

# TIPS ON BUILDING DIORAMAS

Sheperd Paine's classic series on making models come alive!



*In a few moments, interested onlookers and armament personnel will move away from the gleaming "Enola Gay," and the auxiliary hardstand lights will be extinguished. You can see the aircraft commander in the open cockpit window, exchanging last minute quips with two squadron members standing on the airfield. The "Enola Gay" was a B-29-45-MO assigned to the 509th Composite Group.*



## B-29 SUPERFORTRESS *by Sheperd Paine*



*The klieg lights in the foreground are an ingenious unit created by mounting the upper section of an H0 light unit on the chassis of the trailer included with the 1148th scale Bandai Jeep kit. Additional braces were added with Plastruct L-Beam.*

As Allied Forces doggedly engaged Imperial Japanese troops positioned throughout the vast South Pacific, American scientists labored under the utmost secrecy to create an awesome weapon that was the culmination of the highly-classified "Manhattan Project." The two nuclear weapons were dropped on the Japanese cities of Hiroshima and Nagasaki by two gleaming "Superfortresses" assigned to the 509th Composite Group. Unified late in 1944, this unit was formed specifically to operate as the world's first nuclear bombardment group. The 509th was led by Colonel Paul Tibbets, an energetic veteran of the intense strategic bombing campaign over Europe. Though many of the aviators assigned to the unit were combat veterans, months of arduous specialized training was needed to develop the skills that were needed to deliver the mysterious "super weapon." The destructive force of the world's first thermonuclear devices was revealed to the aircrews of the 509th during a tension-filled briefing after their arrival on the island of Tinian. This small atoll in the Marianas Islands was the staging area for the B-29s and personnel of the 509th Composite Group.

The mechanical failures and enemy fighters that plagued Twentieth Air Force "Superfortresses" were unacceptable if the rigorous nuclear missions were to succeed. Fifteen factory-fresh B-29s were modified to suit the exacting requirements of the 509th's classified mission. Devoid of armor plate and most external armament, the modified aircraft were significantly lighter. Uprated Wright "Cyclone" engines fitted with fuel-injection improved cruising speed and mechanical reliability.

This diorama depicts the last moments prior to engine start of the Second World War's most historic flight. The aircraft commander, Colonel Tibbets, can be seen in the open cockpit window exchanging last minute small talk with two members of the ground crew. It was a few moments past 0200 hours on the humid tropical morning of August 5th, 1945. The dawning of the nuclear age was but a few hours away.



*The figure seen in the open cockpit window is included in the B-29 kit. The window will have to be drilled and filed to shape to enable you to insert the figure, but work very carefully as clear styrene is extremely brittle and will crack very easily.*



*The 1/48th scale Jeep in the detail photo above is a Bandai kit. It is ideal for aviation diorama and includes separate figures and a general-purpose trailer.*

# NORTH FIELD AUGUST 1945



*As you will quickly discover, the "Superfortress" model is extremely tailheavy and somewhat difficult to balance. Although a mounting screw was added to the nose gear assembly, it was decided to reinforce the entire model by opening the rear crew entry and positioning a boarding ladder in the doorway as shown.*

Undoubtedly, you will agree that dioramas are an excellent way to display your latest model. A scale model aircraft placed in a realistic setting will surely evoke a great deal of interest from your friends.

This diorama depicts the historic pre-dawn launch of the "Enola Gay" in August of 1945. Like the B-24 "Liberator" diorama shown in a previous Monogram diorama sheet, this creation is based on an actual event in the past that has been documented in books and photographs. The availability of such information will enable you to confirm specific details of the scene that you are modeling. As with any diorama that you create, the advance planning that you do will greatly enhance the effectiveness of your final creation. Most 1/48th scale Monogram aircraft kits contain scale figures that are ideal for dioramas depicting scenes from the Korean and Second World War. Even though these figures are probably the smallest items in your diorama, they are instrumental in making your diorama a fascinating "attention-getter" if you desire, you can reposition the heads, arms and legs of your figures to heighten the interest in your finished diorama. Position your figures so that they are pointing to or looking at objects and activities that you want to emphasize.

Ground support vehicles similar to the tracked tow tractor found in the B-24 kit, and 1/48 scale armor kits available in your local hobby shop, are great for adding to the realism of your diorama. The Jeeps seen in the accompanying photographs are Bandai kits available in hobby shops that specialize in armor models. The figures in the Jeeps were included in the Bandai kit, and are ideally suited for this particular diorama. Consult the construction details for information concerning the portable light unit.

The diorama base was constructed from a 3/4" thick panel of particle board. This is more desirable as a base in that it is less apt to warp than a similar plywood base. Because our base was lighted, 1" x 2" sides were added to conceal the wiring. The edges of the base were trimmed with paper-thin strips of walnut veneer available at your local hardware store. While researching various aspects of the "Enola Gay" flight, our modeler discovered that the sprawling airfield on Tinian was constructed of pulverized coral soaked with heavyweight oil. To duplicate this surface, the base was coated with white glue, and sprinkled with N gauge railroad ballast. When dry, the excess ballast was removed and stains were added using thinned acrylics to simulate stains from engine oil and hydraulic fluid.



Though the exterior appearance of the B-29 in this diorama follows the changes outlined to model the "Enola Gay," the major modifications to the aircraft are internal. Fibre optics strands, available in many scientific hobby shops, were cut to length and fitted to the interior to simulate cockpit and formation lights. If you are unfamiliar with fibre optics, they are very thin, but durable plastic strands capable of transmitting light. In this application, a single twelve-volt bulb was mounted in the bomb bay, and the fibre strands leading to the cockpit and wing tips were gathered into a single bundle and terminated in front of the light mounted in the forward bomb bay. The mount for the light source was fashioned from two-ply illustration board, and the bomb bay was lined with aluminum foil to increase the intensity of the light source. The aluminum foil also insulates the plastic from the heat generated by the light bulb. The pilot's, co-pilot's, and flight engineer's consoles were drilled with a miniature modeling drill, and the ends of the fibre optics strands were glued in place.

The airfield light towers are made for HO model railroad layouts. They can be purchased wired and ready to mount from hobby shops that carry model railroad components. The operating light towers and fibre optics layout within the aircraft are optional. If you desire to wire your diorama, and are unfamiliar with electrical wiring, ask a model railroader for assistance. The airfield lights and bomb bay lamp are wired in a single parallel circuit that is connected to a small twelve-volt model railroad transformer. The transformer is mounted on the inside of the base, and has an electrical plug that fits into a wall socket. If you desire, an on-off switch and a rheostat that will enable you to dim the lights can be added to the basic circuit. The lighting system utilized in this diorama is optional, and can be omitted if you desire.

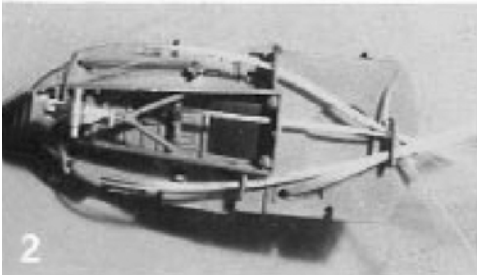
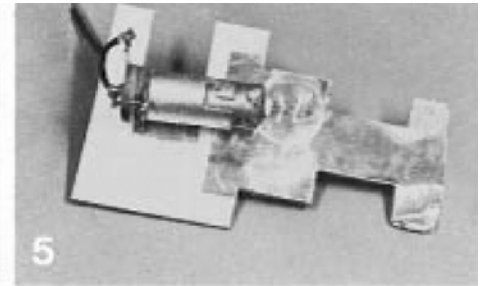
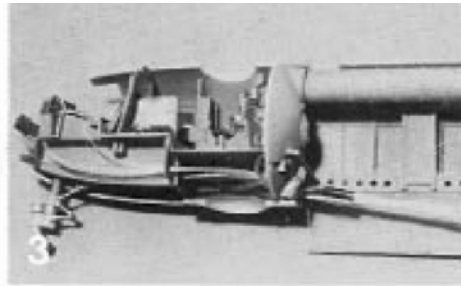
A special problem that you will encounter when building a large, tricycle gear aircraft such as the B-29, is that the model is usually tail heavy. Quite often, weight can be added to the nose area, but, even that is impractical with glass-nosed bombers. As you will note in the construction details, a machine screw was mounted in one of the nose wheels. Drill a corresponding hole in the diorama base for the screw to fit through. Not only will this type of mounting increase the ease with which your finished diorama can be moved, but if you decide to electrify your model as shown, it will be significantly easier to replace a burned-out bulb in the forward bomb bay.



*In this view, you will note that two figures have been added to the bomb bay area. Simulating armament specialists, these figures are ideal for camouflaging the electrical wires that lead to the lamp in the forward bomb bay.*



*This overall view of the "Enola Gay" clearly demonstrates an extremely important aspect of diorama construction. Never mount the major item in the diorama parallel to the sides of the base. You can increase the instantaneous "snapshot effect" of the overall presentation by adhering to this guideline. You will also discover that careful planning as you position figures and vehicles will contribute to the success of your finished effort.*



1. A long machine screw has been "trapped" between two halves of the nose wheel. The side of the assembled wheel that rests on the diorama surface has been sanded flat to simulate the weight of the aircraft on the inflated tire.

2. In this detail, note that the fibre optics strands are grouped in bundles as they lead aft toward the light source. The supports for grouping the strands are fabricated from sheet styrene and glued to the underside of the cockpit assembly.

3. With the cockpit assembly in place, you will note that the large bundle of fibre optics strands have been taped with black electrical tape and fed through a 1/4" diameter hole drilled in the lower portion of the pressure bulkhead. Trim the fibre strands so that they terminate as shown in photo four.

4. Before inserting the light bulb into the bomb bay, line the bomb bay with aluminum foil. This will increase the effectiveness of the light bulb and reduce the amount of heat affecting the surrounding plastic.

5. The light that fits into the bomb bay is mounted in a standard lamp base designed for low-voltage bayonet bulbs. This lamp base is affixed to a mount scratch built from two-ply illustration board. Avoid sheet styrene as it will undoubtedly warp or melt due to heat build-up within the bomb bay.

6. This scratch built light unit was fabricated from the upper section of an HO light unit, the trailer chassis in the Jeep kit, and Plastruct L angle. The electrical wires were lead down through the chassis, and into a hole drilled in the diorama. Use your imagination to create ground equipment such as this.

During the Second World War, nearly four thousand B-29 "Superfortresses" were constructed, but the inevitable ravages of prolonged combat and technical obsolescence reduced their number to a mere handful of aircraft situated throughout the United States. Many of the remaining B-29s are displayed in aviation museums dedicated to the preservation of aviation history. A visit to one of these institutions will provide you with a unique insight into this famed Boeing heavy bomber.

The aircraft depicted in the diorama described in the preceding pages is currently on display at the Steven F. Udvar-Hazy Center in Chantilly, Virginia. After many years and a massive Smithsonian Institute debacle, the "Enola Gay" is finally on public display.

Shown in the accompanying photograph, "Bockscar" is the B-29 that dropped the nuclear weapon on Nagasaki in 1945. This aircraft is a popular attraction at the National Museum of the United States Air Force Dayton, Ohio. It is specially modified to enable visitors to walk through the interior, this will be of particular interest to modelers planning to super detail their models. In Windsor Locks, Connecticut, members of the New England Air Museum have preserved a B-29A. A similar B-29 is on the grounds of the Strategic Air and Space Museum located near Ashland, Nebraska.

Members of the Pima Air Museum restored yet another twentieth air force "Superfortress", "Sentimental Journey". Part of an imposing array of aircraft, this B-29 is finished in an authentic World War Two paint scheme. Situated on the southern boundary of Davis-Monthan Air Force Base near Tucson, Arizona, the Pima Air Museum is one of the largest aviation museums in the United States.

The B-29 "Superfortress" maintained by the famed Commemorative Air Force has the distinction of being the only airworthy B-29 in existence. Located in Harlingen, Texas, a visit to the Commemorative Air Force is truly an experience. If you are fortunate enough to see their B-29, nicknamed "Fif" in flight, you will agree that this great silver bird is truly awe-inspiring.

