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## **The Martin PBM Mariner**



The PBM *Mariner* series flying boat was designed in 1939 and manufactured by the Glenn L. Martin Company, Baltimore, Maryland, between 1940 and 1949. There were four primary models in the series, PBM-1, PBM-3, PBM-5, and PBM-5A. The first in the series was the PBM-1 introduced in 1940, just prior to the beginning of World War II, followed by the PBM-3 and in 1944, the PBM-5. The last in the series was the PBM-5A, a retractable gear amphibian introduced in 1946. Of the 1,367 PBM *Mariners* manufactured in the series only thirty-six were amphibians.

Nearly identical to previous models in the *Mariner* series, the PBM-5A was the largest amphibian ever built and could be equally equipped for anti-submarine warfare, air-sea rescue, or transport use. As with earlier models, it was capable of carrying both bombs and torpedoes and could be fitted with up to eight .50 caliber machine guns. The PBM-5A had the same basic overall dimensions as other models in the series, but was equipped with larger R-2800 engines to accommodate an increased gross weight of 60,300 pounds. The PBM carried a crew of between seven and thirteen, depending on configuration.

## **The Survivor**

Located in Tucson, Arizona adjacent to Davis-Monthan AFB, the Pima Air & Space Museum is home to the last surviving example of a Martin PBM *Mariner*. The museum's aircraft is a Navy PBM-5A, BuNo 122071, the fifth of thirty-six manufactured between 1946 and 1949. Delivered to the Navy in 1948, it was first assigned to VP-33 at NAS Norfolk, Virginia. In 1949 the aircraft was one of five PBM-5A's transferred to the Naval Air Facility at Annapolis, Maryland. In addition to squadron training, the aircraft was used in the aviation indoctrination program for U.S. Naval Academy midshipmen.



After three years of active service with the Navy at Annapolis, BuNo 122071 was retired in 1952 and transferred to the storage facility at Litchfield Park, Arizona, where in 1956 it was stricken from service inventory in compliance with Navy Orders to strike all PBM-5A's. At the time of its retirement, BuNo 122071 had accumulated a total of only 1,326 flight hours.

It remained in inactive storage until 1958, when it was sold as surplus to civilian owners and ferried to California. Plans to use the PBM for commercial purposes did not materialize and the aircraft sat derelict in Porterville until 1962, when it was ferried to Thermal where it remained for the next nine years. In 1971, the PBM was ferried under marginal conditions to Tucson, where in 1972 it was acquired in trade by the National Air & Space Museum (NASM) and placed on loan to the Pima Air & Space Museum for display.



During this last flight, prepared to bare FAA flight minimums, the aircraft was ferried wheels down to Davis-Monthan AFB in Tucson. When it arrived it had been stripped of all paint and missing many of its interior components and instrumentation, most of which had been lost or vandalized from many years of unattended desert storage. While at Davis-Monthan, numerous other significant items were removed for salvage before the aircraft was moved across the highway to the museum for display and possible future restoration.



## Restoration

The Mariner/Marlin Association became interested in the aircraft as early as 1984, and in 1989 performed a general clean-up of the interior and assisted the museum in preparing an assessment and restoration plan for NASM. However, no other work was performed on the aircraft and it remained in essentially the same condition as it had arrived for the next 10 years.



In 2000, having secured permission from NASM, the Mariner/Marlin Association funded a six-year \$50,000 restoration of the PBM-5A to NASM standards to include a complete cleaning of the interior, exterior paint and replacing the tires. Through the efforts of two members, Capt. Bruce H. Handler, USNR (Ret), and Bruce D. Barth, an author and historian on Martin seaplanes; working closely with NASM, the Naval Historical Center, and the Museum, they were instrumental in securing many of the missing interior components and arranging the transfer of additional funding which had been entrusted to the Navy through a previous donation from Lockheed Martin intended to support a PBM restoration.

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## Pima Air & Space Museum

On December 3, 2003 an award ceremony was held by the U.S. Navy at the Pima Air & Space Museum in Tucson, Arizona to honor Mr. Charles D. Cain for his exemplary voluntary service to protect, preserve and restore the last remaining U.S. Navy PBM *Mariner* seaplane in existence, located at the museum. The award is the Department of the Navy's Meritorious Public Service Medal, one of the highest awarded to civilian personnel for such service, and equivalent to the Navy's Meritorious Service Medal.

A retired mechanical engineer, the 75 year old Tucson resident is a former Navy pilot with VP-45 who has logged over 900 flight hours in the Martin PBM-5 *Mariner* and P5M-1 *Marlin* seaplanes.

In 2001 the Mariner/Marlin Association appointed Mr. Cain to the board of directors as Restoration Project Coordinator to oversee and control the complex and challenging restoration process and to coordinate such activities with the Pima Air & Space Museum, the Department of the Navy, the Smithsonian Institution, and the Association. Had it not been for Mr. Cain's exemplary leadership skills, restoration expertise, planning, project management, and personal commitment, such a successful undertaking would have not been possible.



Having languished outdoors for more than thirty years, it was not until 2006 that the museum honored the 1972 lend/lease agreement with NASM to provide adequate cover for this rare one-of-a-kind aircraft. Ground was broken for a new exhibit building in mid-2006 and by years end the newly repainted PBM-5A *Mariner* along with other aircraft was moved into place and construction commenced. The exhibit was officially opened to the public in June 2007.



The exhibit also includes several rare artifacts recovered by the Navy from Lake Washington with the help of the Naval Historical Center and the MMA. The WW-II vintage PBM-5 tail empennage and Martin 250CH-2C twin .50 caliber rear turret are the only surviving examples of this configuration.

Had it not been for the efforts of the Mariner/Marlin Association, the commitment of the veterans, and the support of the Naval Historical Center this undertaking would not have been possible.