

Hobbico FlyZone J-3 Cub

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The Piper J-3 Cub is a familiar classic, and this one looks great! Sport Aviator has reviewed so many J-3 Cub models over the last few years that I have to wonder if it is now part of the Piper Company! (*Ed Note: We still belong to AMA unless Piper makes a really great offer.*) That is because the venerable Cub, with its large wing, gentle handling characteristics and very light wing loading is a most practicable second airplane.

The Hobbico version has a wingspan of 36 inches and a fuselage length of 26 inches. Its weight and semi-symmetrical wing make it a pleasant cruiser for a reasonably experienced newer pilot. Its size allows it to be carried in even small cars in one piece and its foam construction is rugged – a good feature for newer pilots. If you have a good grip on a trainer, and want a scale Park Pilot airplane, this could be a good choice. It looks great on the ground and in the air. Flight characteristics are scale-like.

Even better, The Piper J-3 Cub meets all the aircraft requirements of the Academy of Model Aeronautics' (AMA) Park Pilot Program. The aircraft weighs less than 2 pounds (the Program's upper weight limit) and has a level top speed under 60 mph (the Program's upper speed limit). For complete Park Pilot aircraft details, [follow this link](#).

The AMA Park Pilot Program offers non-AMA members the opportunity to become AMA members at a much reduced cost. Park Pilot membership includes a great magazine "Park Pilot", \$500,000 personal liability insurance, \$2.5 million liability insurance for the flying field owner ([see insurance details](#)) and membership in the world's largest sport aviation association – the AMA. For complete information and details about Park Pilot membership, just [click here](#).

The FlyZone J-3 Cub, unlike most other Cubs offered in this class, has ailerons for roll control. Having all four channels operating, aileron, elevator, rudder and throttle, is unusual for an airplane this size and makes this Cub as maneuverable as any glow-powered sport airplane. Having both ailerons and rudder control opens this aircraft's flight options to the maximum.



The FlyZone J-3 Cub is a true Ready-To-Fly (RTF) system. Packed in the box are the completed airframe, a “380-size” electric motor, a 15-amp Electronic Speed Controller (ESC), on-off switch, an 1100 mAh 7-cell Ni-MH battery, a 12-volt peak detection charger, and a 4-channel radio system on a 72 MHz frequency. All hardware is also included. It’s really complete including an extra 7 x 3 in. propeller!



(Photos courtesy of Hobbico)

The Tactic transmitter is equipped with a trainer switch and a space for a Futaba trainer cord. The trainer cord is the Futaba Micro to Micro Plug Trainer cord (FUTM4415). This cord is only compatible with Futaba or Tactic transmitters. The Tactic micro-servos have no published specifications I could find but performed well even under high speed use.

The airplane goes together easily in an evening. When packaged, the wheels of the Cub are supposed to be tie-wrapped to the bottom of the box to secure the Cub fuselage. Upon opening the box, I saw that both wheels had come loose from the ties, allowing the fuselage to flop around in the box. I was pleasantly surprised (and lucky) to find no damage. Everything else was packed securely and in good condition. The Instruction Booklet is excellent, has good photos, and lots of worthwhile information.



Assembly

The Instruction Booklet covers all the construction steps very well (such as they are in an RTF) with photos and text. It doesn’t have many pages, because there isn’t much for you to do. (Nice). All the parts are built, painted

and decal right out of the box. The motor, speed controller, and switch are already installed. The rudder and elevator servos and linkage are also factory installed. The wing has the aileron servo and linkage already installed. The metal landing gear assembly, with wheels mounted, is installed. There is just a bit of work left.

The stabilizer/elevator and the fin/rudder units are both assembled, using a wide, U-shaped bolt, into a single unit. That assembly then bolts on to the fuselage as a single unit with the same U shape bolt. A wrench is supplied for the two 4mm nuts that secure the tail assembly to the fuselage.

The supplied 1 1/4-inch wheels will be fine on paved runways, but are way too small for typical grass fields. I think most landings on a grass runway would result in a flip over using the small wheels. I replaced them with Dave Brown's Electric Fly 1 3/4-inch wheels. All the photos are with the larger wheels.

Clip eight AA batteries into the back of the transmitter. (An optional rechargeable transmitter battery is available, FUTM1450 Transmitter NiCd 9.6V 500MAh.) This option might be a good one if you plan to be flying the Cub a lot.



Upon trying to mount the wing into the fuselage on my model, the aileron horns hit the rear wing hold down block. There are notches in the block to provide clearance, but they are not large enough.



I used a high-speed rotary tool to enlarge the notches. A razor saw would also work. The paper towel is to keep plastic shavings out of the fuselage. The trailing edge of the wing needed a bit of sanding to fit. Photo 7 shows the enlarged notches and the wing ready to fit. The white area is the sanded part of the wing trailing edge. Once the notches and sanding are done, install the wing bolts on properly. Then add the wing struts. The small arrow marks molded into the plastic struts must point forward.

Ed Note: Hobbico has informed us that they have fixed this problem at the factory. Ron's J-Cub sample was one of the first produced. The problem has since been fixed and all production models have wings that fit without modifications.



As seen in photo 8, the wings, stabilizer and fin lined up nicely. It is important to insure that the stabilizer and wing are parallel. If not, the airplane will try to roll each time the elevator is moved.

Adjust each control surface travel using the specifications noted in the Instruction Booklet. I had to increase throw on all surfaces to get the amount specified. The specified throws proved about right for the scale character of this model. Check and double check that all surfaces move in the correct direction.

Check the balance point ([Center of Gravity](#) [CG]). This model came out just a touch tail heavy which is not surprising. Many scale airplanes such as the Cub have relatively short noses and tend to be tail heavy. I hate adding weight, but it beats trying to fly a tail heavy model. (The life span of a tail heavy model is likely to be short!) This model required only 1/4 ounce in the nose to get the balance point in the recommended range of 1 1/2 to 1 3/4 inches behind the leading edge of the wing.



(Photo courtesy of Hobbico)

The 1100 mAh Ni-MH battery fits neatly into a hatch in the fuselage bottom. It is not necessary to remove the wing just to change the battery. This is a nice feature. The battery can be discharged at up to a 3-amp rate which represents a maximum 2.7C (C = capacity) discharge rate. That is a fairly high discharge rate for this type airplane.

Flying



Keep in mind, the Cub's radio is on a 72 MHz radio frequency. 72 MHz frequencies (Channels) are the exact same ones as used at RC flying sites. One of the many benefits of joining an AMA club is the frequency control system. If you are within 3 miles or so of another model on the same channel, both models may suffer interference. Keep that in mind every time you turn on your transmitter. Do a radio range check, with motor off and on, as described in the Instruction Manual.

Since this is a Park Pilot airplane, the temptation is to stop at every small field you pass and start flying. But if your "Park" field is near a standard size RC airfield, fly at the regular field instead. The club using that field will be happy to work with you and maybe even help trim out your Cub for its first flights. A trimmed airplane is much easier to fly, especially for a new RC pilot. If other modelers are flying in the same Park you are, get together, form a club, join the [Park Pilot Program](#) and develop your flying site into an AMA insured (\$2.5 million) model field.

Moving back to the Cub, it's getting to be flight time. Charge the Ni-MH battery as described in the instructions. Use the frequency control system for your channel if you are at an RC field. The Instruction Booklet recommends flying when wind is 5mph or less, which I found a good rule of thumb.

Since I fly from a grass field, I hand launched the Cub. With full throttle and a brisk push into the wind, the Cub flies away nicely. An overly forceful launch is not required. It's more important to get the launch straight and about 5 degrees nose up. For the first flight, getting an experienced pilot to test fly your Cub, and a second experienced person to hand launch it, is a good idea. (*Ed. Note: No, it is not a good idea, it is a GREAT IDEA.*) Once you have a couple of flights on the Cub and it is trimmed for level flight, you can hand launch yourself.



Normal cruise flight is pleasant and realistic at half to three quarter throttle. Fly bys look great!

If your flying skills are up to coordinating rudder and ailerons for turns, the FlyZone Cub (like a full size Cub) will respond with crisper and more precise turns. How about aerobatics? If you are comfortable with loop and rolls, the Cub can do them, in a scale-like manner.

Loops can be done with full size technique. From cruise flight, nose down about 30 degrees, go to full throttle for added speed, then pull up into a medium size loop. If the wings are level when you start the pull up, you get a nice loop. Airspeed will be low at the top, just like a full size Cub.

For your first aileron roll with this airplane, make sure you have fairly high airspeed, and enough altitude to recover if it doesn't go well. With good air speed and technique, the Cub will roll at a relaxed Cub-like rate. It will also spin. The airplane recovers by releasing the spin controls, and letting it drop into a dive, followed by a gentle nose up to level flight. The recovery takes some altitude, so if you venture into this area, start high.



Keep a bit of power on during landing approaches and maintain a moderate airspeed. This Cub is not a floater. While still a couple of feet high, reduce throttle to a bit above idle and it will settle nicely. A hint on flying the approach to a landing with the Cub (or most any model for that matter); do not allow the nose to come up high enough for you to see the bottom of the wing. If you're seeing the wing's underside at low power and low speed, the airplane is slowing down. It will likely [stall](#). Don't try to make large corrections while low and slow. Plan ahead, and make a Go-Around before things get too difficult.



With full throttle take off, climb and general cruising at 50 to 75% throttle, I found flight duration around 7 minutes. Dead stick landings require the nose to be a bit down to keep sufficient airspeed. It's best to plan your flight times so you have enough battery left to land under power, and make a go-around if the approach is not a good one. This Cub is a pleasant and realistic scale airplane. Enjoy!

For more information about this scale Park Pilot airplane, go to: <http://www.flyzoneplanes.com/airplanes/hcaa24.html>

Specifications

Manufacturer: Hobbico FlyZone	Length: 26 in.
Cost: \$150.00	Wingspan: 36 in.
Radio: Tactic 4- Channel	Wing Area: 190 sq. in.
Servos: 3 x Tactic Micro	Wing Loading: 15.75 oz./sq. ft.
Motor: 380 Brushed	Weight: 20.75 oz.
Airfoil: Semi-Symmetrical	

Special Airframe Features: One piece wing, Extra Propeller, Factory Assembled.

Notable Positives

High quality, pre-built components
Extremely fast assembly
Very good looks
Everything factory installed
Good scale-like flight performance

Notable Negatives

Wing hold down blocks wrong size - Since fixed by Hobbico
Wheels too small for grass runway
Needed nose weight and larger wheels increased weight

Making A Good Airplane Even Better

First, here is a suggestion on tools: The hardware in the kit uses Japanese Philips head screws. A "JIS" or "Japanese Industrial Standard" Philips screwdriver will make installation of the screws easier. JIS screwdrivers are a better fit in the screws used in most of the typical RC equipment we use and are a nice addition to your tool kit. Most RTF airplanes available today are made in Asia and use JIS hardware.

For those interested in modifying and improving their FlyZone J-3 Cub, and accepting some risk for this improved performance, here is a thought. The Cub flies well as it comes from the box. But...less weight and more power are almost always welcome in any airplane.

Replacing the provided Ni-MH 7 cell, 8.4V, 1100Mah, 5.25 ounce battery with a Lithium Polymer (Li-Po) battery such as Great Planes ElectriFly BP 3 cell, 910Mah, 11.1v, 2.9 ounce battery will provide a noticeable increase in performance and flight times.

I've tried it, and found the Cub is a bit more comfortable during low speed fly bys, and landing speed is reduced. Climb out from hand launches and "go-arounds" are better. Loops are now possible from level flight without diving first.

To install the LiPo, some of the foam lining of the existing battery compartment and a bit of plastic frame will have to be carved out. Place it in the forward end of the compartment to maintain the correct balance point. There are some cautions. Li-Po batteries require extra care and a charger specifically designed for Li-Po's. The Triton 2 and Triton Jr. Chargers are excellent examples.

Read up on Li-Pos before deciding on this change. Additionally, I don't know how long the motor will tolerate the increased power. Amp draw is up from about 9A with the Ni-MH, to nearly 11A with the 3 cell LiPo. Maximum RPM is up from about 8,900 to 9,800. The ESC is rated at 15A, so it's reasonable to think it will be OK.

While this is a major modification, the increased performance is worth it. But the pilot must be familiar with Li-Po care and feeding before making this change.

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