



Minicraft DC-3

By Paul Hackmann

Background

The DC-3 was the continuation of the DC-1 and-2 series of aircraft that the Douglas Corporation built in response to the Boeing Model 247. The Boeing aircraft revolutionized air transportation for the 1933 era passenger. A speedy twin engine monoplane, the 247 could make the trip between New York and Los Angeles $7 \frac{1}{2}$ hours faster than existing commercial airliners. Unfortunately for other US carriers, United Airlines and Boeing Air Transport had a virtual lock on all orders of the 247.

In order to compete with United, Jack Frye of Transcontinental and Western Air Inc. (TWA) sent a letter of proposal to various manufacturers saying that they were in the market for a 3-engine aircraft, capable of carrying at least 12 passengers. It had to have a top speed of 185 mph and a range of 1000 miles. A week after receiving the letter from TWA, the Douglas Corporation showed the drawings of a twin engine airplane that could meet the range, speed and carrying capacity requested. TWA's management was concerned that it had only two engines and requested that it be able to takeoff and climb to 8,000' on one engine. Based on weight and engine power, it was determined it could and TWA agreed to a purchase price for one example of what was to be called the Douglas Commercial (DC)-1.

After receiving the single DC-1 and operating it for several months, TWA and Douglas looked at expanding the fuselage and incorporating larger engines. TWA ordered 25 of these newer transports, designated DC-2. The DC-2 flew in 1934, featured a top end of 200 mph while carrying 14 passengers. It set 19 records for speed and distance in its first six months of operation. Douglas ended up building 156 DC-2, which were operated by carriers around the world.

Towards the end of 1934 American Airlines was looking to introduce a concept new to air travel, but already in existence on the railroads. In experimenting with a Ford Tri-motor, they found that some passengers would like the chance to sleep during transcontinental flights. American's president approached Douglas with some sketches of an expanded cabin DC-2 that his engineers had drawn up. Somewhat skeptical, Douglas relented and built the Douglas Sleeper Transport (DST). The first version exited the factory on December 14, 1935. Although based on the DC-2, the new airplane had a 33' greater wingspan with a fuselage that was 26" greater in diameter and 4' longer. In the sleeper configuration the DST could carry 14 passengers, but it was in the non-sleeper or "Day-plane"

configuration that the airplane was to be most successful. The “Day-plane, designated the Douglas Commercial Three (DC-3), had several seating arrangements capable of seating 21 to 28 passengers. In this configuration, the DC-3 could carry twice the passengers as a DC-2 at a minimal increase in operating costs. Thus allowing the airlines to be profitable while

only carrying passengers and not having to rely on either mail or cargo. The first DC-3 was delivered to American Airlines on April 29, 1936. By the end of 1936, over 100 orders had been received at the Douglas Corporation. During World War II, the DC-3 design was modified to accommodate carrying cargo. These modifications included strengthening the floor, adding a large cargo door to the left side of the fuselage, increasing the wingspan by 6" and upgrading the engines to the 1200-hp P&W R-1830. The production of the DC-3/C-47 ended in 1945 soon after the end of World War II. A final total of 10,926 aircraft had been produced, of these 10,174 were produced for military use.

Of the over 10,000 produced, Eastern Airlines owned and operated 98 between 1936 and 1957. The National Air and Space Museum has restored EAL N18124 to its original markings and on display in the Commercial Transport wing.

Markings

In keeping with my theme of the planes of Eastern Air Lines, I elected to build the Minicraft DC-3 straight from the box with the decals supplied. Minicraft chose to use the same scheme (and N number) as the 1/48 scale Monogram kit and similar to that which was used on the Eastern DC-3 as displayed at the National Air and Space Museum. This aircraft N88808, according to references, was a C-47A owned and operated by Eastern from October 1945 until October 1952.



EAL DC-3 NC28391 in the "Duck Hawk" livery circa 1952.

Building the Kit

This is another of the Hobby Lobby $\frac{1}{2}$ off kits that I purchased along with the EAL Electra. While this kit was released earlier than the Minicraft Electra and Constellation, it is a much better kit. This kit has finely engraved panel lines, whereas the other two are devoid of any panel lines. The landing gear, engines and propellers are a little better made than the other two kits, too. The DC-3 kit is a very simple kit to put together, which could be finished over the course of a weekend. The only problem I had was

with the fuselage-wing joint, more on that later.

The breakdown is pretty standard, with the main portions consisting of the 2 fuselage halves, lower wing and two upper wing halves. Assembly begins with the fuselage, which goes together with no problems. I ran into some problems with the fit of the 3-piece wing, with either the fuselage too narrow or the wings too wide. I ended up with a fairly substantial gap on the upper wing fairing. I first

tried spreading the fuselage, but that didn't look right. I also tried increasing the dihedral of the wings, but that looked even worse. In the end, I filled the gap with CA. Unfortunately, the plastic in this area is so thin, that I kept cracking the joint. So I ended up disassembling the model, placing a couple of thin strips of plastic under the join as a brace and gluing it back together again. This time, I poured CA into the gap and let it dry without spraying the Zip-Kicker onto it. I lightly sanded the high spots and quit while I was ahead.



The cockpit windscreen was placed into position and the completed assembly was washed and allowed to dry. While this was drying, I painted the two P&W engines and installed them into their respective cowlings. The completed nacelles were then applied to the wings, as were the two carburetor intakes. I elected not to attach the two horizontal stabs at this time because it would just make life easier when masking and decaling. Since both

the passenger windows and cockpit can be represented with decals, I chose not to mask either and went ahead and sprayed all of the items that would be aluminum gloss black. I then applied 3 coats of ALCLAD II Aluminum. The de-icer boots on the wings and stabs were masked off and sprayed flat black.

The decals supplied are very glossy and thick. Even with applications of Micro Set and Sol, they never really snuggled down into the panel lines. As the decals were drying, I completed painting the remaining items such as propellers, wheels, gear struts, antennas, etc. All of these pieces were added to the model. The final stage was a light coat of a 50-50 mix of Future and Testor's Acrylic Flat Coat. This protects the finish and knocks some of the shininess off of the decals.

The completed model looks pretty nice along the others I've now completed. Outside of the problem I had with the wings, goes together quickly. To me, it captures the look of a DC-3. I'd recommend it if you're looking for something to knock together over the course of a 3-day weekend or as a last minute entry into the O'Hare show in November.