM project was halted, it was resumed in 1989 and then halted again. Attempts to retrieve the Fokker registration files has met with no success. However Hugo C. Leuteritz and the St. Petersburg P. O. did get it right.

References and Thanks:

Radio Log "WAX" Miami Radio Station: New England Air Museum

Radio in Aviation by Hugo C. Leuteritz: Pan American Historical Foundation

St Petersburg News Clipping: Jeff McCarty

A special thanks to: Doug Miller, Pan American Historical Foundation; Dan Hagadorn, Museum of Flight; and Brian Nicklas, NASM

Additional Reading:

THE MIAMI HERALD of 16 & 18 Aug 1928 and the NEW YORK TIMES of 16 Aug 1928

HAVANA :: HAITI :: SANTO DOMINGO :: PORTO RICO :: NASSAU



Fastest Through Service

To HAVANA · NASSAU · LATIN AMERICA

New all-luxury service from your home city to the Indies, Central and South America



Two Years After the Crash - Moving On Up: A 1930 Ad for Pan Am, Showing a Fokker F-10

