



FM Staff Photos

Time for a Vultee "Vanguard"

Rom-Air retracts and a Heathkit system highlight this fine flying machine. An able aircraft to recall old memories.

by Nick Ziroti

Vultee is a name that is well known to anyone who was aware of military aircraft during the WW-II years. Three well known aircraft were produced by Vultee during that period, the "Vanguard", "Vengeance" and the "Valiant".

The BT-13 "Valiant" was also known as the "Vibrator" in slang terminology. Thousands were built and served as basic trainers for both the Army Air Force and the U.S. Navy. They were replaced by the AT-6 in 1943, though there are many still flying all over the world.

The A-35 "Vengeance" was conceived in 1940 in answer to a contract from Great Britain for a new dive bomber. A total of 1,900 planes were built, most of them serving on the eastern fronts. A few hundred remained in the states as trainers.

The P-56 "Vanguard" was designed in the late 1930's to compete with the P-35 and P-36 fighters that were then in service. The prototype had its radial engine streamlined with an extension shaft, spinner and tight fitting cowl. You had to look hard to see that there was a radial engine under the cowl. This plane had performance superior to anything then in service, but it could not compete with new designs that were coming off the drawing boards. These included the P-38, P-39 and P-40.

Sweden ordered 144 "Vanguards", but



Some aircraft have the stance, areas and moments in relation to each other to perform as a model. Below: An idling carb awaits the throttle. Nick's "Vanguard" flew nicely with only a twist of trim.





"Vanguard" is a flyable type Stand-Off design. At left: A tail-dragger to be sure. They need a faster response on the sticks on the takeoffs. Below: A beautifully spaced gear, lean, clean.



Vultee was not allowed to deliver them. Instead, they were sent to Canada and then 129 planes went to China. These "Vanguards" did not have the streamlined nose of the prototype. Only a few remained in the United States to serve as trainers.

The "Vengeance" was the last plane produced under the Vultee name. It disappeared into what is now Convair.

I have always liked the lines of the "Vanguard" and decided it would make a very interesting Stand-Off scale model. One problem I must mention about this particular airplane is the lack of color documentation. After I had it built I realized that I did not have anything in color to pattern it after. This is important if you plan to compete as correct color scheme and markings are worth a high percentage of points. Some further library research would be in order here. There doesn't seem to be even a plastic model with its box art available to use as a guide, though United States, British or Chinese markings could be used.

The model is built to approximately 1/4"=1' scale. This makes a 60" by 600 sq. inch wing. Finished weight came out to be 7-1/2 pounds, including some lead that was required to get it in balance. A set of Rom-Air retracts handle the long landing gear legs without any problem. These are simple to install and work every time.

Building the "Vanguard" is not too difficult, but is not meant to be flown by a beginner. Heavier wing loaded planes such as this take more experience to take-off and land than a beginner has had. Other than that it could be flown by anyone with a little solo time under his belt.

Pick the wood that goes behind the wing carefully so a minimum of weight will have to be added to the nose. Cut the sides and doublers from firm but pliable 1/4" sheet. The sides must be curved over the formers so they must be flexible. Use a good contact cement to join the sides and doublers. Dampen the outside of the sides when joining to the firewall and formers. Sheet and plank the top and bottom. Leave enough of the rear end open so the pushrods can be connected to the rudder and elevator horns.

The wing is built over the plan. Be sure to use the 1/4" sq. rib shim. This automatically builds in the correct amount of wash out so important to good slow speed performance. The plan shows both retractable and fixed landing gear. Refer to whichever details apply.

The entire wing is sheeted with 3/8" sheet. Build the ailerons in place and remove after the wing is sheeted. The Rom-Air torque rods are installed before the panels are joined. Horns for the split flaps, if they are used, are installed after the panels are mated. The flaps are added just before the final coat of paint.

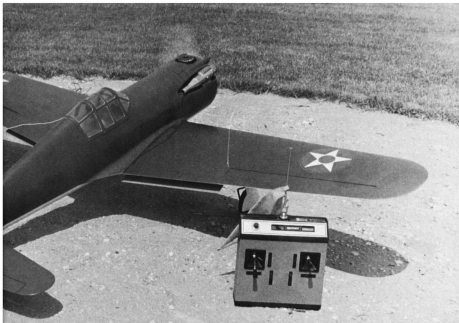
Fit the wing to the fuselage and install the fillet outlines. A front dowel and rear 1/2-20 nylon screw or screws front and rear are used to hold the wing in place.

The canopy is made up of three pieces of flat plastic sheet. This cardboard is used for the cockpit framework.

An O.S. Max 60 Gold Head with a Kavan muffler was used in our model. This proved to be a good combination. A Max is known to be a very reliable engine. The fuselage



Flaps lowered, nose toward the sky. At right, a ring cowling. Beneath: Full flaps are visible. Photos at bottom show Heath system and muffler recessed into the cowling. Neat and effective.





From takeoff roll to howling fly-bys with the Rom Air gear all nicely retracted. Rom Air aileron torque rods are also employed. Aerials here capture flaps deployed, the model on landing approach. Below: The "Vanguard" was representative of pre-war thinking, saw duty as a second line fighter.

was recessed for the muffler and the cowl itself is not removable. The engine is bolted to a suitable mount and the assembly is screwed to the firewall.

Finishing resin, acrylic lacquer, and a coat of clear "Super Pox" was used to finish the original "Vanguard" pictured here. Two coats of resin is all that is required to get a good finish. I used Hobby-poxy "Quick-Prep". A light coat of acrylic primer shows up any defects that can be touched up with putty.

The color scheme is a light blue-grey bottom and olive drab top. Stars are Sig decals, 4 1/2" in diameter. A finishing coat of clear satin "Super Pox" was sprayed over the finished model.

An eight channel Heathkit radio system utilizing six servos was installed with room to spare. The battery pack was wrapped in foam and a plastic bag and located under the engine to reduce the weight required in the nose. I used too much heavy wood in the tail and had to add nose weight to compensate for it. Keep the tail as light as possible.

Flying is straight forward and requires no special care, except to get it up to speed slowly when taking off. Apply the throttle smoothly until it is approaching flying speed and then give it full power. Don't horse it off! It will fly itself into the blue with just a little up elevator.

I hope you enjoy this distinctive, though little known fighter as much as I do. It is a fine performer in the air.

