VMAR Texan II

The Texan lives on!

PHOTOS BY CRAIG TAUCHTIN & WALTER SOAS

by Craig Trachten

The North American AT-6 Texan is probably the best-known primary trainer of the WW II era. Raytheon Aircraft in Wichita, KS, is manufacturing the next generation of trainer: the Texan II. Since winning the Joint Primary Aircraft Training System fly-off, the Texan II has been ordered by the U.S. Air Force, the U.S. Navy and several NATO nations to replace their rapidly aging trainers. Using authorized drawings, VMAR brings us this sharp-looking military trainer in two sizes (.45 to .60 and .90 to 1.20) and two trim schemes (USAF and Canadian Harvard) for a choice of four models. The .45 to .60 USAF model is the subject of this review.

KIT CONTENTS

After I opened the box, I double-checked my cash-register receipt; I thought a mistake had been made. There is no way this aircraft could be so inexpensive! VMAR ARFs are certainly setting a new benchmark for quality and value. Items such as a finished cockpit tub that's fully detailed with instrument panels and painted pilots and landing gear with scale-looking struts are just two examples. Other kit features include a painted fiberglass cowl with scale exhaust stacks, an aluminum engine mount, a universal servo tray, spinner, wheels, fuel tank, a complete hardware package and assembly manual. By the way, the pilots have cloth shoulder harnesses—a very nice touch!

Building this kit was as easy as it gets. The woodworking was excellent, the Sure Seal covering has panel lines and other details bonded in, and the control surfaces are attached at the factory. The assembly manual is better than most, but the construction photos were fuzzy. Sharper photos would clarify some of the construction details.

SPECIFICATIONS

MODEL: Texan II

MANUFACTURER: VMAR

DISTRIBUTOR: Richmond RC Supply Ltd.

TYPE: semi-scale military trainer

LENGTH: 50 in.

WINGSPAN: 57¾ in.

WING AREA: 540 sq. in.

WEIGHT: 7 lb.

WING LOADING: 29.87 oz./sq. ft.

ENGINE REQ'D: .46 to .60 2-stroke or .53 to .70 4-stroke

ENGINE USED: O.S. .70 Surpass 4-stroke

PROP USED: APC 13x6

CHANNELS REQ'D: 4 (aileron, elevator, rudder, throttle)

RADIO USED: Futaba 8UAPS w/4 servos

FUEL: Wildcat 30% heli

PRICE: $149.95

FEATURES: all wood construction; fiberglass cowl; power module system; aluminum engine mount; pinned hinges; factory-installed metal pushrods; scale landing gear; scale cockpit; full hardware package; photo-illustrated instruction manual.

COMMENTS: from the materials used to the detail of the graphics and the overall design features, VMAR has hit the nail on the head with the Texan II. Top it off with the detailed cockpit that includes painted pilots, and you have an airplane that is a joy to build and fly.

HITS
- High-quality materials.
- Fast, easy assembly.
- Power Module system.
- Scale details.

MISSES
- Fuzzy construction photos.

The Texan II sits on the tarmac awaiting its next training mission. Pretty sharp-looking model!

ASSEMBLY

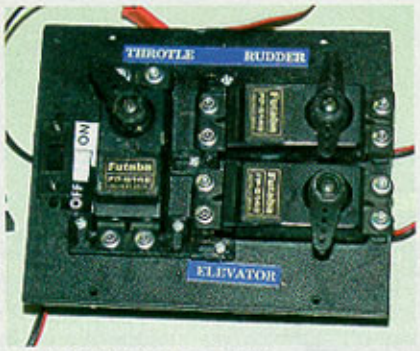
Wing. Construction begins with the wing, and a great feature is the use of alignment dowels near the leading and trailing edges; this guarantees a well-aligned wing. I test-fit the wing joiner and alignment dowels in each wing half; some minor sanding was necessary to achieve a proper fit. I marked the center of the joiner and dowels and then epoxied them into a wing half. While this was curing, I wrapped some ¾-inch-wide masking tape around each wing root as an "ooze guard." Any epoxy that oozes from the joint will remain on the tape and be peeled away with it. I applied a healthy coat of epoxy on each root plate and in the joiner and dowel holes and then slid the wing halves together. I used tape to hold the wing halves together until the epoxy had cured.

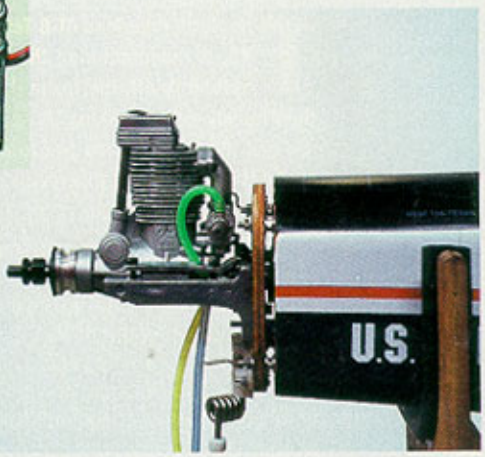
The aileron servo and control rods are a snap to install. The servo mount is part of the wing, and you need only open the mounting hole to fit your servo. I used a standard-size Airtronics servo, and I only had to cut a notch for the servo wire to exit. The pushrods are factory-assembled with clevises at both ends; I only had to adjust their length before I attached them. I find that most kit-supplied clevises are acceptable, but these are excellent! Unlike other clevises, these use a machine screw to hold them closed—not a snap pin that could pop open.

To finish the wing, I removed the covering from the hardwood landing-gear blocks and installed the gear with the supplied straps and screws. On my model, the gear legs were a tight fit in the hardwood blocks. Each landing-gear leg has scale-looking covers installed, so make sure that you mount the correct leg in the correct wing panel. Install the wheels, and lock them into place with the included wheel collars; then the wing is complete.

Fuselage. VMAR employs a unique and ingenious system to mount the engine, fuel tank and nose gear in what it calls the "Power Module." It's unique because you mount the nose gear, fuel-tank assembly and engine on the firewall, which is removable from the fuselage. This comprises the Power Module, which is then slid into the nose of the fuselage. Four studs on the front bulkhead mate with the firewall, and the module is secured to the fuselage with nuts and washers. Need to perform some maintenance on the fuel tank? Just remove the nuts, and slide the module out. Pretty slick! Be sure to use some thread-locking compound on the nuts; you don't want them to loosen during flight.

Start by marking the holes for the engine mount. The thrust lines are already marked on the firewall. I temporarily attached my O.S. .70 4-stroke to the mount, then marked and drilled the holes.





Above: the included servo tray is molded of plastic and has fixed mounting holes on one end. The other end is adjustable to fit any standard-size servo. The tray screws into the fuselage for easy servicing. Right: the module is mounted on studs that protrude from the front bulkhead. Nuts and washers hold it in place. Note that you can easily adjust the thrust angles by inserting a few washers in between the back side of the firewall and the nuts on the studs.

FLIGHT PERFORMANCE

TAKEOFF AND LANDING

Although the O.S. .70 Surpass can get the Texan off the ground in a big hurry, I like to do scale-like takeoffs. I slowly add throttle and elevator until the plane rotates. For best effect, I like to use most of the runway. Very little right rudder is needed to keep the Texan on track, and on rotation, the Texan climbs out smoothly. Landings are smooth and scale-like; I can grease 'em in, landing after landing, using throttle to control the descent and aileron to keep the wing level.

LOW-SPEED PERFORMANCE

Just like its big brother, the Texan II is an excellent first low-wing trainer. It handles extremely well at just above stall speed, which is quite slow. When the aircraft does stall, the nose and left wing will drop, but not violently. A blip of the throttle and a correction on the sticks bring the aircraft back under control. Scale fly-bys look really pretty.

HIGH-SPEED PERFORMANCE

With the O.S. Surpass, the Texan will eat up sky in a hurry. No trim changes are required between low and high speeds, though, and this speaks well of the plane's alignment. I would not recommend exceeding the suggested high-rate control settings, as the controls are very effective.

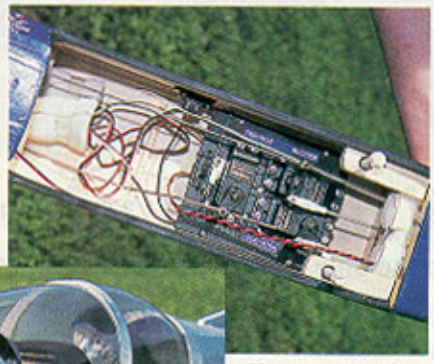
AEROBATICS

Rolls are very rapid on high rates, and axial loops are symmetrical and tight without any drop-off or snapping tendencies. I tried very hard, but I couldn't high-speed stall the Texan—not something you'd expect from a semi-scale military trainer. Flying inverted is not much different from flying right-side up, and not much down-elevator is needed to hold level flight. Knife-edge flight is easily achieved by holding a little rudder; I could fly the plane on its side from horizon to horizon. This model makes me look like a better pilot than I am. The military won't be disappointed with its trainer!

I decided to mount the engine upright instead of using the inverted installation shown. This was no big deal; just a little extra work was needed to mount the cowl.

The fuel tank is assembled in the usual manner, and I used a 3-line fuel system. I also used different colors for each line; no mixing up the fuel lines for me! The tank is secured to the back side of the firewall with rubber bands attached to mounting dowels. I chose instead to use electrical tape to hold the tank in place.

I installed the nose gear in the factory-installed bracket; the gear is held in place by the steering arm. Before you place the nosewheel steering arm on the gear, insert the steering control rod through the firewall and into the steering arm; it will be impossible to get the Z-bend on the arm once it's installed on the gear leg. The Power Module is now complete and can be mounted on the fuselage.



Above: no lack of space in here. You install the servo tray after you mount the servos on it. The pushrods are installed at the factory and require very little adjustment for the servos you'll use. I mounted the battery behind the servos to minimize the weight needed to balance the model. Left: this is how the cockpit comes finished, right out of the box. The instrument panels, pilot busts and canopy are painted and mounted on the fuselage.

Radio tray. The radio tray is removable for easy installation and maintenance of your servos. What makes mounting easy is that the plastic servo tray has fixed mounting holes on one side and adjustable sliders on the other. No cutting or sanding was needed to properly fit my Futaba S148 servos. The tray is then installed in the radio compartment with four screws that can easily be removed when it's time to perform routine maintenance.

Empennage. Installing the horizontal and vertical stabilizers is so simple that there is little to say about it. Both of them have built-in slots and tabs that mate with the fuselage and make it virtually impossible not to get a perfect fit. I attached the control horns to the elevator and rudder and then clipped them onto the factory-installed metal pushrods.

Final touches. Finish construction by mounting the cowl and securing the dorsal fin to the top of the fuselage and to the vertical fin. No effort is needed to install the canopy. You guessed it; not only was it factory-installed, but the pilots and instrument panels were, too—a tremendous timesaver!

Following the manual, I set up the control throws and balanced the model. With the O.S. Surpass up front, I needed to add 1 ounce of lead to the tail to make the Texan balance perfectly. When all was set, the Texan II was ready to go!

SUMMING IT UP

A great deal of time and effort have been put into the design of the VMAR Texan II to minimize assembly time, and it shows. It took me about 4½ hours from the time I opened the box to be flight-ready. The scale details such as the finished, detailed cockpit and panel lines really make the model stand out on the flightline. But for me, the best part is the way the Texan flies—very solid and predictable. I guess that's why the U.S. military chose it as its next generation of trainer.

Airtronics (714) 978-1895; airtronics.net.
APC Props; distributed by Landing Products (530) 661-0399; apcprop.com.
Futaba; distributed by Great Planes; futaba-rc.com.
Great Planes Model Distributors (800) 637-7660; greatplanes.com.
O.S. Engines; distributed by Great Planes; osengines.com.
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