

Beginners Guide to Radio Control Airplanes

by [nickademuss](#) on January 27, 2009

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Intro: Beginners Guide to Radio Control Airplanes

This instructable is intended to familiarize you with the basic workings of Radio controlled aircraft. It is not a complete guide to everything about the subject, its intended to inform the reader on what is involved and help you choose the right aircraft for you.

I grew up around this hobby, my Dad built and sold them back then. Me and him fly them when we get the chance. His airplanes will be pictured here as well as mine. Together we have more than 35 years of tinker time with this hobby.

Its both a relaxing and exciting hobby.

I must also warn you its addictive and don't worry we all crash our aircraft, but if you start out with the right trainer and simulator you will repair and fly again.

First a crash course in what the types of aircraft have in common.



step 1: Common to all types of RC airplanes-Radio

First before you choose the type of airplane you want to build and fly, lets go over what is common to most RC airplanes.

The radio transmitter and receiver : This is your link to the aircraft never scrimp when it comes to the radio, if it glitches you can crash or worse hurt someone. Radios come with two or more channels, the channels are also not what you think, they are *not* separate frequencies, instead they are each control. Most airplanes have 4 channels, rudder, ailerons, throttle and elevator. Sailplanes have just two or three. Radio transmitters are also on several radio frequencies and are set by the user by changing the matching crystals in the transmitter and receiver. Unless you have a newer radio that uses ultra high frequencies in the 2.4 gigahertz range, these radio's do not require crystals.

The radio receiver on gas powered aircraft is powered by a rechargeable battery, on an electric it can be powered by the same battery that powers the propeller threw a battery eliminator circuit.

The power is usually 4.6 to 6volts.

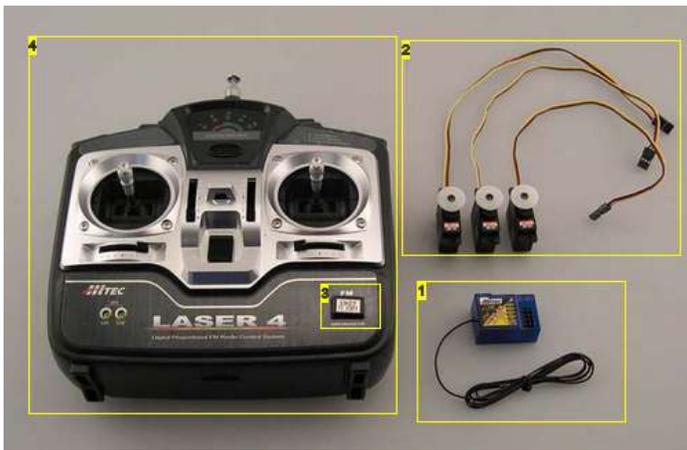
I have used several brands, most were good, as long as its a name brand one like Futaba, Airtronics, HiTec, or Tower hobbies (made by Futaba).

Its also a good idea if you plan on having more than one airplane you can get an extra receiver on the same frequency and use one radio with several airplanes. This is what I do, I have a programmable radio with six memories so I can switch between them. I simply bought a receiver for each airplane, much cheaper than another radio.



Image Notes

1. receiver, the thin wire is the antenna
2. servo's
3. crystal



4. analog radio transmitter no memory to switch between models. 4 channel



Image Notes

1. Digital transmitter with 6 channels, the extra channels can control landing gears, air brakes, bomb releases, smoke, or landing flaps.



Image Notes

1. 4 channel receiver, note that channel 4/B is where the battery is also connected through a Y-cable

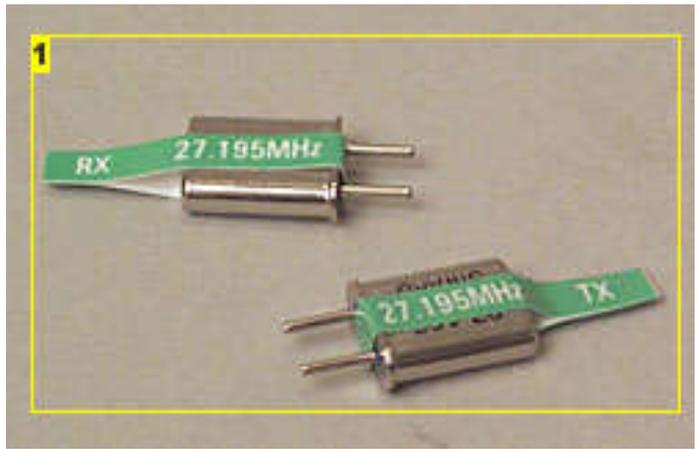


Image Notes

1. Receiver (RX) crystal and Transmitter (TX) crystal.

step 2: Common to all types of RC airplanes-Servo's

Servo's: The strong geared electric motor used to make the flaps, rudder and throttle work. These come in several sizes and are rated by how much torque they can produce. They plug into the receiver via a three conductor wire.

They are proportional, meaning that if you move the control stick just a fraction of an inch the control surface moves just a fraction of an inch, like wise move the control allot and the surfaces move allot.

The top part of the servo has a "horn" that you can attach the push rods to.

This set up provides the motion for moving everything on your airplane from the throttle to the rudder. Pictured below is a straightforward setup where the throttle servo is up top is pushing a plastic flexible type push rod. The center servo is controlling the rudder and the bottom servo is connected to the elevator.

Like the radio I would stick with a good brand and I test them before installing them into the aircraft by actuating them for several minutes while shaking them in my hand. If they glitch during this test return it for a new one.

For most gas powered aircraft you will use the standard size to high torque, the electric use micro or nano sized servo's that weigh a few ounces.



Image Notes

- 1. Throttle servo
- 2. Rudder Servo
- 3. Elevator servo
- 4. Radio receiver



Image Notes

- 1. servo horn: most servo's come with several kinds of horns for many applications.

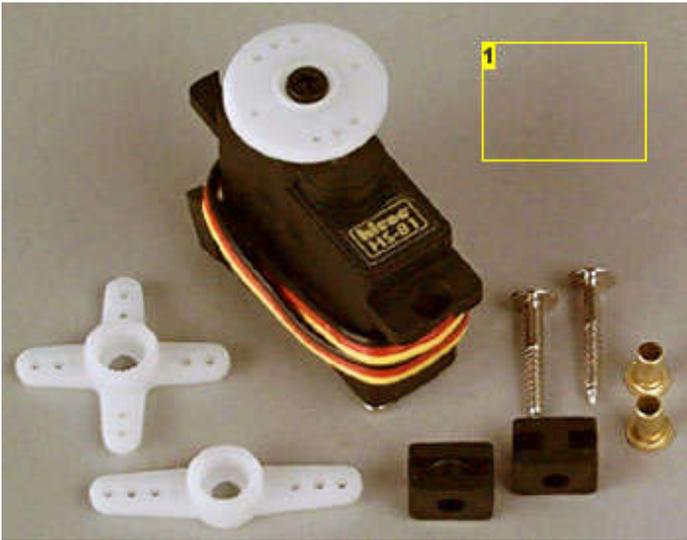


Image Notes

- 1. micro servo with hardware kit.

step 3: Control's

The direction you move the control sticks needs to be the same for everything you try to fly so you don't have to teach yourself a new aircraft every time.

Below is a diagram showing what stick controls what.

If you stay with this set up you will be able to keep graduating up to larger more maneuverable aircraft.



step 5: Choosing what will power your airplane, Fuel?

Nitro or Gas powered are the "Kings" of the RC airplane world, real airplanes burn fuel and so do these. Most common are two cycle high RPM engines will enough power to get the job done twice. Other are gasoline burning and 4 stroke.

Pro's: large scale airframes, longer flight times, engines as cheap as some batteries(Li-Po), the sound is cool, kits are very cheap, extra power means more detail on airframe like retractable landing gears, Larger frames not as bad to fly in light winds.

Cons: Noisy, oily, engine maintenance, high speed of some means hard to control, larger take off area, takes up allot more room in your car, complicated build, need more support equipment.

Most of the gas planes are 2 cycle glow fuel powered, they use a spacial fuel available at most real hobby stores in quart to gallon size bottles. Its a nitro-methane alcohol, oil mixture that lubricates these engines as they run. The fuel also comes in different nitro-methane content such as 10% to 35% nitro. As you guessed more Nitro is more power. Just don't get carried away with it, you can burn up a motor with too much nitro.

These engines are called glow engines because they use a small glow plug to maintain the spark for ignition. you simply use a battery to heat it up and start the engine.

There are also 4 stroke engines that use the same fuel, they have valves just like a car engine, the big advantage is more torque for bigger propellers, and better fuel economy. The down side is price and a few more engine parts to worry about adjustment and breaking.

Most engines also require you break them in when they are new, if you just start running them out of the box the parts will heat up to fast and wear out way to fast. Most of the break in procedure will be in the instructions that come with the engine and is a simple process of running the engine very rich for a few tanks of idle running to full throttle running for a whole tank, just make sure you follow the instructions and the engine will last for a long time.

These engine do not require a fuel pump as the exhaust gas pressure is piped into the fuel tank to push the fuel into the carburetor

Starting involves attaching the glow starter, and turning the engine over using the starter motor.

These engines are strong and dangerous, you can lose a finger or two, if you make a mistake. The propellers turn so fast they disappear, so use caution.



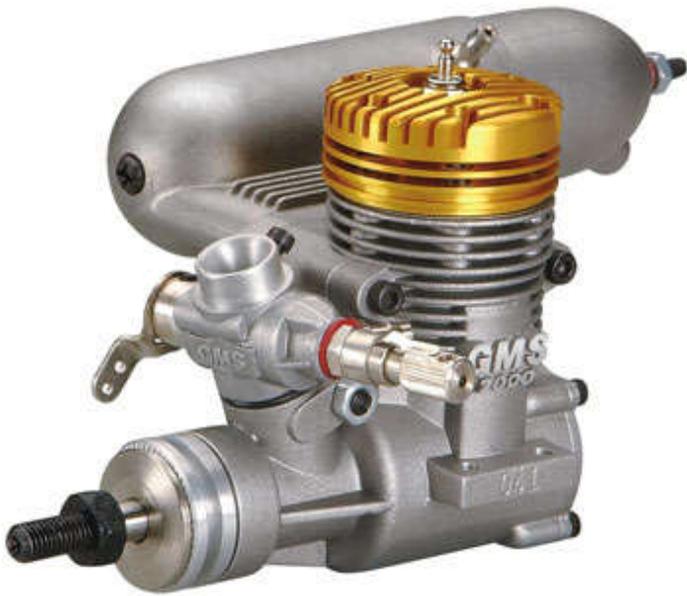


Image Notes

1. this is the heater wire that will glow when power is applied
2. Glow plug, always keep a few of these around, you can burn one out if your new to the hobby, usually running the engine to lean.



Image Notes

1. 1.2v nicad rechargeable glow plug starter



Image Notes

1. 12 volt starter, this one can connect to your cars battery or you can hook it to a field box.



step 8: The Trainer

A good trainer needs to have stable flight characteristics, it must be predictable, and have the ability to fly slowly for quick takeoffs and slow landings. My first real RC airplane was the corrugated plastic airplane Aircore 40

It has a high wing so it naturally tried to level itself in flight, it also has a tricycle style landing gear, they steer so much better on the ground than a tail dragger.

The best and most important part is that its made from coroplast a flexible plastic that looks like corrugated cardboard. My first flight attempt with it I crashed on takeoff. Had it been a Balsa or foam airplane it would of cracked up and required many hours of repair. I only needed to put on a new \$2.00 propeller. After I got it in the air I landed so hard that I broke another \$2.00 propeller, not the whole aircraft.

you will also notice that the wing and the main landing gear are held on by rubber bands, this lets those parts pop off in a crash instead of breaking the fuselage. Other aircraft use plastic bolts as well, They are a good alternative to rubber bands.

Remember its a trainer, not a stunt plane or a work of art, its suppose to fly not look that good.

The other trainer below is representative of most balsa trainers, sturdy, light and cheap, under \$75.00 for the airframe itself, but its a long build lots of gluing and wing covering.

Electrics offer nice slow flight, you just need to get one that will have the same controls as a larger one. That is the throttle elevator rudder and flaps need to be on the standard places. Many small ready to fly toy planes will help you get your bearings and practice before you take the plunge with a large one.



Image Notes

1. hard landing, but the gear just folded up with no damage because its held on with rubber bands



Image Notes

1. Great Planes PT-20

step 9: Training Programs

There are only a few RC aircraft trainers out there and only one free one that I know of. That one is called FMS

It's a good one to practice on and comes with a few trainers. You can also download several from the net just do a bit of searching.

For those who want to get a better looking one try Real Flight, I have used it and it will help you get into the air very well, it's just expensive, but it does come with a controller.

Many radios from Futaba and other also offer a port on the back of them for a USB cable so you can use your own radio with these programs to train with. I strongly recommend it.

Another program is ClearView.

You can also check Ebay for combos of controllers and FMS for under \$30.00



step 10: HELP!

Building and flying your airplane can be a challenge, I recommend looking on the net for local RC clubs and finding an AMA approved flying location.

This way you can get the AMA membership and be insured. Most fields also have many fliers willing to teach you how to fly and to check out your work. It always pays to let a second or third pair of eyes look over your work. They may spot a potential problem before you get off the ground.

You can also learn a great deal about the hobby from watching others,



Image Notes

1. My Dad's scale Cessna 182 with an 81" wingspan. Covered in balsa sheet not plastic.

step 11: Construction Part 1

So you have made the choice, and decided to build an airplane. If your planning on building one from plastic like the Aircore Your gonna be flying in a couple of weekends because the kit builds fast using contact cement or super glue.

If your going to make a Balsa airplane (in my opinion they fly better because they are stiffer and lighter), it will be a few weeks of building but you will have fun working with the wood. Its super light and most kits from Great planes or Topflight have good instructions. You will need a large flat surface to build on, and a scrap piece of 1/2" drywall board to "pin" your parts to and glue.

Pictured below is one of my aircraft a Great planes SlowPok e kit not a good trainer but it shows you what a larger 62" wingspan aircraft has under the skin.

The Skin is called MonoKoaat a very tough plastic you iron to the aircraft using a small iron. The plastic has a special glue on one side that's heat activated and the plastic shrinks when you heat it. That way you can drape the plastic over your parts and with time and practice shrink it down to a nice strong fit. To me its the funnest part of the build.





step 12: Construction part 2

Electrics build the same as gas with a few exceptions, no provision for fuel tanks, no throttle servo(replaced with motor speed controller or ESC), and a different kind of engine mount.

You may have chosen a foam airplane, they build very fast, but usually are not very big. like the smaller one in the pic below with a 32" wingspan.

You however will not be able to fly a small one like this in any kind of wind or from grass runways.

A good thing to remember as well about electrics they are small so if your eyesight isn't that good you can go too high and "lose" top from bottom. You can avoid this with as large a plane as you can afford and make sure your wing bottoms are not blue like the sky!

Real war birds like the Spitfire were blue on the bottom to make it hard for anti-aircraft gunners to see, but a model like that needs something on the bottom to break up the blue.



Image Notes

1. Great Planes Basic Light Trainer Park Flyer Kit 42"



step 13: Radio installation

installing the electronics should be done very carefully and to your radio manufactures instructions. Below is a typical diagram of how its all wired together.

Also your antenna is just a wire and is not very sturdy, I either run mine inside the aircraft away from any metal, or if the airplane is small, I run it outside securing it with tape to the top of the tale.

Most servo kits come with isolation pads to keep the engine vibration from damaging the servo, always use them, a stuck servo could really ruin your day.

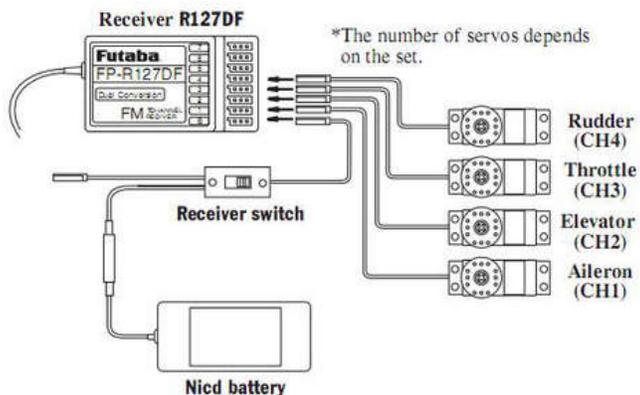


Image Notes

1. run the antenna away from the metal push rods to keep from having radio glitches
2. zip tie all loose wiring, you don't want it coming loose mid flight.

step 14: Pre flight checks and radio test

You should always go over your aircraft before each flight, the radio range test should be done at least once before a days flying.

if your using a FM radio one with a long antenna keep the antenna down on your transmitter and walk at least 100ft away from the airplane, you should have jitter free operation, if you don't, fix it before you fly. Do the test with it running and move around the airplane to make sure you don't have a blind spot.

If your using a new digital radio, follow the manufactures recommendations.

Most of the radio glitches I have seen were from very long servo leads, you can get a noise filter or choke for that at the hobby store. Make sure you check all your linkages and again it helps to have someone look over your shoulder.

I also make sure my fuel lines are good and tight, on an electric make sure the battery is secure.

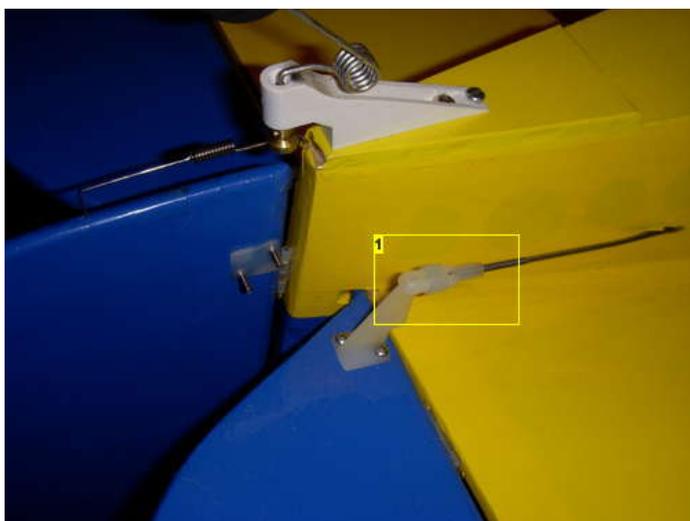


Image Notes

1. make sure the clevises are snapped and tight before flight

step 15: Flight!

We all got nervous the first time we flew a creation we spent a lot of time on, I can't stress enough that if you build a tough airplane your crashes or scrapes won't be so bad. Below you will see the Aircore trainer flown by my dad taking off and his Cessna in flight and the Slowpoke.

Your take off should not be a jam the throttle wide open and scream into the air kind of flight. Slowly increase the throttle to full and let the aircraft climb out slowly and make gentle banking turns.

On your first flight you should not try anything remotely aerobatic, you should climb to a good altitude and fly in slow circles around the area maintaining your altitude.

You should also make a few practice approaches setting yourself up for the landing. Be aware of how long your flight has been.

Gas aircraft just cruising around can do so for up to 20 minutes depending on how much fuel you carry. I recommend trying to land for the first time long before that happens in case you need to circle around for another try.



step 16: You can fly and land now? take it a bit further!

After making several good flights without incident, take off and climb to a good altitude and try a loop, most trainers will do at least a loop.

You can also do a roll, but on most trainers rolls are slow and you lose altitude rapidly.

You may after a while start to look for faster more maneuverable airplanes, The great planes Reactor is a good one for insane flying, with the proper engine it will go where you point it, and the roll rates are incredible, the one picture is my dad's and has a .60 on it. The reactor also glides very well and will also fly very slowly.

When I wanted to take the next step I built the Aircore Colt, a plastic low wing stunt plane with a .46 engine. decent climb and roll rates a good starter for learning aerobatics, like my other trainer, it has been crashed as well, but lived on to fly again and again. Its the red and white one being fueled.

My first Balsa airplane was the Slowpoke, a odd little plane with a huge wing, takes off almost instantly and flies very slowly if you want to. landing are so easy with this airplane, its roll rates aren't the best but it will do very tight loops.



step 17: Scale aircraft

Scale aircraft require a lot of time to build and can cost a lot more than a simple trainer, but they are the most realistic aircraft next to the real thing.

You can spend months on one kit if you want to go the extra step in detail.

Pictured below is dad's Spitfire, a .60 powered war bird with working retracts, landing flaps, and a full cockpit.

The Cessna 182 also below has full working flaps, landing lights and a cockpit installed.

Most scale planes are on the heavy side, you need a lot of speed to get them off the ground, so they are not for the first-time flier. The Cessna was modeled after an easy-to-fly airplane so it's easy to fly, but not very aerobatic.





step 18: Conversions

A **conversion** aircraft is one that started as electric and is now gas powered, pictured below is a Wattage electric Crazy 8 converted to gas. I used a .10 engine and made my own brass fuel tank.

I done this because I wanted a gas airplane that I could fit in the car without taking it apart.

Its highly maneuverable the little .10 having plenty of power for an aircraft that weights on 28oz!

The other conversion is a friends little electric Cessna it also has a .10 engine on it, seen here in flight

He simply epoxied a 1/4" firewall in the nose mounted the engine and added a throttle servo and fuel tank. It has flown very well.



step 19: Gasser's

A **Gasser** is an aircraft powered by a gasoline burning engine, these planes are large and sometimes use a Weedeater motor, like my Piper cub

And my dads biplane, his is powered by an 18cc Weedeater engine and mine a 25cc Homelite.

These were home built from the ground up, so they are for the advanced flier.

They are also large aircraft, hard to transport if you don't have a truck or van.

The major advantage is the really long flight times that a Gasser has, up to 45min with a 16oz tank!

Another advantage is that they are relatively cheap to build, under \$350.00 for an eight foot wingspan cub.



step 20: Last Thoughts

Building and flying model aircraft is a challenging hobby, I have enjoyed it more than my other ones by far, but its not for everyone. if you cant take your time building things right you wont have a good time.

I would also like to recommend that you size your aircraft to your home and car, if its a hassle to move you wont fly much and your money will be wasted on a hanger queen.

Below are some pics of what me and Dad go threw when we move our aircraft.

Also first flights of an aircraft that took months to build and test can take allot out of you, see the last picture of my dad after he first flew his Cessna and safely landed it.

I hope this instructable has given you some idea of whats involved with this hobby. You really can spend a lifetime in it and never run out of idea's.

Thanks for reading and be safe,
Zachary M
Clinton, TN



Related Instructables



Foam RC Airplane by tak145



8 Ft Wingspan Coroplast RC Piper Cub flown by 25cc Weed Wacker Motor by nickademuss



Propeller Powered Skateboard by crazybuilders



Easy RC Car Controller Mod by Mr.NHRA



Building a Solar Powered R/C car by brightwhite



R/C Paradox - a pair of radio controlled duck decoys by courtney



Nitro Powered RC Hovercraft by Jnkyrdguy



Remote Controlled Barbie Jeep (video) by prabbit22m

Comments

48 comments

[Add Comment](#)



dagenius says:

Can you use one gas motor for more than one plane, just like electric? Or is it too much trouble to switch it out...

Nov 6, 2009. 5:51 PM [REPLY](#)



nickademuss says:

you sure can if you dont mind taking 4 screws loose, the servo connection, and the fuel lines, should be able to do that in about ten minutes.

Nov 9, 2009. 6:09 PM [REPLY](#)



dagenius says:
Oh, OK, thanx!

Nov 11, 2009. 1:17 PM [REPLY](#)



nickademuss says:
Your welcome!

Nov 12, 2009. 2:53 PM [REPLY](#)



tchang2010 says:
Hey nickademuss thanks for your reply and suggestions. I will take a look at it.
Thanks

Sep 15, 2009. 5:31 PM [REPLY](#)



tchang2010 says:
i'm a beginner for this rc stuff. i don't really know about connecting wires or gas tube. which one is easier to work with, between gas engine and the brushless motor??? right now i have the brushless motor, and still wait for the servos to come and test my it out...i think i might try to go with the gas engine... can you give me some advice about what kind of engine i should buy and where i should get it...(for an airplane)

Sep 8, 2009. 11:27 AM [REPLY](#)



nickademuss says:
good question!

Sep 11, 2009. 8:56 PM [REPLY](#)

In the past glow engines used to be a bit of a pain to work with, but now they are very easy to deal with. You will attain a higher power to weight ratio with the glow engine on the right fuel. All new engines come with detail instructions on how to hook them up and tune them properly. You will need patients and must take your time in the initial setup .

As far as what is easier, I would say the electric is easier to get into, but the price will be higher for the batteries and performance will lack a little. I know that some will doubt it, but I can gas and go over and over keeping my aircraft in the air allot longer than the electrics.

Gas ones will need more space as the aircraft are faster and larger, but not any more expensive. My 64" wingspan Slow Poke stunt plane kit was 80.00 plus 80.00 for the .46 sized glow engine. not a bad price for such a large and maneuverable aircraft.

As for the brand I like the O.S. brand allot, properly broken in they will last for years. Other brands I have flown are Magnum, Tower hobbies and thundertiger. All are good if you take your time in breaking them in. Follow the instructions that come with the engine.

Where to buy?

Tower Hobbies is good, a few other on the web can compete with the prices but Tower is fast on shipping and easy to deal with if you have a problem.

To size the engine it would be helpful to know the size and weight.



Isocoee says:
Thanks for the instructable. I hope that you enjoy your "real" engines. You can be tinkering with your motor, while I'm enjoying unlimited vertical and 40+mph on my \$8 electric motors.

Jul 13, 2009. 8:37 PM [REPLY](#)



nickademuss says:
I think Electrics have their place, my back yard has seen several of them, but if you want to break the 130mPH mark you cant beat the power to weight ratio of a good glo engine and tinkering with the engine is part of the fun, I enjoy tuning them. Also please be careful with Li-po batteries, I use one in my heli and I always charge it on a metal surface and never full discharge it.
I might add that the two batteries I have for the heli cost as much as a glo engine and 3 gallons of fuel.

Jul 14, 2009. 3:36 PM [REPLY](#)



bowmaster says:
Mount some solid fuel rockets on to your plane it you really want speed.

Aug 18, 2009. 1:33 PM [REPLY](#)



finnrambo says:
your radio funtions are only mode 2, you might want to explain the modes

Jun 28, 2009. 11:31 PM [REPLY](#)



nickademuss says:
modes? do you mean channels?

Jun 29, 2009. 4:15 PM [REPLY](#)



finnrambo says:
no, there is mode two and mode one and others I'll show you an explanation
Mode 1: rudder and elevator are controlled by the left stick, throttle and ailerons by the right
Mode 2: ailerons and elevator are controlled by the right stick, rudder and throttle by the left
Mode 3: ailerons and elevator are controlled by the left stick, rudder and throttle by the right
Mode 4: throttle and ailerons are controlled by the left stick, rudder and elevator by the right

Jun 30, 2009. 6:03 PM [REPLY](#)



nickademuss says:

Jul 1, 2009. 8:51 PM [REPLY](#)

I would ONLY ONLY ONLY use the real setup, the standard setup up used by millions of pilots for years. The rudder and throttle on left stick, and the ailerons and elevators on right stick. I would keep with this from the first trainer so when you graduate to a larger aircraft you wont have to relearn the controls again. The above mentioned modes are not listed by any of the real radio manufactures setup instructions.



Isocoee says:

Jul 13, 2009. 1:24 PM [REPLY](#)

The "real" setup? Other countries consider Mode 1 to be the "real" setup.



nickademuss says:

Jul 13, 2009. 5:39 PM [REPLY](#)

Sorry, the most prevalent, common, like-kind, setup is the standard, normal transferable to larger and larger aircraft style listed here and in every Futaba manual to date. Thanks for looking!



Isocoee says:

Jul 13, 2009. 8:33 PM [REPLY](#)

Fine. Be a smartie pants. Mode 2 is the North and South American standard. Mode 1 is the European/Asian standard. You should consider not being such an elitist so that others have a chance to learn other ways. Furthermore, it helps out new pilots when they are shopping for controllers. Do you think that new pilots would like to buy a controller ignoring what mode it is setup for? They should be aware of the differences before shopping. Thanks for the instructable, even if it is biased.



finnrambo says:

Jul 2, 2009. 3:50 AM [REPLY](#)

then again your right but as I was scrolling down to reply I noticed nothing about mixing and my first "real" plane EDF my first one with servos on it had elevon mixing it was an exceed rc F-35 JSF but my point is many trainers have v tails



theRIAA says:

Jun 16, 2009. 6:21 PM [REPLY](#)

Hehehe. I got my foam Super cub in my closet. Got it souped up with a lipo too. I've crashed that thing a hundred times. Snapped the wings in half while flying upside down (or trying). Nose dive from 100 ft (cause the battery slipped out). Ran it into walls, grass, ground, fences, poles, dirt. ANY problem Ive had with that thing can be fixed with gorilla glue. I love that thing.



nickademuss says:

Jun 18, 2009. 8:30 PM [REPLY](#)

sweet!



kjjohn says:

Jun 12, 2009. 11:24 AM [REPLY](#)

I am building an electric RC plane. The propeller motor i am using is rated for 11 volts, and my Li-Poly battery is also 11 volts. However, my servos are only rated for a max of 8.4 volts. Will the servos be okay if i plug them into the receiver with the 11v battery, or will they fry?



nickademuss says:

Jun 12, 2009. 7:55 PM [REPLY](#)

Your receiver should be powered by the ESC or electronic speed controller. It will have a small switch to turn it on as well. This is called the BEC and it puts out either 4.8v or 6v.



kjjohn says:

Jun 12, 2009. 8:30 PM [REPLY](#)

Wait, I dont exactly get how it is supposed to be wired. I need to control the servos, but I also need to control a powerful brushless motor with the receiver. Could you maybe send a diagram or something?
Thanks



nickademuss says:

Jun 14, 2009. 5:40 AM [REPLY](#)

On an electric, the motor is controlled by the ESC (electronic speed control).

The ESC is plugged into the receiver were the throttle servo goes, it will have a servo connector on it. This also powers the receiver. The ESC also has a battery connection and a connection for the motor. Their are so many types of ESC's out there you should follow the diagram that comes with your chosen ESC. I would recommend getting the one recommended by your motor's maker.

<http://www.rc-airplane-advisor.com/electric-rc-airplanes.html>



kjjohn says:

Jun 14, 2009. 9:05 AM [REPLY](#)

thanks



finnrambo says:

Jun 2, 2009. 7:39 PM [REPLY](#)

What model of retracts would you reccomend for a 2-5 pound sailplane.



nickademuss says:
retracts on a sail plane? ,most of them dont even have a landing gear.
or were you talking about the folding propeller?

Jun 4, 2009. 2:08 PM [REPLY](#)



finnrambo says:
can electrics run on solar

May 21, 2009. 5:45 PM [REPLY](#)



nickademuss says:
Being an electronics guy I can say that solar could power and has powered small aircraft, but at great cost. And performance is very low, The real aircraft built in the 90's that carried one person was a fair weather flier only, no wind at all, it was so fragile that a little 5mph wind could crash it. As far as model ones you could charge a battery via solar but you will have a hard time getting enough amps from light weight cells to power any model. I would say it defiantly could be done it will just take allot of design and cost.

May 21, 2009. 6:50 PM [REPLY](#)



finnrambo says:
ok thanks:)

May 25, 2009. 7:21 PM [REPLY](#)



gphart says:
fantastic, this instructable has made me want to get back into it again. have you got any vids of them would be interested in seeing the Cessna 182 and the wheels and lights. cheers

May 24, 2009. 7:14 AM [REPLY](#)



finnrambo says:
Oops I forgot to to reccomend the spektrum DX6i

May 19, 2009. 8:48 PM [REPLY](#)



nickademuss says:
I am loving the new 2.4 ghz radio's-- no more glitches!

May 20, 2009. 11:45 AM [REPLY](#)



finnrambo says:
thanks again

May 21, 2009. 5:46 PM [REPLY](#)



finnrambo says:
sailplanes can't fly electric or can they

May 19, 2009. 8:45 PM [REPLY](#)



nickademuss says:
Many have an electric motor in the nose ot above the wing in a power pod for boosted flight. The propeller is usually a folding one to reduce drag.

May 20, 2009. 11:44 AM [REPLY](#)



finnrambo says:
thanks:)

May 21, 2009. 5:45 PM [REPLY](#)



22222222539 says:
Nice instructable. The only plane I own is an electric 36" P-51D Mustang. I am wondering what that boat in the car is. Does it actually fly?

Apr 28, 2009. 4:15 PM [REPLY](#)



nickademuss says:
The big yellow one?
It does really well.
http://www.instructables.com/id/8_Ft_Wingspan_Coroplast_RC_Piper_Cub_flown_by_25cc/
and thanks!

May 1, 2009. 11:00 AM [REPLY](#)



robot117 says:
nice Instructable!!!!!!! I get it now!!!

Apr 26, 2009. 7:28 PM [REPLY](#)



nickademuss says:
Thanks!

Apr 28, 2009. 11:26 AM [REPLY](#)



finnrambo says:
Perfect instructable now I finally understand rc planes but please put an instructable for a DIY nitro plane.

Apr 17, 2009. 4:11 PM [REPLY](#)



nickademuss says:
So ya like Nitro? What size?

Apr 18, 2009. 8:40 PM [REPLY](#)



finnrambo says:
About 32 inch wingspan biplanes and warbirds.

Apr 18, 2009. 9:46 PM [REPLY](#)



nickademuss says:
good portable sizes, and the older motors can be found on ebay really cheap!
Warbirds if built to scale can be difficult, their color can make flying difficult but they look so good in the air!
As for a do it yourself on nitro airplanes, what were you looking to find in one? Building tips or engine tuning tips?

Thanks for the praise!

Apr 19, 2009. 10:28 AM [REPLY](#)



finnrambo says:
In DIY I was looking for tips building the planes and installing the electronics

Apr 19, 2009. 9:20 PM [REPLY](#)



ongissim says:
Great instructable! However, I might add a bit more to the Radio Installation step, as that can be a bit confusing to beginners. For example, you could tell how and where to install servos for specific purposes, such as those for gas engines.

Mar 11, 2009. 5:57 PM [REPLY](#)



nickademuss says:
good idea! ill work on it

Mar 11, 2009. 7:14 PM [REPLY](#)
