Reference Information and Answers to Frequently Asked Questions about the Exhibit.

AIR MUSEUM
NEW ENGLAND

CAR RESTORATION
U.S. NAVY BLIMP
WORLD WAR II

K-28
K-CLASS BLIMP FACTS
This exhibit is the only K-class blimp car in the world which is in World War II configuration. We have only the car, not the envelope. If an envelope existed, it would be too large to fit in this hanger and too expensive to fill with helium.

U.S. NAVY

WHAT PART OF A BLIMP IS THIS EXHIBIT?

K-CLASS BLIMP FACTS

K-CLASS BLIMP FACTS

BLIMP DIMENSIONS

12.046 cubic meters
425,000 cubic feet

VOLUME OF ENVELOPE

252 feet
76.8 m

17.7 feet
5.4 m

24.1 feet
7.4 m

42 feet
12.8 m

79 feet
24.1 m
During World War II, K-class blimps were officially designated "ZNPK-28".

**K-28's Actual Navy Designation: ZNPK-28**

- After the war they became "ZPK-28" and later "ZSC-28".
- Z = Lighter-than-air, P = Patrol, K = K-class, 28 = 28th blimp of that class.


April 1944.

From the K-class, only 4 were built, from October 1943 to 1944.

M-class blimps were designed using lessons learned.

This is the one NAM has, the K-28.

134 were built.

K-class blimps were the standard operational blimp in WWII.

K-class built work, 7 were built.

G-class blimps were used for advanced training and utility.

They were modified versions of Goodyear advertising blimps.

L-class blimps were used for training.

22 were built.

The Navy used blimp classes L, G, K, and M. The photo

**Diferent Navy Blimps in WWII**

**K-Class Blimp Facts**
More detailed historical references are given at the end of this document.

By 1944 the U-boat threat was pretty well gone in the Western Atlantic. Brazil, pushing the U-boats away as they went south. As the Navy kept adding blimp squadrons down the coast to Florida, into the Gulf of Mexico, the Germans shifted their efforts.

As blimp escorts reduced the U-boats, hunting opportunities in the Northeast, the U-boats chose to submerge to avoid being spotted. The U-boats could not use their diesel engines when submerged and ran on battery-powered electric motors instead. They were then slower than the convoys and the convoys could get away. Thus the electric motors were almost completely effective in keeping the convoys safe from U-boats. It is claimed that 89,000 ships were escorted by blimps in WWII and not one was lost to U-boats.

When blimps were able to accompany convoys of cargo ships, almost all U-boats would choose to submerge to avoid U.S. S. In early 1942, the war was close to being lost by the Allies.

The K-class blimps were effective in protecting cargo ships and tankers from German submarines (U-boats) in the Western Atlantic. They were effective in protecting cargo ships and tankers from German submarines (U-boats) in the Western Atlantic.

Why did the Navy have blimps?

K-CLASS BLIMP FACTS
CATENARY CURTAINS

HOW DID THE BLIMP CAR ATTACH TO THE BLIMP?

K-CLASS BLIMP FACTS
The valves, which allowed the air in and out of the balloons, were controlled manually by the pilot, who pulled overhead knobs attached to long cables. This required constant attention from the pilot.

- This was a way to trim the blimp, it became tail-heavy or nose-heavy.
- Air could be pushed into one balloon and let out of the other, moving the helium towards the tail or towards the nose. The balloon would then move in the direction of the heavier side.
- They were inflated with air if the helium contracted, and expanded if the helium expanded.
- Two air bags called "ballonets" were sewn into the envelope.

No, the envelope always remained the same size and shape.

DID THE ENVELOPE EXPAND AND CONTRACT WITH ALTITUDE?

K-CLASS BLIMP FACTS
Data: U.S. Navy K-type Airships Maintenance Manual, Rev. May 1944, pp. 7 - 12

Note: Blimps almost always took off "heavv. The huge envelope acted as an airfoil. The blimp lifted its nose up and made a short, slow takeoff run to get the extra lift needed to counter the "heaviness." After a mission, when the fuel had burned off, the blimp was "light," and had to point the nose down to descend for landing.

BLIMP WEIGHTS

K-CLASS BLIMP FACTS
THE CREW

K-CLASS BLIMP FACTS

The pilot (left seat) controlled the elevators with the wheel and the throttles over the control panel. He was responsible for the blimp's altitude.

The co-pilot (right seat) controlled the rudder with the wheel, and the rudder maintained the proper course. He worked with the navigator to maintain the proper course.

The K-class blimp carried a crew of 10 men. It took two men to control the right of a blimp in this regard.

Photos from K-26 at NEAM.
Photos from "An Operational Flight" 1946

They took turns on the radar as well. They were one of two assistant radiomen.

The Radio Operator sat opposite the Navigator on the right side of the car. Among his aids was a dinnight mounted to the front of the navigator's seat just behind the pilot on the left side of the car.

K-28's dinnight sights are authentic.
(photos from "An Operational Flight" 1946)

After an hour, monitoring the radar was tedious. Efficiency fell off side of the car. He also ran the M1AD equipment above the gallery. He watched the engine controls and monitored the mechanic set on the left side of the car behind the navigator on the left.

The Radar operator set behind the navigator on the left.

K-Class Blimp Facts
K-28's galley appliances are authentic.

- The rigger - his main job was to maintain all parts of the blimp except the electronics and engines, including the blimp envelope.

The rigger also had a coffee maker, a hot plate, and a toaster.

The rigger or assistant rigger often acted as cook.

The rigging leaks or tears in the envelope.

The rigger has the correct K-20 serial camera.

- The art lookout sat in the rear end of the car.

- Photos from "An Operational Flight" (1946).

- K-28 has the correct K-20 serial camera.

- Record any item of interest.

- Search: Greater galley cameras were carried to the rear of the car. They used binoculars for daytime visual.

- A time, so as not to drain the electrical supply.

- Be sure appliance could be used at like a crock pot.

- Only one appliance could be used at a time.
Rounds of .50-caliber ammunition
had a small holding canvas seat. He had 4 magazines of .50.
area above the cockpit to work the machine gun turret. He
crewed up a ladder and through a hatch into the
The Gunner.

Using bomb release levers down by his feet.
In a combat situation, he acted as the bombardier.
Pilot used binoculars for daytime visual search.
The forward lookout sat on a cushion on the floor at
K-Class Blimp Facts.

The Crew (cont.)
Trade winds magazine, April 1942.

Grilled steak for luncheon with potato chips and string beans, as noted by Sherman B. Allen, "On U-Boat Patrol."

Eggs and bacon were common menu items.

Meals could be good on a blimp, depending on the skills of the cook.

There was a chemical toilet and a wash basin in the back. There was no partition or curtain around this area.

One hour on the radio

One hour on the radio

One hour on the radio

An example of a crewman's rotation:

missions, they had to rotate positions frequently.

Crew members were trained on many jobs on the K-ship. Because of the tedious nature of escort and patrol

THE CREW (cont.)

K-CLASS BLIMP FACTS