NAVIGATION

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DEALER INFO

Hobbico/Aquacraft

INTRODUCTION

Are you looking to make the transition from a plane to a boat? Perhaps you simply don't want to fool with cable grease or submerged props when it comes to being able to run on the lake. Whatever the reason, an airboat may be just the thing you're looking for.

An airboat is a boat powered by a propeller in much the same fashion as a plane would be. However it steers via a rudder in the rear of the boat because, aside from the propeller-based drive system, an airboat maintains all other characteristics of a normal boat. Aquacraft has put together an attractive airboat package that they have dubbed the Air Force. It sports a .46ci engine and a streamlined looking hull, which simply looks like it will be fun to pilot around the lake on a nice clear day.

So how easy is it to get a boat like this up and running? Does the motor being mounted above the boat add much of a stability issue overall? We're about to find out, as it's time to get ready to head to the lake for

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Great Planes Model Distributors
P.O. Box 9021
Champaign, IL 61826-9021 USA

Phone: (800) 637-7660
Website: www.hobbico.com

VIDEO

See the Air Force .46 in action!
Resolution: Low Medium High

RATINGS

Quality	★★★★★
Performance	★★★★
Assembly Ease	★★★★
Handling	★★★★
Durability	★★★★★
Speed	★★★★
Engine	★★★★
Price	★★★★★

HITS

Electronics Switch at Cockpit
Electronics Box Seals Well
Motor Easily Accessible

MISSES

Somewhat Top-Heavy

some fun at the waterfront in the hot summer sun!

SPECIFICATIONS

Model Name: Hobbico AquaCraft Air Force Airboat RTR w/.46 Engine
Part Number: HCAB27**
Price: $210.00 (Approx. Street Price)
Type: Airboat
Overall Length: 36.0" (915mm)
Hull Length: 30.5" (775mm)
Beam: 13.5" (343mm)
Height: 12.0" (305mm)With Engine Pod in Place
Weight: 5.32 lbs. (2.42kg)
Hull Material: Fiberglass
Prop Size: 11x8 Propeller
Engine: AquaCraft Pro .46 (7.7cc)
Radio: Futaba 2-channel 75MHz AM Pistol-Grip Radio

REQUIRED ITEMS

Additionally Required Items
8 AA Batteries (For Radio)
4 AA Batteries or Receiver Pack (For Receiver)
Nitro
Fuel Pump
Glow Plug Wrench

Short Runtimes	Glow Igniter After-Run Oil Phillips Head Screwdriver

Documentation

Decals

Boat Stand

The Aquacraft Air Force comes with plenty of documentation should you be new to the boating scene, or just simply need some basic information. There are a total of two manuals; one for the airboat itself, the other covers the .46ci motor. Both manuals give you all the specifics and details regarding their respective topics, and get you up to speed in no time at all.

Out of the box, the Air Force is rather plain looking. So you'll want to use the supplied decals to spruce the boat up some before hitting the water. The large sheet that's included contains some large striped decals, as well as some smaller ones to label and identify the boat. Once you finish using these decals, your Air Force will certainly look decked out.

Working with a boat can be difficult without a stand for it to sit on. Aquacraft understands this well evidently, and includes a nice wooden stand in the box. The stand is already assembled, making things very easy for the owner. In addition, it also comes with some small diameter rope that assists you when carrying the Air Force, and also loops around the front sponsons to hold the boat in place if you run the motor while it is on the stand.

Propeller

Video

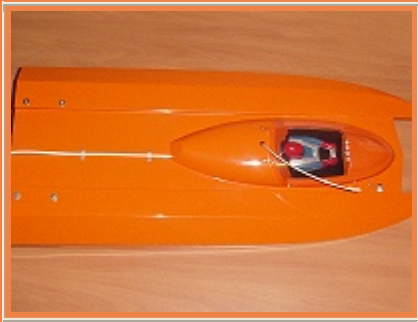
Rudder

Since the Air Force is an airboat, it's not complete without a propeller. So Aquacraft has supplied an 11x8 propeller to provide the momentum to move the boat forward in the water. The propeller comes with the necessary mounting screws as well as a two piece nose cone. The manual covers the actual installation process very well, making the task of installing it extremely simple.

If you're still a little uneasy because you're green to the boating scene, Aquacraft includes a video to help assist

you when it comes to starting and tuning the Air Force. The video covers the basics, although it's not a substitute for reading the manual. However, it will help you determine the sounds to listen for when tuning, as well as allowing you to see a walkthrough of the tasks you'll perform while working with the boat.

What boat would be complete without a rudder to steer it? To accomplish this function, Aquacraft uses a plastic rudder assembly mounted on the rear of the boat. A cable, connected to the steering servo provides the movement necessary to steer the boat. Since the Air Force doesn't have a traditional water-based propeller, the rear of the boat has a very simple but effective layout. Also, Aquacraft has installed the rudder for you, so that's one less thing you'll need to do once you pull the Air Force out of the box.



Top View

Bottom View

Cockpit

Without the motor pod and decals installed, both the top and the bottom of the Air Force look very similar. This is due to the streamlined hydroplane look of the boat. All efforts focus on minimizing drag in the water, and from that aspect I'd say the goal was achieved. The bottom of the boat is as smooth as possible, while the top matches it as well, to assist resistance from any spray that flies through the air. The white line you'll see when looking at the top of the boat is the housing for the throttle cable that runs from the servo in the electronics box to the motor pod.

Up front, Aquacraft didn't take the "smoked glass" look that many manufacturers do. Instead they used a cockpit cover over the electronics box that has a realistic looking pilot in it. This adds to the realism factor tremendously. The cover is held on by a total of five screws up front, and tabs catch the rear of the cover. Just behind the cover, the receiver's antenna sticks up so it can respond to any signals sent from the transmitter.

Electronics

Underside of Cockpit

Radio

Once the cockpit cover is removed, you can get a good glimpse into the electronics box of the Air Force. It has adequate room for all of the necessary components, and is laid out well in regards to making access easy. Two Aquacraft SX-100 servos control the motor and the rudder. These servos are actually made by Futaba, and labeled under the Aquacraft brand. Regardless, they'll work well for the duties they've been assigned.

A little closer to the front of the boat, the receiver and battery holder are held in place by a rubber band. The receiver is wrapped in a balloon, but is also manufactured by Futaba just like the servos. The balloon helps prevent any moisture, that finds its way past the cockpit cover, from finding its way into the receiver and ending

your day prematurely. The battery holder itself is standard fare and holds four AA batteries to power the onboard electronics.

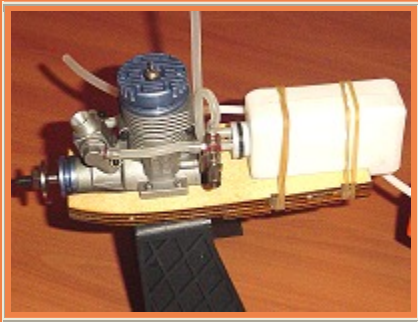
On the starboard side of the cockpit, you'll see a lever that runs to the power switch. This is a nice touch on the manufacturer's part, and allows you to flip the electronics on and off without having to remove the cover. In addition, the on and off directions are clearly marked, making using the switch even easier. This was a great addition to the boat on the part of Aquacraft.

The cockpit cover itself is made of lexan and, as mentioned before, has a realistic pilot inside it. However, the underside of the cover bears some mentioning as well. To help seal it against the spray and moisture coming from the front of the boat, Aquacraft sealed the cover with some foam weather-stripping. While it's possible that some moisture may still find its way in the electronics area, as is the case with all boats, this should help to cut down on the chances tremendously.

The radio that's included with the Air Force is labeled Aquacraft. However, just as with the rest of the electronics, it's manufactured by Futaba. It's an AM unit that operates in the 75MHz range. The boat is offered in six different versions, each one with a separate frequency channel installed. The channels offered are: 62, 64, 68, 70, 72 and 74. Of course, should the need arise to use a different channel, additional crystals are available.

The radio itself is basic, but should give you all you'll need to get started and run the Aquacraft. The radio does include a dual-rate function which is a nice touch. Given that the airboat has a rather large motor mounted on the engine pod above it, you might want the ability to decrease your turning radius if the water is a little choppy. This is easily accomplished with the dual-rate knob located at the back of the radio. In addition, a built in charging jack will allow you to recharge your batteries without the need to remove them from the radio.

Motor Pod



.46 Motor

Motor Pod Angle

Finally we arrive at the heart of the Aquacraft Air Force, the .46 cubic inch motor. The motor pod arrives in a detached state from the rest of the boat, and will require a small amount of work to prepare it for action. However, any steps taken for this are not very time consuming at all.

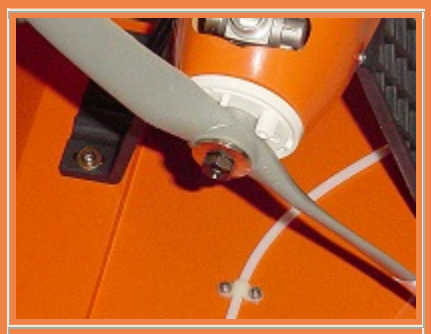
The motor pod itself sits up on plastic towers, and is covered by a fiberglass shell for aesthetic reasons. A flat, finned motor head sticks out of the top of the fiberglass shell. The glow plug rises from the head and is easily reached. On the starboard side of the motor pod, the muffler routes spent exhaust gases to the rear of the boat after they make their way out of the motor. Directly opposite of that, on the port side, you can see the high speed needle. The needle is easily reached in case the need arises for adjustments. A plugged line exiting the fiberglass shell from behind the motor is used to fuel the boat with the help of a fuel pump.

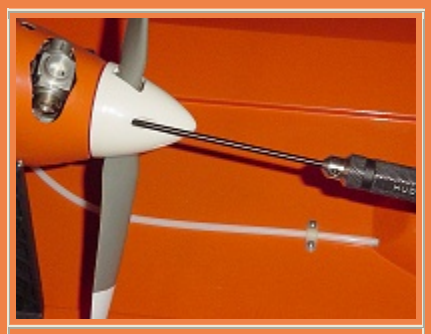
With the fiberglass shell removed, you can get a much better look at the .46ci motor that powers the Air Force. The motor is fed via an aluminum bodied carburetor, which is fed by a 120cc fuel tank. All of these components are mounted onto a wooden base, which serves as the foundation, and holds everything together.

I should also point out, that the motor pod is not mounted on the boat perfectly centered. So don't feel as if you

have something wrong with your boat if you notice the odd angle. The pod itself is angled to counteract the torque of the motor. This should be kept in mind, especially if you pick up the ARR (Almost Ready to Run) version of the boat. The ARR version comes without a motor, and requires that you mount the base of the motor pod in a way that provides this offset angle. A template is provided with the ARR version of the boat to assist you with this. As the RTR (Ready to Run) version of the Air Force comes with the motor installed, this angle is already achieved. You'll simply need to mount the pod onto the boat itself using the supplied screws.

Mount Motor Pod


Propeller


Nose Cone

Getting the motor pod and propeller mounted is the biggest items you'll tackle in the preparation phase of readying the Air Force for use. The first step of this is to mount the motor pod itself. Simply set it on top, and then run in the four screws supplied by Aquacraft.

To install the propeller, you must first remove the prop nut. Then install the spinner assembly's back plate, followed by the propeller. Make sure to line the propeller up with the alignment pegs on the backplate, and then replace the prop washer and nut. Tighten the nut down firmly.

Once the propeller is firmly in place, place the nose cone over the propeller. The blades should fit in the notches on the cone, and the cone should rest all of the way against the backplate. Then use the small stainless steel screws supplied by Aquacraft to hold the cone in place.

Receiver Pack

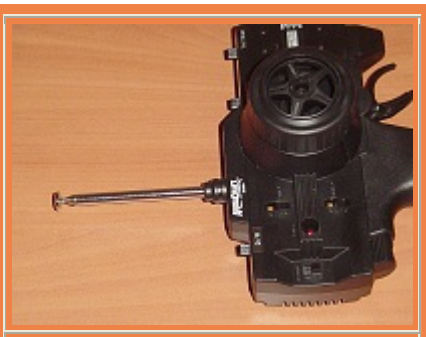
Power Switch

Decals

You'll want to supply the onboard electronics with a source of power. While you can use the supplied battery holder with four AA batteries, I opted to use a 5-cell receiver pack instead. Whatever option you take, you'll want to secure it in the electronics compartment under the rubber band. Make sure the power switch is in the off position, as you don't want to drain the receiver pack while you are readying the rest of the boat.

To round out the appearance of the Air Force, you'll want to install the supplied decals. Some of the smaller ones

will go on rather easily. However, the larger ones can be quite a bit tougher to drop into place. I recommend using some warm water with a little dishwashing soap in it. Wet the sticky side of the decal and then drop it into place. Once the decal is on the boat, you can slide it around if needed. Then, squeeze out any air bubbles with a cloth. Once the soapy water dries, the decal will stick just as good as if it were installed dry. Without the soap and water mix you'd have to try and peel it back up if the decal wasn't straight, often the result would be a torn or stretched decal.



Radio Antenna

Radio Batteries

Fuel

The radio comes without the antenna installed, so drop it into its respective hole on the top of the radio. Then simply twist it clockwise to tighten it down. After the antenna is installed, find yourself a set of eight good AA batteries, and put them into the radio. Once the batteries are installed, replace the cover.

Fueling the boat requires a fuel pump. A hand operated fuel pump can be picked up for around $10.00, and it's definitely a worthwhile investment with a boat like this. The Hobbico pump that I picked up to use with the boat came with some fuel line in the package. However, instead of cutting that in half, I used it solely for one side of the pump. I reached into my pitbox and grabbed some spare Dubro fuel line for the other side of the pump. This gave me a little more room to work with in regards to filling the tank. The Hobbico fuel pump also includes a filter for the inlet side, as well as a fitting to plug the boats fill line into.

After reading the manual for the Aquacraft Air Force, I knew that the first step should be a sufficient break-in period. The manual instructed me to do this on dry land, which definitely worked out much better in my book, as that way there would be no need to worry about having to retrieve the boat if it stalled due to the rich break-in settings.

You might wonder at first, why would it be acceptable to break the boat in out of the water? The answer is simple. Since the boat uses a propeller-based setup, a coolant line that runs water through the motor head is not used. Instead the propeller forces air over the motor's head as it spins, providing plenty of cooling capability. Aquacraft also knows that the break-in process can result in the motor stalling at times so, since there is no real need to run it in the water for this step, they recommend it be avoided.

To ready the Air Force for the break-in process, I first placed it on the wooden stand supplied by Aquacraft. I then looped the rope around the boats sponsons to help hold it in place so that it wouldn't glide forward when under power. After I began the break-in process though, I found I still

needed to place my pit box in front of the boat and stand as well. This was because the boat simply wanted to creep forward, dragging the stand with it, during the break-in process. I checked my needle and idle positions to ensure everything was ready for me to turn the motor over. Then I fueled the boat up with a Hobbico manual fuel pump, and primed the motor according to the instructions. After clipping on my Dubro E/Z Glo Igniter, and spinning the propeller with a homemade safety stick, the motor fired right up.

I allowed the Air Force to idle for a few minutes to get the motor up to operating temperature with minimal stress on the large engine's components. Once the motor was warmed up, I richened the high speed needle as mentioned in the manual to where it felt it gave a sluggish feel to the motor. I then operated the motor with some throttle input variations as described by Aquacraft's break-in recommendations.

The break-in process went well up until the third tank. The motor did stall a few times before that point, and sometimes was a little tough to get started again. However, with a little patience, I got it fired back up and continued the process. My only real problem occurred after refueling for the third tank. It was extremely hard to restart, and didn't seem to be pulling any fuel through the line to the carburetor. After examining the engine pod carefully, I noticed that the a piece from the gasket that seals the header and muffler together was missing. This provided a poor seal, and after replacing it with a spare, I was underway once more.

During the break-in process I did notice one other quirk with the Air Force. That was the throttle linkage seemed to have a sticky feel to it. I lived with this during the break-in process, as it was more of an annoyance than anything. However, once the break-in was completed, I delved into this issue a little further. I quickly narrowed the issue down to the cable's housing. It seems that the housing had a small crease in it right at the engine pod. I used a pair of needle nose pliers to work the crease out after removing the cable, and then had no further problems with the linkage operation at all. Since the motor pod isn't installed when the boat is in the box, I imagine the pod pulled on the cable at some point, causing the crease. It looked as if it was packed well in the box, and it's very possible I may have caused this myself when removing the boat from the box.

Once break-in was completed, I was ready to hit the water. However, it was getting late so any running on the water would have to wait for the following day, which was promising to have some perfect weather in store for me and the Aquacraft Air Force. So I packed it in and anxiously awaited the next day's festivities overnight.

When I arrived at the lake, I walked through the procedures necessary to get the Air Force up and running. Once the boat was fired up, I carried it to the water's edge for its initial launch. Regardless of exactly how you launch, you should be mindful of the propeller. Even at idle speeds it can be tough to see while spinning and it could easily slice up a finger or a hand badly. In fact, it really helps to have two people on hand for the launch. This way on person can handle the radio, while the other focuses solely on launching the boat.

Once in the water, I was amazed at how quickly the Air Force and its .46ci

motor can put some distance between itself and the radio. There's plenty of power on hand, and the boat itself is a pretty lightweight package. Together these two items always seem to provide a lot of fun, and I could tell this was going to be no exception.

I started off by driving the boat around steering rather lazily to get used to the feel of it as I turned it in one direction or the other. I knew that the boat would feel somewhat top-heavy thanks to the engine pod, but was surprised at the fact that I had anticipated it would feel much worse than it did. The boat was much more stable overall than I had first thought, and soon I was starting to carve the corners sharper, and even dialed all of the steering back in with the dual-rate knob on the top of the radio to check stability with the maximum amount of steering. Even at that point the boat still felt nice and stable enough for me on the smooth lake water.

In fact, with the dual-rate set to allow full steering, I found it real fun to enter a turn off throttle, and then steer into the turn while pegging the throttle. This gave the boat a characteristic oversteer feel. It was cool to watch, and even more fun to drive in this manner, as the Air Force carved its way through the water feeling more like a dirt-oval racer than a boat. This form of "drifting" in the water made for an excellent way to enter a turn when I was making laps around the pier at the lake as well. I used a marker in the water as a turning point and, after some practice, I soon had myself able to cut the corner off very sharply using this method. Immediately after entering the corner, the Aquacraft Air Force was headed the opposite direction and speeding away.

The agility of the boat simply continued to surprise me as the day wore on. I just wasn't simply prepared for how well it would maneuver through the water. The .46ci motor is no lightweight in regards to power or weight, but Aquacraft obviously took that into consideration when they designed the boat and the result was speaking for itself. You had to push the boat pretty hard, in regards to both speed and turning, before it felt as if the boat was beginning to lean too much, and be in danger of tipping over. Usually this involved wide open runs across the lake, followed by a sharp turn at speed. You would see the boat start to wiggle, telling you to immediately back off the throttle and regain control.

I enjoyed watching the Air Force slice through the water so much, that I eventually took the kayak out to get closer to the action. With the boat being piloted from shore, and myself on the water up close and personal with a camera, the power and agility of the boat looked even more impressive. With the airplane-style of propulsion in use, instead of a submerged propeller, the Air Force enjoyed rapid changes of directions and speed. It did not suffer the momentary delay that often accompanies a submerged boat-style propeller, as it waits for the water to cover the propeller after sudden throttle and direction changes. This simply made the boat feel as if it was gliding across the top of the water, more so that riding in it. I liken it to a cross between a swamp buggy and a hydroplane!

The Air Force itself has a somewhat rear squat-like stance in the water, especially under power. The front of the boat tended to ride up out of the water once the boat was moving, causing less drag in the water, and increasing the steering capabilities of the boat. However, at no time did this

stance ever feel like it compromised anything in regards to stability or handling. Instead it helps continue the feeling that the boat is riding along the surface of the water instead of in it.

If the boat has one real weakness, it would be runtime. The .46 motor provides plenty of power, and gets the boat moving in a hurry. However, the large-displacement motor does have an appetite for fuel, and can empty the tank quickly. Expect to see runtimes in the 7-9 minute rage, depending upon your throttle finger's habits. While the shorter runtime would be a big issue with a land-based vehicle, refueling does take a little more time when we are talking about a boat. First you must return to shore then, due to the tank's design, you'll need to hook up the fuel pump. I also found it necessary to point the nose of the boat up some to get the tank close to full. With the boat sitting horizontal, the fuel would start running through the pressure line before the tank was full, preventing me from getting use of the complete tank. However, the time spent fueling was more than made up for once the boat re-entered the water, signaling the arrival of more action!

I should also mention that the electronics box under the cockpit cover stayed perfectly dry during the time I spent with the Air Force in case you are curious. I expected to see a little moisture under the lid after the day was over, but I found none at all. A little moisture is normal, and not considered a problem at all. However, the Aquacraft Air Force simply shattered that line of thought, and showed how well an electronics box should truly work, both in convenience and the ability to repel moisture. All of this was topped off with a realistic looking person sitting in the cockpit that got the ride of his life once I had the Aquacraft Air Force out on the water!

See the Air Force .46 in action!
Resolution: Low Medium High

Piloting the Air Force around one of my local lakes has certainly proved to be an enormous amount of fun. It also held a few surprises, as I had initially expected the boat to be a little less nimble than it was once I had it on the water. The propeller-based setup that the airboat uses will undoubtedly be right up the alley of any airplane guys, and was very easy to work with overall.

All of the items on the Air Force worked well, and most people will get by with the factory radio perfectly fine. In the long run though, a 5-cell receiver pack, and some AA-sized NiMH cells for the radio, would save you some money over alkalines. Other than that I would be hard-pressed to change much of anything on the Air Force,

instead opting to enjoy it just as it is when it's pulled out of the box.

Aquacraft has produced a nice and nimble boat, that's a total blast to drive around the lake whenever you might get the chance. The .46ci motor provides plenty of power when it comes to zipping across the water, and its fun watching the back end drift through any corners you carve in the water. So if you're looking for some fun at the waterfront, it simply doesn't get any better than this.

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