

# FMS Mitchell B-25 Panchito

This bomber makes a great first twin

By Rick Bell Photos by Peter Hall



## Specifications

**Model:** Mitchell B-25  
**Manufacturer:** FMS (fmsmodel.com)  
**Distributor:** Diamond Hobby (diamondhobby.com)  
**Type:** Scale WW II medium bomber  
**Wingspan:** 57.9 in.  
**Wing area:** 434 sq. in.  
**Length:** 44.5 in.  
**Weight:** 68.1 oz.  
**Wing loading:** 22.6 oz./sq. ft.  
**Radio req'd:** 6-channel (rudder, elevator, ailerons, throttle, flaps, retracts)  
**Power req'd:** 3S 3300 25C LiPo battery  
**Price:** \$299.99

## Highlights

- + Fast assembly
- + Smooth flight performance
- + Sequencing retractable landing gear and gear doors
- + Counter-rotating propellers

## Gear used

**Radio:** Futaba 14SG transmitter, Futaba R617FS 2.4GHz receiver (futaba-rc.com)  
**Servos:** Eight FMS 9g servos (included)  
**Retracts:** FMS 1400mm B25 MD202 electric retract system (included)  
**Motor:** FMS 4023 KV1000 x 2 (included)  
**Speed Control:** FMS-ESC-40A BP x 2 (included)  
**Battery:** Turnigy 3S 3300mAh 25C LiPo (hobbyking.com)  
**Prop:** 9x6.5 3-blade propeller with spinner x 2 (included)

Mention the B-25 Mitchell to any warbird fan, and they will more than likely bring up the Doolittle Raid. While the attack on Tokyo on April 18, 1942 was the most famous B-25 mission, North American Aviation's brilliant bomber played a much larger part in WW II. Designed as a medium bomber to operate from altitudes between 8,000 and 12,000 feet, the B-25 was powered by two 1,700hp Wright R-2600 engines and it served in every theater of WW II. The aircraft was very forgiving to fly and had a formidable array of firepower.



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## In the Air

The first flights were made on our club's well-mowed grass runway. As expected, the B-25's tricycle landing gear configuration makes for easy ground handling. With full power, takeoff runs are surprisingly short, and on the first flight, the B-25 leaped into the air in less than 20 feet! That sure caught me by surprise! Future takeoffs were made with less power and were very realistic. While the B-25 is making a nice scale-like takeoff, retract the gear and watch the landing gear doors close — it's mesmerizing! Landings should be made with some power on and the plane needs to be flown all the way to touchdown. A gentle flare about a foot off the ground will grease the plane every time. With confidence-inspiring flight characteristics, the B-25 will remove any fears about flying a twin-engine model.

### GENERAL FLIGHT PERFORMANCE

**Stability:** The B-25 has a moderate wing loading and this makes for a nice, solid feel. For the first flights, I set up the model a little nose heavy on the forward side of the CG. After a couple of flights, I feel the B-25 will easily tolerate a more aft CG.

**Tracking:** With its counter-rotating props, there aren't any torque issues. I only needed a couple clicks of right aileron and down-elevator to fly hands off, straight and level.

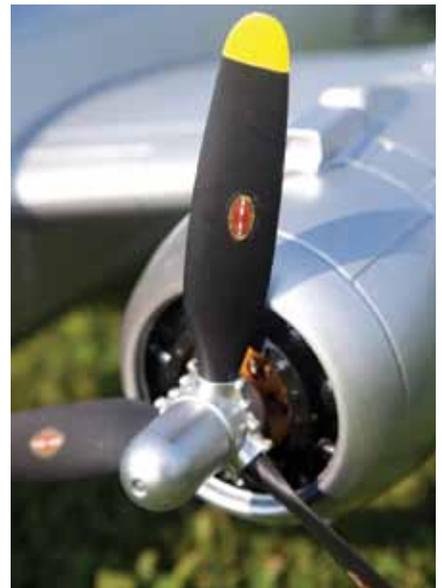
**Aerobatics:** While the B-25 is capable of mild aerobatics, it's very much out of character. Rolls are very axial due to the counter-rotating propellers and do look pretty cool. Also, loops are easily done — enter with full power and gently pull up-elevator. Be sure to reduce power on the downside of the maneuver.

**Glide and stall performance:** The B-25 airframe has a fair amount of drag and will slow down quickly when power is reduced. I didn't notice any snapping tendencies when the model stalled, just the nose dropping.

### PILOT DEBRIEFING

The B-25 taxis well, thanks to its wide stance main gear and steerable nose gear. The twin motors provide a lot of thrust and I had no problems taking off from a thick grass runway. This is a standoff scale, twin-engine bomber, and I think it looks best flown in a scale-like manner. Cruising at half throttle provides a nice scale-like speed that looks perfect for a B-25. While aerobatic maneuvers are out of character for a bomber, loops and rolls do look pretty cool! The best-looking maneuver is a nice low pass with the gear up and cycling the landing gear. During these passes watching the gear doors open and then the landing gear dropping is just too much fun that guarantees to bring a smile to any pilot's face!

Shenzhen Famous Electronic Tech Co., better known as FMS, is one of the industry's fastest growing RC airplane manufacturers. Known for their commitment to quality and innovation, the new Mitchell B-25 is no exception. It has a span of 57.9 inches, is constructed of durable EPO foam, and the "Panchito" is painted in brilliant silver and packs scale details including forward, rear, top, and side gun turrets with clear canopies and gunner figures. The twin KV1000 motors provide strong power, great reliability, and smooth



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performance, while the main landing gear and nose gear use worm drive electronic, servoless retracts that feature sequential closing and opening doors. This is accomplished with a very simple-looking circuit board that the retracts and the servos for the gear doors simply plug into. No fancy radio programming is required here and they look awesome in action! There are also bright LED navigation lights in the leading edge of the wing. While the wing panels are detachable for ease of transportation, I don't recommend removing them once installed because of the large amount of leads (five per wing panel) that need to be connected and stored. Access to the flight battery is through a removable canopy. Any intermediate pilot will be proud to add this warbird to their hangar!

## Getting a B-25 Type Rating

Text and photo by Budd Davisson

Have photo. Will scan and place

If I live to be 100 years old, I'll never forget the feeling of sitting at the end of the runway, right hand wrapped around two throttles, looking out at 3,600 horses in two big radial engines. The 22,000 pounds of airplane around me agitated gently but noisily in their wake. I was about to fly the big, beautiful B-25 bomber! I was in the left seat of N543VT, a North American B-25N, Mitchell. Junior Burchinal, proprietor of Flying Tigers Air Museum, was in the right seat, shouting at me to do this and that. Yes, I'm multi-engine rated, but most of my limited experience has been in a couple of moth-eaten Apaches, and the B-25 bears as much resemblance to an Apache as I do to Raquel Welch.

Flying a 10-ton aluminum ingot isn't something you just wander out to your local FBO and do. I was going through the WW II flight course at the Flying Tiger Air Museum in Paris, TX, and my original intent was to fly the fighters. The B-25 is also part of the program, intended to broaden your education — and it does, in spades! "Heavy" in this case means about 17,000 pounds empty, with an allowable emergency overload of nearly 45,000 pounds. That's more than my hometown weighs!

Originally, I was to go up with Junior and drive the 25 around for an hour or so, just to see how it felt. I began to like the idea of flying the big moose, however, and I soon heard myself saying things about "more time," and the words "type rating" kept popping up. Type rating! That's the special license it takes to carry passengers in airplanes that weigh over 12,500 pounds, and the B-25 weighs that much with one wing and both engines removed. It takes a different type rating for each type of airplane. This also meant I would have to learn the airplane inside and out, and that's a lot of territory. Junior is an FAA-designated examiner for the B-25, and I knew he would be tough. My first "introductory" flight made me feel like crawling into the bomb bay and going for a walk outside.

When we got up into the air and over the practice area, Junior signaled for me to take it. I took the wheel, and a slight out-of-trim condition caused the nose to drop. I automatically pulled the nose up — or at least I tried. I was flying with my left hand as my right rested lightly on the throttles. I could hardly pull the wheel back with one hand! I released the throttles and brought the other hand over to help, barely getting the nose up level. I finally had enough sense to wheel in some up-trim. I then made a turn to the left (or at least my hand did), but the control wheel resisted my attempts to move it. Grasping it firmly, determined to do it with one hand, I forced one end down and the wings responded smartly enough by rolling obediently into a left bank. Then the nose started to fall. With the 30-degree bank I was holding, I had to force the wheel to the rear to keep the nose from falling. It had started losing altitude the second I started to roll. I wasn't prepared for the heavy control pressures.

Just to prove to me that the airplane would fly, Junior reached up and punched a red button on the console between us that started moving levers. As I was watching him, I saw the right propeller come to a stop, its blades edged into the wind. He diddled with some trim wheels and sat there, hands off, boring along with only one engine going. Satisfied that I had been suitably impressed, he fired up the other engine and headed back to his field.

To read the entire Pilot Report, check out Budd Davisson's website: [airbum.com](http://airbum.com).



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### UNIQUE FEATURES

Distributed by Diamond Hobby, the B-25 comes extremely well packaged. The manual is nicely illustrated with photos and shows a logical assembly sequence. Also included is a 7-page manual that also covers the operation of the speed controls. Everything needed to complete the model is included — even a tube of glue and a screwdriver. However, I used some 5-minute ZAP epoxy as the supplied glue takes several hours to dry. Glue is only required for the attachment of the twin vertical fins to the horizontal stabilizer and the various dummy cannons, so a bare minimum of epoxy is needed. The model also comes complete with decals applied.

The B-25 assembles very quickly and without a lot of fuss. All of the servos are already installed and the control surfaces are hinged at the factory. This saves a lot of time, as there would be eight servos to install. The tasks you do need to complete are basic and go quickly. The tail assembly is first, and the control horns for the twin rudders and elevators need to be screwed to the control surfaces. This should be done before gluing the vertical fins to the stabilizer for handling ease. A clever array of pushrods and bellcranks actuate the twin rudders and elevators and they are pre-installed to the rudder and elevator servos on the underside of the horizontal stabilizer. After the vertical fins are glued to the stab, you only need to attach the rudder pushrods to complete the assembly. Before screwing the tail assembly to the fuselage, I tested the rudders and elevator and adjusted the pushrods to neutralize the control surfaces.

The wings are the heart of the model and require the most effort when it comes to assembly. The aileron servos are pre-installed and you only need to screw the control horns to the control surfaces and make up the pushrods from the included hardware. Like the tail assembly, I tested the ailerons before attaching the engine nacelles to adjust them. Now is a good time to check that the wing panels fit the openings in the fuselage — mine were pretty tight and required some sanding of the airfoiled section that fits into the fuselage. A couple of minutes of light sanding had the wings fitting perfectly. The wing uses two carbon-fiber wing tubes to attach the wing panels to the fuselage. Two built-in clamp assemblies in each wing panel provide a tight pinch around the tubes, and the screws to tighten the clamps are on the bottom of the wing. Before inserting the wing panels on the tubes, make sure the screws are loose, otherwise you won't be able to slide the wing panels on. I really like this feature as it makes repairs or replacing a wing panel a snap.

The engine nacelles come ready to screw onto the wing panels, and the motors, 40-amp speed controls, cowls, retractable landing gear, and gear doors are all factory installed. You only need to snake the leads of all the components through the wing to the root and screw the nacelle to the appropriate wing panel. Before attaching the wing panels to the fuselage, hook up the receiver to the various functions to test the motors and make sure they are rotating (without the propellers attached) in the proper directions and that the retracts and doors



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work properly. After I confirmed that everything was working appropriately, I attached the wing panels, fed all of the leads to the battery compartment, and plugged the leads to the receiver. Here's where FMS really shines in my book — they supply the needed Y-harnesses and they are labeled so you can easily and correctly plug everything into the receiver. They also supply a harness that connects both motors together to use a single battery. From here, it's only a matter of securing the receiver,



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fitting the battery, installing the 3-bladed propellers, adding the clear nose piece and dummy cannons to the fuselage, and balancing the model. All in all, it took me about two hours of effort to make the B-25 ready for flight.

### BOTTOM LINE

The FMS B-25 Mitchell bomber from Diamond Hobby is a steal at \$299.99. It is a highly detailed model that includes retractable landing gear, sequenced gear doors, lights, and pilot

and gunner figures, and all hardware needed to complete the model. The assembly was quick and easy and I love the sequenced landing gear doors! The removable cockpit hatch provides easy access to the receiver and makes battery swaps a snap. I am impressed with the level of detail packed into this bomber and it is the center of attention on every trip to the flying field. The B-25 Panchito provides warbird thrills in a beautiful EPO foam package and sure looks great making low passes down the runway!