



The Martin M-130, China Clipper, NC 14716, at Middle River, Maryland in 1935. (Photo - R. H. Scheppler Collection)

The Martin Clippers

By ROBERT H. SCHEPPLER and CHARLES E. ANDERSON*

In the entire history of aviation, many great and famous aircraft are well remembered. Some, such as the Ryan "Spirit of St. Louis," owe their fame to one historic flight. Others, such as the Ford Tri-motor, became famous through long years of hard service. A few have gained renown through a combination of historic flights and years of service. Certainly one of the greatest in this category is the Martin Clipper, or Martin M-130. Only three of these aircraft were built, the China, Hawaii and Philippine Clippers, but together they were used to blaze aerial trails across the Pacific and provide the experience and know-how which eventually produced today's routine, hourly flights throughout the world.

Pan American Airways, as the chosen instrument of the United States Government, was entrusted with setting up aerial routes throughout the Pacific. In the early 1930s the Sikorsky Clippers, S-39s, S-40s and S-42s, were used for mail and passenger service throughout the Caribbean and South American areas and, frequently, for survey flights in the Pacific. It was realized in 1931, however, that a larger, heavier and stronger plane with greater load-carrying ability and range would have to be developed before safe, regularly scheduled service could be provided in the Pacific. Discussions were held with six manufacturers, but only Martin and Sikorsky felt it within their capabilities to construct the type of plane required.

After preliminary negotiations, Pan American issued specifications for such a plane to Glenn L. Martin Company of Middle River, Maryland in 1932. Work started in November 1932, and the keel of the first plane was laid in May 1933. In 1934, firm orders were placed for three of these aircraft. The first flight was made on December 30, 1934 with an M-130 Clipper, and this probably was NC 14716 which was to become the China Clipper. Ken Ebel was the pilot.

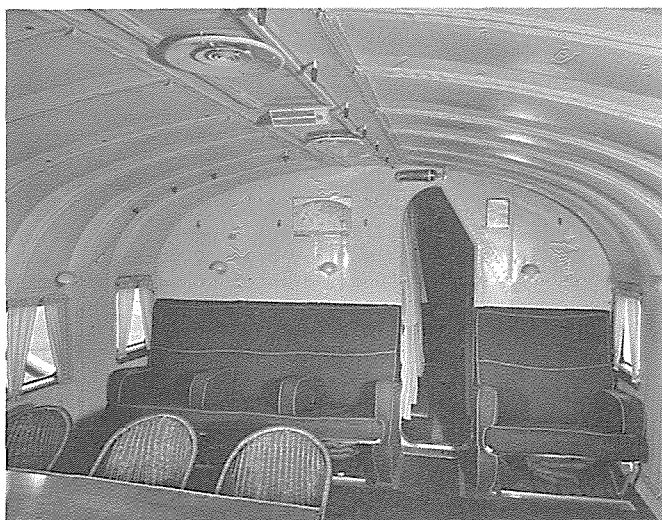
(* Note: This article was originally written by Mr. Scheppler, and another fine article, by Mr. Anderson, on the Philippine Clipper, has been included with it.)

On the historic day of October 9, 1935 the Martin Company delivered to Pan American the first M-130 which was promptly christened the "China Clipper" and nicknamed, "Sweet 16" (from the last two digits of its license number). A ceremonial presentation was made by Lassiter C. Milburn, Chief Engineer of Martin, to Juan Trippe, President of Pan American. An acceptance flight was made at which Juan Trippe and Charles A. Lindbergh were present. The two sister ships, the "Hawaii Clipper" and the "Philippine Clipper", were delivered shortly thereafter.

For some unexplained reason, these three, huge airplanes immediately caught the fancy of the entire United States. It was reported that tickets were being sold in November 1935 for Trans-Pacific flights scheduled for 1936. The early flights, escapades and even individual trips were followed closely by both the press and public. The China Clipper was the first and last of the three, and it naturally received a lion's share of the publicity. Although only one China Clipper existed, the term became generic and was applied not only to the Martin Clippers but also to the later generation of Boeing 314s.

The M-130 was designed and built by the Martin Company with considerable assistance being provided by Pan American. Design was under the able direction of Chief Engineer, Lassiter Milburn, Assistant Chief Engineer and Test Pilot, Ken Ebel and Project Engineer, L. D. McCarthy.

The M-130 was a high wing monoplane flying boat with four engines. Its primary function was passenger and mail transportation in the Pacific area. The engines were mounted in the leading edge of the wing which was set on a vertical semi-pylon extension above the combination hull and fuselage. A single horizontal and vertical stabilizer was used. Ten large, square windows, capable of being opened in flight, were located on either side of the hull, resulting in excellent passenger visibility. Large single sponsons were used on each side of the hull for stabilization while taxiing and to serve as support for short "X"-shaped wing struts. The sponsons were so designed as to provide



Martin M-130, Main Cabin, showing luxurious seating facilities and writing table. (Photo - M. Mayborn Coll.)



Passengers seated in the sixteen foot long lounge of the Philippine Clipper, 1935-1936. (Photo - Earl Marshal)



Interior of the forward portion of the main cabin of the Martin 130 during sumptuous dinner hour. (Photo - PAA)



Stateroom furnishings on Martin 130 as they appeared before initial Pacific crossing. (Photo - The Martin Co.)

considerable lift when flying, and this marked the first time they had been used on an American flying boat though they had been used for many years by German designers. Construction was all-aluminum except for the wing aft of the rear spar which was fabric covered. The cabin interior was approximately 45 feet long divided into a series of compartments, the largest of which was a 16 foot long lounge. Each compartment contained settees convertible to bunks. In addition, there was a galley, twin lavatories and crew quarters.

Individual cost was reported as \$390,000 for the airframe and engines, plus \$40,000 for various furnishings and extras. General specifications under ATC-585, issued October 9, 1935, were:

Wing Span:	130 Feet
Wing Area:	2315 Sq. Ft. (including approx. 170 Sq. Ft. for spars)
Wing Loading:	23.97 lbs/Sq. Ft.
M.A.C.:	17.46 Feet
Aspect Ratio:	7.8
Length:	90 Feet 10½ Inches
Height:	24 Feet 7 ¾ Inches
Spoon Span:	33 Feet 7 ¾ Inches

Stabilizer Span:	40 Feet
Engines	Four - P & W Twin Row Wasp R-1830S2A5G, geared and supercharged. 800 hp each. Later changed to 950 hp.
Propellers:	Four - Hamilton Standard Constant Speed. Later changed to Hydromatic type.
Power Loading:	16.23 lbs/hp
Empty Weight:	25,363 lbs.
Useful Load:	22,784 to 25,363 lbs.
Gross Weight:	51,000 to 52,252 lbs.
Max. Landing Weight:	48,000 lbs.
Normal Load:	32 passengers, 8 crew.
Maximum Speed:	179-181 mph @ 7,000 ft.
Placarded Max.:	210 mph
Normal Cruise Speed:	157 mph
Cruising @ 1,200 ft:	163 mph
Landing Speed:	70 mph
Range at 10,000 Ft and 130 mph:	3200 miles with 12 passengers, 4000 miles with mail only.
Fuel Consumption:	1 gal/mile average.
Takeoff Run:	45 seconds.
Sustained flight possible on two engines.	