



Hobby Zone Firebird Freedom

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Photo supplied by Horizon Hobby

Having been the head flight instructor at my local club for several years, I have become very skeptical about smaller, Ready-To-Fly ([RTF](#)), store-bought airplanes. After seeing the hopes of many an aspiring pilot dashed by poorly designed and under powered models, I have arrived at the conclusion that these aircraft are mostly junk. True, most of the airplanes in my experience were the single-channel, very small, electric airplanes found in toy stores. But some were the more sophisticated hobby-store aircraft.

So when I was asked to test Hobbyzone's Firebird Freedom I expected an exercise in futility with a little frustration mixed in to season all the disappointment. The final result was a big surprise to me and a lot of smiles.

(Ed Note: Some of the photos taken for this article did not reproduce well. Therefore a few of the photos were supplied by Horizon Hobby as substitutes for the missing flight photos. Each will be identified as such. However, all text, statements and conclusions remain those of the author and Sport Aviator.)



Photo 1



Photo 2

Hobbyzone produces three "Firebird" introductory airplanes (they call them "Zone 1" aircraft). The Freedom is the largest of the three with a 50-inch wing span while the [Commander](#) spans 40 inches and the smaller Phantom just 29 inches. Both the Freedom and the Phantom are 3-channel aircraft featuring pitch (elevator) control while the Commander relies on motor power to control pitch.

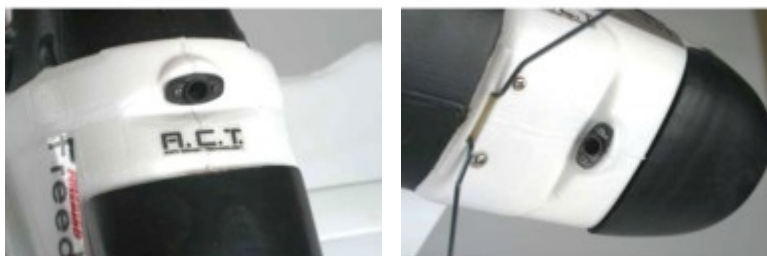


Photo 3

Photo 4

Photos supplied by Horizon Hobby

All three aircraft have ParkZone's revolutionary Anti-Crash Technology (ACT) to help the new pilot recover from dangerous attitudes and situations. ACT appears to be a very advanced system. It employs two optical orientation sensors to sense the aircraft's attitude. One sensor is located on the top and one on the bottom of the fuselage (photos 3 and 4). If the nose drops too far, ACT senses the change then reduces the throttle and applies "up" elevator.

The brightly colored box boasts of this Anti-Crash Technology that makes it easy to teach yourself to fly. This, along with the claims of "everything included in this box", were really arousing my cynicism. Those of us from the New York City area have learned to never trust what the "box" says. But after trying very hard, I put my prejudices aside and finally got to work.

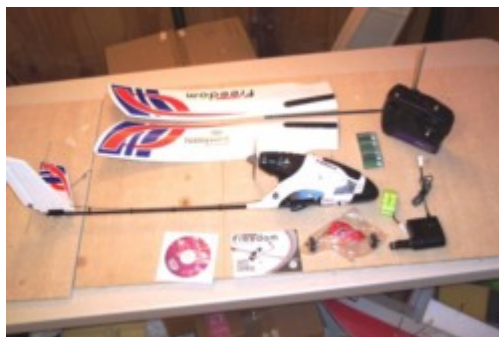


Photo 5

I was quite surprised. The components were packaged as if they were facing the Samsonite gorilla and everything was really in the box (photo 4)! Included is not only everything you need to assemble the aircraft as well as a transmitter, but also the transmitter batteries, flight pack, charger, manual, and instructional CD.

The manual was simple and to the point but with enough details and diagrams to get you through the process. The CD covered a lot of the same material as the manual and had some good video demonstrating the assembly process and lots of encouraging footage of the Firebird zooming around the skies.

Assembly

There is very little assembly required in getting this airplane flight ready. The first step is installing the included- "AA" alkaline transmitter batteries. Next, attach the flight battery to the Electronic Speed Control (ESC) connector. To drain the flight pack, insuring a full charge for the initial flights, run the motor, being careful of the spinning propeller, until the ESC shuts the motor off automatically. The instruction manual clearly outlines this procedure.



Photo 6

The flight battery is a 7-cell, 1000 mAh Nickel Metal Hydride (Ni-MH) pack. The charger is of the "Peak Detect" type and has a variable output for use with the smaller flight packs for other Hobbyzone aircraft. The variable rate charger, set for 1.2 Ah, is designed to plug into your car's cigarette lighter. This was my first error. For some reason, despite the clarity of the manual and the video I thought the charger's blinking LED indicated a full charge. Actually I learned later, by finally reading the instruction manual when all else failed, that the full charge indicator is a *steady* red light.

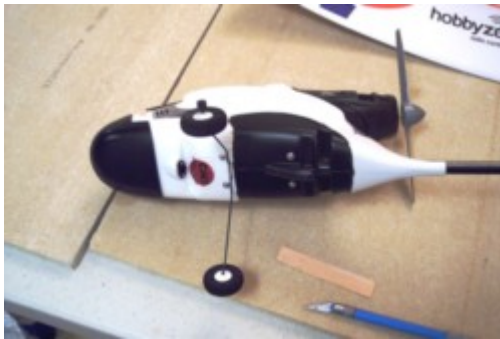


Photo 7



Photo 8

Next, attach the landing gear if you are flying off pavement. This step is best omitted if you will be flying off grass. However, if you plan to use one of the X-Port accessories like the parachute drop or laser fighter module, then make sure you install the main landing gear. Since my local flying field has a paved runway and the gear weighs in at a paltry eight grams, I decided to use it.

This was the only area of difficulty encountered during the assembly process. The slot in the fuselage was simply too small, not allowing the landing gear to fit. Some judicious trimming with a hobby knife and a little sanding remedied the situation.

The kit included a tail wheel assembly that was not mentioned in the manual or in the video CD. Installing the tail wheel assembly is not at all difficult. It merely attaches to the fuselage by removing the large thumbscrews that hold the stabilizer in place. Then replace the thumb screws. Make sure that the stabilizer's incidence *does not change* during this installation process.

One thing the Freedom has over most other airplanes in this class is that the rear control surfaces are operated by metal pushrods. So many aircraft similar to the Freedom use thin nylon string for control surface movement. The metal rods are more durable and provide a firmer control response and pilot "feel".

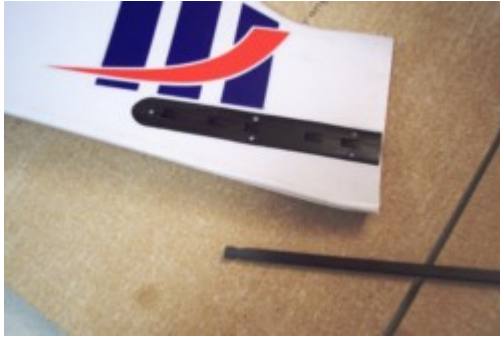


Photo 9



Photo 10

The next step was assembling the two piece wings This Firebird is a mid-wing with the two wing halves joined through the fuselage using a square fiberglass rod as a spar. The wing halves are foam with the brightly colored decals already in place and a hard plastic socket to capture the spar. A large fillet molded into the plastic fuselage contains the wings and sets their incidence.

Once the assembly was complete, the manual moves you through the centering and checking for correct movement of the flight surfaces. It also guides you through a range check that is different from the typical procedure. The manual recommends fully extending the antenna and then testing at one hundred paces. This is quite a thorough exam yet the system had no problem.



Photo 11

The three-channel transmitter that is included has a decent feel with good stick tension. My primary competition transmitter has a very high stick tension so the feel of this was very welcome. Other than the transmitter's power switch, there are only two other switches, one button activates the X port functions and there is a toggle switch for turning on or off the ACT function. The slide throttle was the only unusual part for me, having never flown three channels before.

A safe flying site is emphasized in both the video and the manual along with using the enclosed ribbon to the antenna as a windsock to ensure flying in only moderate winds. Another point emphasized was keeping the aircraft upwind during flight to avoid a flyaway when the battery loses power. Most importantly, the manual and the instructional CD repeatedly stressed keeping clear of the propeller while checking the transmitter's throttle position before installing the flight pack. I was disappointed that the only mention of the AMA was on the very last page of the manual. (Ed Note: Surprisingly for a teach-yourself first airplane, Sport Aviator wasn't even mentioned at all!)

Flying Time



Photo 12



Photo 13

With all the assembly and pre-flight covered, it was time to head for the field. Since the weather was perfect there were a number of pilots at the field. I checked for frequency conflicts but, as the Firebird uses a 27 MHz system, this was not a problem. After some pictures and a successful range check, it was time to fly.



Photo 14



Photo 15

Photos supplied by Horizon Hobby

The Firebird Freedom has good eye appeal. The top is very colorful while the underside has just enough design to allow the new pilot to know what the airplane is doing. Visual orientation is important if a new pilot is trying to learn to fly RC without an instructor. *(Ed. Note: This is never a good idea as at least an instructor can trim your airplane during the first flight. Out-of-trim airplanes are a nightmare for a new pilot. Simultaneously trimming and flying an out-of-trim aircraft can be daunting for even experienced pilots.)*

Note that big black nose on the Freedom. This is a rubber “bumper” that protects the airplane during hard landings; especially if the hard landing is on the nose! The bumper proved its worth several times during my first flight attempts because I neglected to study the flight manual.

My first two flight attempts employed traditional takeoffs. These resulted in the airplane flipping over on its nose. Subsequent hand launches had similar results. Why? Because when I had installed the tail wheel I had inadvertently changed the tail incidence and never checked it. A quick field check and a minor adjustment of the two thumbscrews that secured the tail and the Firebird was flying.

But then it didn't seem to want to stay in the air. I hadn't expected the Freedom to be a powerhouse, but I know from experience with other electrics that the brushed 480 motor should pull this 24 ounce airplane with authority.

Luckily, this airplane is very tough. A good characteristic for an airplane designed for solo learning. Its 24 ounce weight is not sufficient to cause any serious airframe damage and the foam is strong.



Photo 16

Photo supplied by Horizon Hobby

Finally, after a few very short flights, the low voltage cut-off was activated and the motor stopped. This left only enough power to navigate to the only decent landing the Commander had seen all day. I was completely disappointed and it seemed that my judgment of small electric-powered RTF airplanes was justified. I didn't know what was happening so it seemed like the best thing to do was to call it a day and go home to check everything over.

On the way home I connected the flight pack to its charger and plugged it into my car's cigarette lighter. Immediately, I noticed the light on the charger was blinking; a condition I incorrectly thought meant it was trickle charging. Surprised by this I re-read the instructions and found my error. A beautiful flying day wasted and an aircraft abused due to my haste in not reading the instructions!

But, think about this for a moment. I drained the battery pack as per the instructions and never really re-charged the flight battery. Despite having virtually no motor power, the Freedom still flew, remained controllable, and was easy to land. That is very good performance for a powered airplane forced to fly without power; well fly without much power anyway.



Photo 17

Photo supplied by Horizon Hobby

The next trip was to a flying site farther from my home. The longer drive allowed the flight pack to reach full charge. Most charge times were about 40 minutes. The wind speed was much higher; really at the limits for this type of aircraft but now I was determined to get a significant flight.



Photo 18

Photo supplied by Horizon Hobby

A quick check the controls, open the throttle and a little toss into the wind. Then, success! This wasn't the same aircraft that was flopping about previously. A little trim plus some throttle adjustment and it was flying! The Freedom was moving easily through the high winds while making turns and cruising around the field.



Photo 19



Photo 20

Photos supplied by Horizon Hobby

When it came time to land, the Freedom didn't really need me around. Landing meant pointing the airplane into the wind, reducing power and letting it land about by itself. The ACT system made having a pilot a little superfluous. But I hung around anyway in case I was needed.

I was surprised that the Firebird Freedom handled the extra wind so well. Most aircraft in this class would not do this well. While a brand new pilot, without an instructor, would never attempt flying the Freedom in windy conditions (*Ed. Note: No Huh? Think again.*) It is important that the airplane have this extra capability.

It may really be possible to successfully and safely learn to fly this aircraft without an instructor. There will be some damage and the learning will take longer, but it should be possible. But I still strongly recommend visiting an RC club and taking advantage of the free flight instructions they offer.

The Firebird Freedom is an excellent flying airplane. Most very new pilots will not notice any problems at all. However, to the more experienced pilot, the airplane shows its two-channel roots in the air. Some earlier versions of the Firebird, and the current Firebird Commander ([reviewed in Sport Aviator](#)), used throttle for pitch control. The Freedom's pitch control is heavily influenced by the throttle and, in calm weather, the elevator is only really used to make tight turns. Just adding a little more throttle will keep the Freedom at a constant altitude in turns without elevator input. Maybe this airplane is too easy to fly?

Laughing and really enjoying myself, I flew circles and figure-eights moving through the heavy breeze until I could feel the motor power start to drop. Then I lined up on the runway, throttled back and put the Firebird down at my feet. (*Ed Note: Every once in a while, Anthony gets lucky in his landings. Only kidding as Anthony is actually a Masters Class Pattern Pilot and will be flying, and doing well, in the 2007 National Championships where landings are SCORED.*)

After landing, I wished I had sprung for an extra flight battery pack. I would have liked to have had a quick second, or maybe even a third, flight. The airplane was that much fun to fly. I will be ordering a spare flight battery or two.



Photo 21



Photo 22

Photos supplied by Horizon Hobby

There are several X-Port modules available for the Freedom. Photo 21 shows the combat module that allows two Firebirds to shoot each other down in mock, laser, combat. Photo 22 shows the parachute drop module which also looks like fun. But I have my eye on the night flight module and that may get included in the order as well.

It had been a long time since I had this much fun just flying circuits and Lazy Eights around the field. The Firebird Freedom is going to spend a lot of time in my car just in case. Unlike my competition airplanes, the Firebird Freedom can be flown in just about any open field I may happen to pass in my travels.

This complete, RTF aircraft can teach anyone to fly an RC model. Considering that everything comes in one box, ready to charge into the air, the Freedom's \$140 price seems a little meager for everything you get in that box and the performance abilities the airplane has. For more information on the Firebird Freedom, go to [website](#).

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Specifications

Manufacturer: ParkZone

Cost: \$140.00

Radio: HobbyZone 3-channel 27 MHz

Servos: 2 servos

Engine: Brushed 480 motor

Airfoil: Under-cambered

Range: 12-13 minutes

Length: 33 in.

Wingspan: 50 in.

Wing Area: ~ 270 sq. in.

Wing Loading: 12.8 oz./sq. ft.

Weight: 24 oz.

Special Airframe Features: Mid-wing design for better handling and improved flying in lighter winds. Easy to see.

Notable Positives

Gentle Flyer

Truly RTF airplane

Anti-Crash Technology works

Possible to learn to fly on your own

Good basic trainer performance

X-Port capable for more options

Notable Negatives

Mid-mounted wing can be damaged if hit too hard.