

THUNDER TIGER

AH-1W

SUPER COBRA GUNSHIP CONVERSION KIT

The Mini Titan is ready for battle with this new uniform

Ace Hobby and Thunder Tiger have been industry leaders in helicopter design and technology for over a decade. As the 450-size electric ships became wildly popular in recent years, the Thunder Tiger design department went to work and created the E325 Mini Titan. The Mini Titan is a great flying helicopter with unique engineering features, a very competitive price and inexpensive spare parts in good supply. They also recently added a scale Super Cobra Gunship conversion kit for the Mini Titan, and it is a knockout.



FLIGHT COMMENTS

If you can fly the Mini Titan, you can fly the Super Cobra. It feels very solid in the air, and it's a great first scale model. Intermediate fliers will enjoy its looks both on the ground and while putting it through its paces in the sky. The Cobra is very distinctive when airborne. Forward flight is steady and quick. Stall-turns, loops and hovering are all precise, but a breeze makes hovering a bit more challenging than with the pod-and-boom E325 because of the larger side area and drag from the scale body. All scale maneuvers are possible with this helicopter.

I preferred 85-to 100-percent settings on the throttle curves using the stock power system in the stunt mode. Even in normal mode, I have point one set to zero, point two at 70 and point three at 85. There's a nose-to-tail-bouncing with lower head speeds, so keep the revs up as high as you're comfortable with. Idle-up is set at 90 to 100 across the board; this helps to minimize tail bounce while it keeps collective and cyclic response high.

The extra weight of the scale fuselage did reduce the flight time by 30 to 40 seconds to about 6 minutes of aggressive flight, which I expected. A more sedate cruising-type flight will easily stretch that to 7 minutes.

PHOTOS BY TONY IANNUCELLI

SPECS

HELICOPTER: AH-1W Super Cobra conversion kit

MANUFACTURER: Thunder Tiger

DISTRIBUTOR: Ace Hobby

TYPE: 1/20-scale electric helicopter fuselage

FOR: Intermediate builders & pilots

FLYING WEIGHT: 32 oz.

LENGTH: 30.7 in.

ROTOR SPAN: 29.5 in.

ROTOR-DISK AREA: 683.5 sq. in.

ROTOR-DISK LOADING: 6.7 oz./sq. ft.

RADIO: 4 channels required; flown w/Spektrum DX7 transmitter, Spektrum AR6100 receiver, 3 Ace C1016 servos for swashplate, Futaba GY401 gyro & Futaba S3154 digital microservo for tail rotor

POWER SYSTEM: Thunder Tiger OBL 29-37-10H brushless motor & BLC-40A speed control, Air Thunder 3S 2200mAh battery

HOVER POWER: 13.6 amps, 136 watts, 4.25 W/oz., 68 W/lb.

MAIN ROTOR HOVER RPM: 2,600

DURATION: 6-7 min. aggressive flight

MINIMAL FLYING AREA: Ballfield or AMA club field

PRICE: \$92.99 (list price, body kit only)

COMPONENTS NEEDED TO COMPLETE: Heli body only; requires complete Thunder Tiger mini-Titan E325 helicopter, radio & power system

SUMMARY

Thunder Tiger's Cobra conversion is a unique offering. If you've ever considered a foray into scale helicopters and wanted to start small, this is the one for you. It has created a buzz at our field, and everyone who sees it fly really likes its scale lines and performance. With a street price of around \$75, it's a remarkable bargain that will give you pride of ownership and a fun day at the field.

The manufacturer's attention to detail and quality stands out immediately when you first examine the kit. This helicopter is a marvel of engineering, and the fit and finish of the overall design are unique and well thought out. The fuselage is made of tough PVC that is easy to work with. The assembly manual shows that the fuselage will need trimming in several places, but I found these steps had been completed at the factory. There are three choices of camouflage color finishes: Desert Storm, Blue Gray and, my favorite, Field Green. The fuselage can also be purchased unpainted.

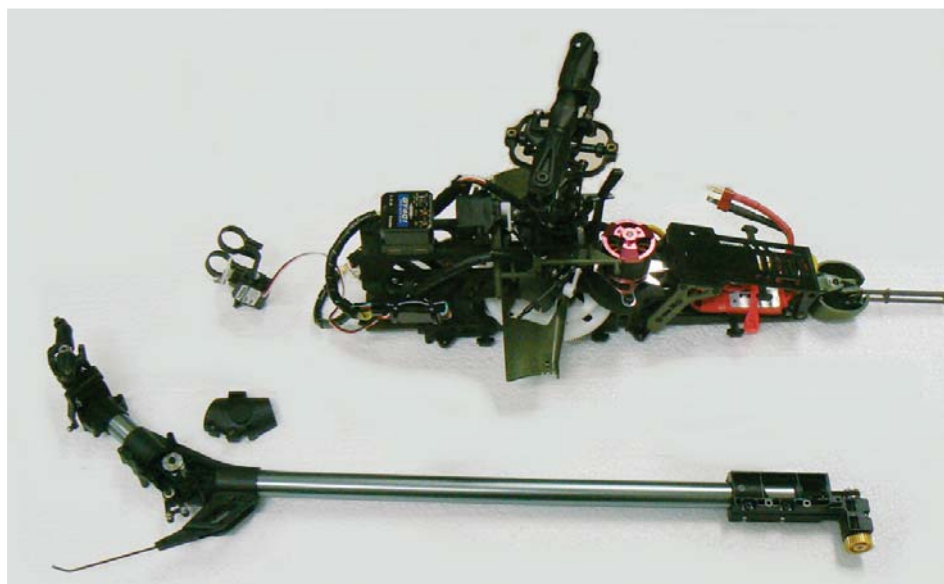
In addition to its scale finish, the kit includes a Gatling gun, missiles, scale landing gear, black paddles and tail blades and other scale bits that really enhance the body's visual appeal. The front of the fuselage is one piece, including the canopy frames, which you'll have to trim before you can insert and attach the tinted canopy with micro-screws. The military marking decals are frosted and blend nicely with the paint. All the hardware necessary for the complete conversion is included.

ASSEMBLY

The first steps require some disassembly of your Mini Titan, including pulling the main shaft and head from the frame. It took me about 30 minutes to remove the tail boom and landing gear and complete a few other easy disassembly steps. Following this preparation, some minor modifications to the original parts were required. These included trimming a bit of plastic from the main frames, moving the tail rotor servo because of the new boom and lowering the battery tray. This is a conversion body, so none of these changes were unexpected. The Ace servos and linkage to the swash work fine as is without any changes. Considering the complexity of the new body, the mechanical changes were relatively minor.

I mounted a Futaba micro digital servo for the tail rotor and left the gyro and receiver undisturbed. I also left the stock motor and ESC in place, and they have proven to be adequate for performance.

The high-position tail-rotor mechanism is really neat and easy to install. The supplied new two-piece boom, belt, gearing,



pushrods and pulleys are all well engineered. The high tail really adds to the scale appearance when the fuselage shells have been screwed on. It's a very secure arrangement and exhibited no vibration whatsoever in the air. It also lifts the tail blades out of the grass a bit, and that helps smaller helicopters on rougher fields and in long grass.

TIPS FOR SUCCESS

Thunder Tiger expects you to use the Mini Titan blades on the Cobra, or perhaps an aftermarket set of black blades; blades aren't mentioned or provided in the conversion. The CY blades didn't look right and neither did the stock wooden blades. My solution was to strip the clear plastic off the wooden

blades and re-cover them with olive-drab Solartex covering from my scrap box. Rebalancing was easy, and the blades' CG was right on the money. This is a good solution, and as you can see, they look a lot more true to scale than the stock blades.

CONCLUSION

Adding the Cobra body to the Thunder Tiger Mini Titan E325 was a really rewarding project. The Cobra gunship holds a unique place in aviation lore, and this conversion kit made the transformation easier than I expected. If you're a scale nut, you can really go to town adding scale detail. To me and many others, I'm sure, combining the Mini Titan's performance with the scale looks of the legendary Cobra gunship is our idea of a match made in heaven. ☺

Links

Air Thunder Batteries,
www.airthunder.com,
(312) 212-3723

Futaba, distributed exclusively by Great Planes Model Distributors,
www.futaba-rc.com,
(800) 682-8948

JR, distributed exclusively by Horizon Hobby Distributors,
www.jradians.com, (877) 504-0233

Spektrum, distributed by Horizon Hobby, www.spektrumrc.com,
(800) 338-4639

Thunder Tiger, distributed by Ace Hobby Distributors,
www.acehobby.com,
(949) 833-0088

For more information, please see our source guide on page 121.

