BURC SIMSEK burcs@flyrc.com

The hobby's first ARF model "E"!

Author's Opinion

The Maxford USA Gee Bee is a beautiful fifth-scale rendition of the infrequently modeled model 'E' sportster airframe that whose most notable feature is the Townend ring and its detailed replica Warner radial engine. With an impressive wingspan of 59-inches, the Gee Bee Model E builds quickly, looks fantastic and flies quite well. The recommended 400W power system is sufficient but be prepared to add a more powerful setup for serious performance.

View the video online!
Scan bar code or type www.flyrc.com/071302

The Gee Bee is one of the most recognizable airframes of the golden age of aviation. Developed by the Granville brothers in Springfield, Massachusetts, a variety of versions were built including the most popular model "R" and "Z". A lesser-known version which predated the popular "Y"," R" and "Z" versions is the model "E" whose most notable feature is the Warner radial engine and Townend ring. A Townend ring is a narrow fairing fitted around the radial engine and was utilized to reduce drag created by the large radial engine. Four model "E" Gee Bees were built in the 1930s and sadly all of them crashed and were destroyed injuring or killing their pilots.

The Maxford rendition of this airframe should be a welcome addition to Gee Bee enthusiasts as it is a less frequently modeled version. Maxford used the serial number of the close-looking Model Y with the radial engine. This makes it so the ARF could be either a Model Y or Model E. Developed for electric power, the Gee Bee Model E arrives mostly built and only a short assembly is required to get the airframe in the air. The Gee Bee E arrives with a nice list of features which include a beautiful replica Warner radial engine and Townend ring, scale wheel pants, a removable wing with flying wires and a nicely concealed battery hatch on the bottom of the airframe.

NEED TO KNOW

MFG/DISTRIBUTOR: Maxford USA

TYPE: Sport-scale electric ARF

FOR: Intermediate sport pilots

MIMIMUM FLYING AREA: RC club field

PRICE: $219.99

NEEDED TO COMPLETE: Four-channel radio system, four mini servos, two 12-inch servo extensions, a "Y" extension, minimum 400 watt brushless power system, propeller and battery.

MAXFORD Gee Bee Model E ARF

Key Features

- The Gee Bee is a very pretty airframe; one that is unique and infrequently modeled.
- The replica radial engine, Townend ring and wheel pants are the main features of the Gee Bee and look great.
- The construction and covering quality is topnotch.
- The model has an impressive wing span.

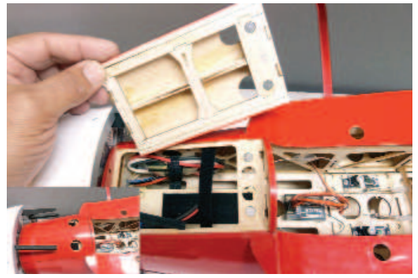
Pros

- The Gee Bee Model E is a unique subject; the replica Warner radial is a thing of beauty
- Build quality and covering of the Gee Bee Model E is very good with a few minor issues that are easy to address
- All the required hardware is included with the ARF

Cons

- The recommended 400W power system is towards the lower end of the performance spectrum

PHOTOS BY BURC SIMSEK & LAURENT CAEKBEKE



ASSEMBLY TIPS

Assembly of the Maxford Gee Bee Model E is a pretty standard process. While the process does not deviate much from most standard ARF builds, several annoying, but easily solvable issues were present in the build which I will mention in the following paragraphs. The model ships in a pretty plain container and the wings, fuselage, tail and remaining components are wrapped and secured to the box well to avoid any damage during the shipment. A printed manual is included which provides an abundance of information to allow you to assemble the Gee Bee without any major hassles.

The Gee Bee Model E ARF requires several components to complete, which include four mini servos, an electric motor, ESC, propeller and battery along with your choice of receiver and transmitter. The recommended power system from Maxford is a minimum 400W motor controlled by a 60A ESC powered by a 4S LiPo battery. I installed a Himax 3522 400W motor, a 54A Castle Creations Thunderbird ESC and a Venom 4S 3200mAh LiPo battery. For the control surfaces, I used four ParkZone DSV130M metal-geared mini servos. To control the Gee Bee, I used my Futaba 8FGS along with a Futaba R617FS receiver.

Assembly of the Gee Bee Model E involves installation of the servos, control horns and CA hinges on all surfaces. The horizontal stabilizer is keyed and slides in to a pre-opened slot on the tail of the fuselage. The vertical stabilizer inserts in to this key making alignment of the tail a simple process. Covering has already been removed where the stabilizer will meet the fuselage so all that remains is to double check the alignment and fix them in place with some thin CA. The rudder and elevator pushrods have already been installed in the fuselage; however this is where I ran across the first minor issue with the build. The rudder pushrod guide has to have a sharp bend inside the fuselage where it exits in the rear, making the pushrod hard to move. Adding a couple drops of lub oil made it move smoothly. The elevator and rudder servos are installed in the fuselage in pre-cut locations. The servos I was using are slightly bigger than standard mini servos so I had to enlarge the openings a bit to get them to fit which was easily achieved with a modeling knife. The elevator is provided in two halves and is joined together with a metal U-connector. All of the surfaces are attached with CA hinges. The CA hinge cutouts have already been done and I did not have to mess around with the fit of the assemblies to get the surfaces fitted.

The ailerons are actuated by individual servos mounted in the wings. I used 12-inch extensions for the servos. The manual states that the wing halves can remain separate for transport but I decided to glue them together as I was not very happy with the gap under the fuselage when the wings were not glued. The wing is held on the fuselage with a keyed slot on the front and two screws in the back. In addition, the wing is bolted to the fuselage on the top using four painted aluminum wing struts. These are attached to the wings and fuselage using wood screws that insert in hardwood locations on the wing. The hardwood locations are on either side of the rib cap so it would be best to not drill right in the middle of the rib to affix the screw or you will be weakening the structure of the wing. Removal of the wing afterwards will involve removing the six screws.

The landing gears are installed in the openings on the bottom of the wing and are held in place with wood spacers and plastic retainers. The wheel pants are then attached to the bottom of the wing with wood screws. Two of these wood screws will go in to the spar so make sure you do not weaken the structure as you install these screws. I also ran some thin CA along the seams to make sure I had a good bond. However, if you do this, you will not be able to remove the wheel pants afterwards so build accordingly. The cosmetic flying wires can then be run along the bottom of the wing.

The motor is mounted directly to the firewall. Several wood spacers are provided to achieve a proper spacing to the opening on the replica radial cowl. If the motor you are using is long, you can use the provided spacers to move the cowl out a bit to achieve a good fit. The cowl is held in place with three screws that attach from the front. There is ample space in the fuselage to mount the ESC and receiver. I mounted the 54A Castle Creations ESC to the side of the fuselage and installed Velcro backing in the battery compartment along with two straps to keep the flight battery in place.

Once the build was completed, I set the control surfaces per the manual and also installed a 1/5-scale Maxford pilot figure to complete the great looks of the Gee Bee and was ready for flight.

THE LAST WORD

I think the Maxford Gee Bee Model E is a very good looking and nice ARF; one that is welcomed in the market as it is a unique replica of an infrequently modeled subject. The build quality and covering of the ARF was top-notch and the included replica wheel pants and radial engine look great. With the addition of a Maxford 1/5-scale pilot, the Gee Bee really looks the part with its open cockpit and massive radial engine.

In the air, I would describe the Gee Bee flight performance as more scale than sport. The roll rate with the smaller ailerons is not very high. Its longer fuselage makes the Gee Bee a slightly easier model to land as compared to model R/Z Gee Bees; however it is a Gee Bee after all so do not expect it to land like a trainer. ✪

IN THE AIR

The day of the maiden, I lined the Gee Bee against the wind and applied power and watched as she picked up speed and the tail lifted off as it became light on the wheels. The recommended power system with a 4S battery gave the Gee Bee plenty of power for take-off as it left the terra firma with authority. Once airborne, I had to deal with some variable wind gusts which required plenty of throttle management. I was happy to have a little reserve power on hand. I was pleased to find that I did not have to apply much trim to keep her flying level.

With a large wingspan, the Gee Bee can fly around very nicely and can be slowed down for beautiful passes over the runway. The roll rate with the recommended throws is not very high and even with maximum throws the Gee Bee rolls like a trainer. The elevator and rudder authority on the other hand is significantly higher and I would recommend sticking to the recommended throws as higher rates on the elevator can cause the Gee Bee to unexpectedly snap. The rudder provides enough throw to allow the Gee Bee to knife edge nicely without much coupling. Inverted flight requires a bit of up elevator to maintain. Loops looked better if entered with some speed and on several occasions, I stalled at the top not being able to complete the maneuver. The large wingspan and wing area does not really have any bad stall characteristics when observed from level flight. However, if you stall with the nose pointed up, like at the top of a loop, be ready to drop the nose and pick up speed as quickly as possible to recover.

Gee Bees are notorious for their landings as they definitely don't have "trainer" landing characteristics. However I can say that the Gee Bee Model E is easier to land than other Gee Bees that I have flown, such as the Model R, which has significantly shorter coupling. On my maiden flight with a strong cross wind, I was able to bring the Gee Bee in under power at a fairly slow rate and touch down on the runway without bouncing or toppling over. On later days with calmer conditions, I noticed that the Gee Bee can glide fairly nicely and can be landed under power but you have to pay attention to your decent rate and flare to make sure you try to avoid touching down too hard.

SPECS

WINGSPAN: 59 in.
WING AREA:: 529 sq. in.
FLIGHT WEIGHT: 4 lb. 14 oz.
WING LOADING: 21.34 oz./sq. ft.
CUBE LOADING: 11.1
LENGTH: 39 in.
RADIO: Four-channel radio system required; flown with a Futaba 8FGA transmitter and a Futaba FS617R receiver
SERVOS: Four ParkZone DSV130M mini servos
MOTOR: Himax HC3522 400W brushless outrunner
ESC: Castle Creations Thunderbird 54
PROP: 12x6 APC
MAX RPM: 8,250
DURATION: 5-7 minutes
BATTERY:
Venom 30C 3200mAh 14.8V LiPo

We Used

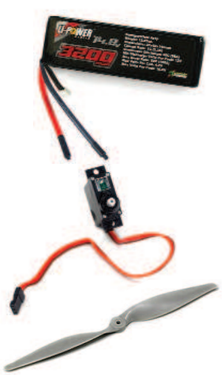
TRANSMITTER
Futaba 8FGAS, LXAVCN

RECEIVER
Futaba FS617R, LXTHL6

MOTOR
Himax HC3522 400W motor, HC3522-0990

ESC
Castle Creations Thunderbird 54, LXUTB2

BATTERY
Venom 30C 3200mAh 14.8V LiPo



SERVOS
ParkZone DSV130M, PKZ1090

PROP
12x6 APC, LXZK98

CONTACTS
CASTLE CREATIONS
castlecreations.com, (913) 390-6164
FUTABA futaba-rc.com, (217) 398-8970
HIMAX maxxprod.com, (847) 438-2233
MAXFORD USA maxfordusa.com, (562) 529-3988
PARKZONE parkzone.com, (800) 338-4639
VENOM venom-group.com, (800) 705-0620

For more information, please see our source guide on page 105.