



Propwash

Sept 2020

From the President



Very interesting and testing times for all this year, and possibly for quite some time to come yet. As mentioned by Ron in the previous Propwash I was a verrrry average trainee which I am now proud to say have progressed to a verrrry average pilot AND still having issues with nose wheels, well any wheels for that matter. But, and here is a big but, I am still thoroughly enjoying myself.

Welcome to all new and existing members and I hope that we as club can contribute to your enjoyment within the hobby/sport/pastime. As a newbie I have found the club to be very informative, patient and welcoming, all traits that a club should strive for and maintain. We really do have an ideal location for our sport and facilities as well, although, with still some work do on this front.

Currently our past president Ron is presiding over two grant applications and myself one. Word is that the AWA grant (\$10,000) would be discussed at their next general meeting being held next month. Another application (\$3000) is with the Capel Shire for consideration.

An application is also currently being submitted through our new bank, the Bendigo Bank Capel, as part of their community pitch grants of up to \$5000. Obviously the runway upgrade project progressing this year is very dependent on the success of at least some of these applications. Wish us well with these.

For those of you who go out and fly please try and support the canteen with having a pie or drink as all contributions count and especially since the Fun Fly had to be cancelled this year.

Don't forget to abide by Covid rules when at the field. Any other suggestions for raising funds are welcome so if you have any please don't hesitate to contact one of the committee members with it.

In closing I would like to reiterate to all that when at the field, be safe, be respectful, and most of all, ENJOY yourselves. Happy Flying.

Bill Darnell

Bill has had a few minor bingles with the Corsair over the last couple of flying session, however, these have only been disruptive not terminal. Having sorted the problems out with the plane he is now working on the pilot so the next time out it is all looking good for a good days flying.



If you could kick the person in the pants responsible for most of your trouble, you wouldn't sit for a month.

From the Editor



Some important snippets from the August general meeting of interest:

It was recommended that it could be in the clubs interest to review the benefits of changing the clubs back account as a new player was offering grants to voluntary organisations each year and we may be a recipient of future grants.

Arrangements are currently underway to achieve this and we had until the 4th of September to submit an application for these funds, you guessed it the application has been submitted.

We are all waiting anxiously for the results of the two grants that have been submitted for the runway upgrade both will be reviewed in September and the results will determine if this project will go ahead.

Isolation switches or throttle cuts on the radio for electric planes is on the agenda for the next meeting, if this is passed and accepted it will become a Club Bylaw and will then be included into the document.

The replacement of the boundary fence along the access road is scheduled to be completed in September when the ground dries out a bit to enable the tractor to access the area with minimal surface damage.

We have been advised that the Capel Shire are looking at providing some funds to community groups under the banner of:

***COVID Community Donations
Making a positive difference to our community:***

If we meet the selection criteria for this donation it would mean they are offering \$50 per member of these registered clubs.

This being the case we could be eligible for \$1450.00 based on our current membership, the deadline date for lodging the application is 30th October so the committee is pursuing a claim by submitting an application.

It is good to see the number of fliers is increasing on a Sundays, we have had some pretty average weather however, it is improving so a great opportunity to get out and enjoy some airtime and get those projects into the sky.

Members this is your newsletter, for it to remain interesting and something members look forward to reading we need contributions from you the members either by sharing your flying experiences, both good and bad, your build projects, concerns etc, etc, get your details and photos to me for inclusion in the next edition.

If you have something of interest that you would like a photo taken for inclusion don't hesitate to contact me and I will oblige.

For the record all test flights referred to in this document were performed by me, apart from Dusty, but not involved in all the mishaps, some have not all gone to plan but the builders have learnt something and that is what the sport is all about.

It always irked Jane that her grocery store didn't carry eggs in packages of six — just by the dozen. She sent in complaint after complaint to try and get her message across.

Then one day, her wish came true. She walked into the grocery and found fresh eggs in cartons of six!

She was so excited, she bought two!



Finally found out why the fish were'n't biting..



Could well be the reason more members are turning up to fly each week.

Dennis Milligan has this knack of coming across a bargain or two when we are talking about model aircraft and his recent expedition to seek out a deal certainly paid off for him.

He is quick to say, oh, I seen it on this web page and just checked it out and when he sets his eyes on a bargain he finds it just a little too hard to resist. His recent excursion to one particular location netted him a Decathlon, a PC9, a Pilatus several nitro motors, helicopters and the list goes on.

The decathlon was ready for flight, however, the motor had not been run for some time so after a check and tune it was ready for it's first flight at the SWARMS field.



Pre-flight checks complete taxi to runway and off into the breeze, the normal trimming was conducted and the plane settled down to some serious flying, It was now proving to be very stable in flight, however, the motor went dead stick.

When this occurred it immediately dropped the wing and the rest was history as the ground became closer and closer with the plane finally making contact with the ground on it's nose braking the firewall from the fuselage.

The evidence that was revealed when the covering was removed from the nose after the incident indicated it had been in a mishap previously with some of the balsa not being replaces over the nose section.

After some repair time in the shed the firewall was refitted motor installed covering complete and it was all back to normal ready for it second flight.

This occurred two weeks later when it again returned to the field, with motor run-up and pre-flight checks completed it was onto the runway for take off.

Second flight proved to be the same as the first with the motor going dead stick soon after take off again causing the plane to immediately drop the wing again with a more devastating result.



This incident would have been a bin job for the majority, but not Dennis, after several painstaking hours, days, weeks in the shed it was again back together in readiness for its next flight.

With the wing dropping very quickly after both dead sticks it was considered time to check a bit further into contributing factors so the lateral balance of the plane was checked to identify if this could be a contributing factor to these two incidents.

This has all been checked out and the plane is now ready for its next outing, fingers crossed with the checks completed and the motor retuned this next one will be the icing on the cake.

This PC 9 was also part of the package deal it had some minor damage to the fin which was quickly repaired and bought out for test flight.



The motor an OS 46 fitted to this plane had not been run for some time so tuning was required prior to test flight, with all pre-flight checks complete it was ready to go.

This proved to be very stable in the air once the trimming had been completed and it flew very well, (or was that the ability of the test pilot) with the throttle now set to half Dennis took control and was very impressed with what he was flying.

Two flights conducted on its first outing proved it to be a very successful stable flying model, like it was on rails, I dare say you have all heard that phrase before.

It was packed into the car and Dennis drove home thinking about the deal that he had done on these planes.

The second visit to the field ended in disaster, on take off not enough power was used to get it off the ground causing the plane to stall making contact with the ground nose first resulting in the attached damage.



Don't know if anyone has noticed that Dennis loves the challenge of rebuilding planes, as a result both planes are now repaired and ready for some airtime in the skies over SWARMS.

I recently got my self a senior's GPS, not only does it tell me how to get to my destination, it tells me why I wanted to go there.

Men marry women with the hope they will never change. Women marry men with the hope they will change. Invariably they are both disappointed.

Age is an issue of mind over matter. If you don't mind, it doesn't matter.



"Your insurance will cover either the vasectomy or the anesthetic. Your call."



Dusted off my big Cub recently and prepared it for a flight, it is fitted with a 20 cc petrol engine and fly's well, but like all Cubs it is only good in moderate winds.

Cubs seem to have a problem on the ground whilst taxiing prior to take off, however, once in the air they are pretty docile to fly and they can be flown very slow without any risk of a wing tip stall.

It was good to get it into the air again it has not been out for some time, (Years) I still have it fitted with 36 mgh system it has not been converted to 2.4 and the good thing about that is I am the only one with an aerial on the flight line that I can hang things on whilst flying.

As predicted it flew very well with little wind.



When I was a boy, my Mother would send me to the corner store with a \$1 and I would come home with 5 potatoes, 2 loaves of bread, 3 bottles of milk, a block of cheese, a packet of tea and 6 eggs.

Can't do that these days !

Too many security cameras.



A recent police study found that you're much more likely to get shot by a fat cop if you run.

My doctor gave me six months to live, but when I couldn't pay the bill he gave me six months more.

The only time a woman really succeeds in changing a man is when he is a baby.

Money doesn't always bring happiness. People with ten million dollars are no happier than people with nine million dollars.

A lot of fellows nowadays have a B.A., M.D., or Ph.D. Unfortunately, they don't have a J.O.B.

Breaking News: Irish swimming pools will reopen on the 14th September, due to social distancing there will be no water in lanes 1, 3, and 5.

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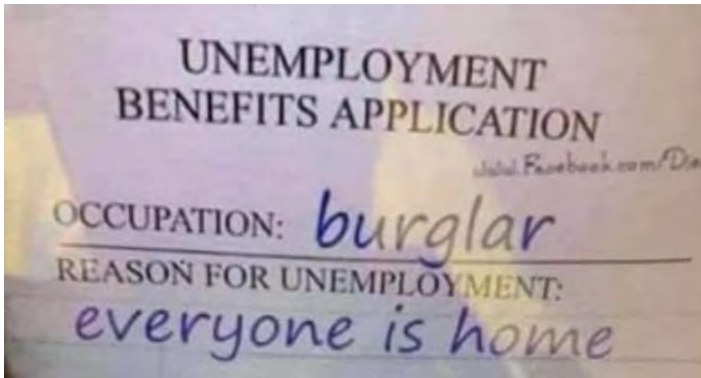
People who think they know everything are a great annoyance to those of us who do.

My doctor told me that jogging could add years to my life. I think he was right. I feel ten years older already.

Dogs are animals that poop in public and you're supposed to pick it up. After a week of doing this, you've got to ask yourself, "Who's the real master in this relationship?"

Life begins at 40 - but so do fallen arches, rheumatism, faulty eyesight, and the tendency to tell a story to the same person, three or four times.

Recent application for the "Job Keeper" allowance was truthful about the need for assistance.



BEWARE !!

Drone owners / operators the Drone police are out and about and anyone caught flouting the law will be severely dealt with.



Just had two Police Officers at my door. They asked me, "Are you familiar with the letters HB?" I said "No, I'm not."

"How about LS?" I replied, "No." Then they asked, "What about JD?"

I said "Hang on a minute, am I a suspect or something?" They said "No, these are just initial enquiries".

Glenn Lloyd-Woods had this trainer plane donated to his hanger it is fitted with an electric motor, however, the build left a lot to be desired and the covering was well below standard so it was agreed that it required an upgrade before progressing to the field. I took on the task to upgrade it and after some time in the shed with some modification and a new cover skin it came out the other side looking like this.

Glenn is an Eagles fan and I tried every where to get some Eagle stickers to put on the wings but found that there were none available even from the Eagles store (does that mean that they are insignificant in the AFL competition) so the colours were as closest I could get to the Eagles.



BREAKING NEWS !!

Concern has been raised over the disappearance of a nine year old girl, it was reported that she disappeared after using moisturiser that makes you look 10 years younger !!

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We have another passionate builder of large model in the club and now Woody is up for some stiff competition.

Glenn Lloyd Woods has been spending many hours (18 months) in his workshop producing a B 25 bomber with a great deal of detail included.

The model is 2.5 metres in length with a wing span of 2 metres, it is fitted with two 30 cc DLE engines with on board starters, brakes, flaps and detailed gun tarrant, almost ready for maiden flight.

Photos prior to being given finished top coat paint.

30 cc DLE engine fitted into the cowl.



Top coat of paint completed with a lot of scale detail exposed on the surfaces.



Retractable undercarriage and wheel doors fitted.



Thursday 20th August was a good day for flying and seeing that there had been no panes in the sky for the past two weeks due to the unsettled weather some members took advantage of the good weather on this particular day.

Some of the planes that were flown are seen here lined up in the pits ready to grace the skies, not all the flights during the day were successful but a good day was had by all who attended.



The Cessna fitted with a DLE 20cc motor, Tuscan fitted with an electric motor setup and Pattern Plane fitted with an OS 90 nitro motor all had several flight during the day.



Now this is the way to package and transport your planes to and from the field, this unit was designed and built by Bill Darnell and the Corsair fits snug inside with the wings either side of the fuselage a compact unit which fits comfortably inside the car.



This is a photo of a very proud owner builder of this Sic aircraft, Trevor Wilson, proudly displays his first kit built aircraft since taking up the sport some two years ago.

It was a precision build and presented very well prior to the maiden flight, however, things did not end well for the plane. The take off was near on perfect and as the plane settled into flight and a turn was made to return over the field to conduct the trimming it all went wrong.

As the throttle was eased back so did the signal to the plane and there was no contact maintained and gravity slowly took over. It came to rest in a tree at the southern end of the field and amazingly not a lot of damage was sustained as a result. It is currently under repair ready for the next flight.

The finished product.



Construction almost complete.



All completed prior to maiden flight



Oops !! Bill's model decided to rearrange it's own C/G by removing the front section (after it hit the ground) in a recent mishap. Luckily the cockpit remained in place and no one was injured in the accident, the pilot revealed during the interview that he had experienced a similar incident before and was a bit concerned about going up again under the same circumstances. (With Bill at the controls)

No indication as yet if it will be repaired and return to the sky over SWARMS.



**Don't stress about the future,
it hasn't arrived yet
Live in the present and
make it beautiful!**



You are parked over a though fare creating limited access to the pits.



But, Officer I am the new SWARMS President.



Troy has been fossicking around, as he does, and found some new / used partly built planes and you guessed it he obtained them. This is the Beaver :

This is the Ag-Wagon that was part of the deal and Dennis painted it up as "Dusty" was in the movie.



The construction had been started , however, still need a lot of work so he struck a deal with Dennis to complete it and as a result he would give him small Ag-wagon. Dennis completed the build and this is it's first trip to the field for the maiden flight. The usual checking and tuning and it was ready for its first flight, on the first attempt it did not have enough power from the 40 four stroke motor to get it airborne. A change of propeller proved to partly fix the problem and I took off again with the plane still struggling a bit but flew very well once it was up.

This also had its maiden flight on the same day but was not as successful as the Beaver's flight. This is fitted with an electric motor and first time off the plane appeared to be slow to respond to radio input and made a unceremonious landing without damage.

A few checks were made and it was time for another attempt, this time it got up and away, however, still seemed rather sluggish with the response to radio input and after struggle to keep it in the air gravity took over and it came down in the outfield, not a lot of damage was sustained. It seems that the ailerons may be a bit short for the wing dimensions.

Bill Darnell has completed his latest build a Rascal, it is of very light construction and it was designed for electric power.

It has been test flown but did not successfully complete the flight, it rolled over on take off and the motor parted company with the firewall, however the damage was only minor and it has since been repaired and waiting it's second attempt to get airborne.

Plane prior to maiden flight.



The parts that were removed during the mishap taped back together ready for a more permanent fix in the workshop.



During a recent visit to my doctor, I asked him, "How do you determine whether or not an older person should be put in an old age home?" "Well," he said, "we fill up a bathtub, then we offer a teaspoon, a teacup and a bucket to the person to empty the bathtub." "Oh, I understand," I said. "A normal person would use the Bucket because it is bigger than the spoon or the teacup." "No" he said. "A normal person would pull the plug."

Do you want a bed near the window?"

Glenn is dwarfed here by the size of the tail section of his B25 bomber, the detail of the tail gun tarrant can be clearly seen here.



Why I like retirement !

Question: How many days in the week ?

Answer: 6 Saturdays, 1 Sunday.

Question: How many retirees does it take to change a light bulb ?

Answer: Only one, but it may take all day.

Question: What's the biggest gripe of retirees ?

Answer: There is not enough time to get every thing done.

Question: Why don't retirees mind being called Seniors.

Answer: The term comes with a 10% discount.

Question: Among retirees, what is considered formal attire ?

Answer: Tied shoes.

How to Tune Your Engine

What is **tuning** and why would you want to do it? Tuning is simply adjusting your engine for best performance. The settings that it comes with from the factory may be a good starting point. However, these engines are somewhat sensitive to the environment. You may need to adjust for higher altitude operation, or for temperature variations throughout the year. Changes in fuel type, or in wear as the engine breaks in, may also call for re-tuning. To understand how to tune your engine for best performance, it helps to first understand the function of the **carburetor**. This is a modified tube on the front of the engine.

It functions as the **air inlet**, pulls fuel from the tank, allows you to **throttle** the engine, as well as set the correct fuel-air mixture for best performance. There are many variations on carburetor (carb) designs; we will discuss the popular **twin needle** design. This has a "high speed" as well as a "low speed" needle, which we'll discuss below. The engine itself acts like a pump and creates its own air suction. (See also [How the Two-Stroke Engine Works](#)).

When the engine is running, the flow of air through the carb actually pulls fuel into the carb. This is accomplished by the **Venturi** effect. When a fluid like air speeds up, its pressure decreases.

The inside of the carb opening gets narrower over its length, causing the air flow to speed up, and the pressure to decrease. Another smaller tube called the **spray bar** is connected to the fuel inlet. The opening of the spray bar is positioned in the low pressure area, causing the fuel to be pulled into the engine's crankcase.

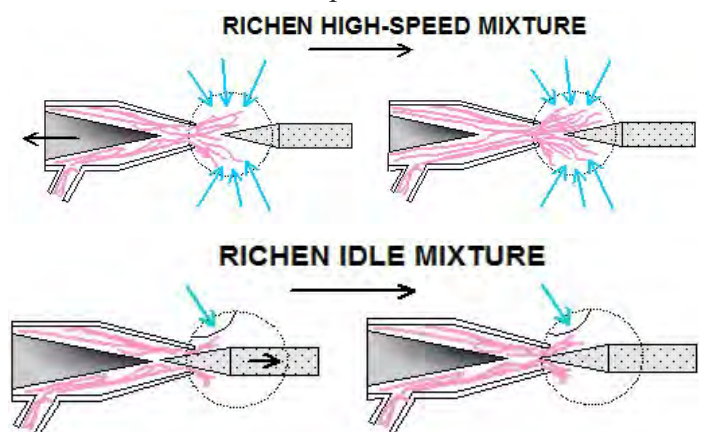
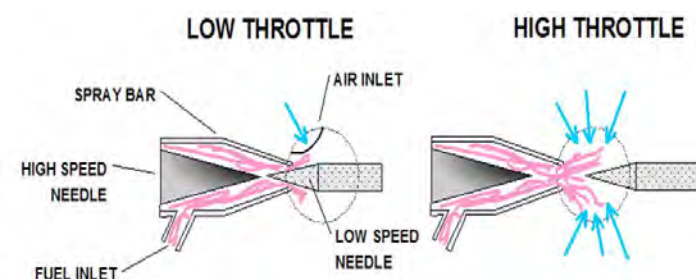
Inside the typical carburetor body is a **rotating barrel** with a hole. The barrel has an arm that is connected to the throttle servo. Moving the throttle stick on the transmitter causes the barrel to (1) rotate, and (2) move inwards or outwards.

At low throttle stick, the barrel mostly blocks the hole that allows air into the engine. At high throttle, the barrel opens up fully, allowing maximum air in. In addition, the rotating barrel *at the same time* moves a low speed needle to partially block or unblock the spray bar, controlling the amount of fuel released into the engine. So now you understand what happens when you throttle up or down. Low throttle = less air *and* less fuel. High throttle = more air *and* more fuel. To run properly, the engine needs the right ratio of fuel to air. This ratio is known as the **mixture**. The carburetor needles (or screws) allow us to set the correct mixture, both at low and high throttle, for best operation of the engine.

Relatively more fuel to air is known as a "**rich**" mixture, whereas relatively less fuel to air is known as a "**lean**" mixture. A lean mixture generates more power, but also generates more heat. Running the engine past its optimum lean point can result in damage to the metal parts, and should always be avoided. A rich mixture generates less power and less heat. Too rich and the engine might quit while you're flying, and just generally be harder to keep running.

Both the low and high speed needles can be richened, or leaned out. Richening is usually turning them counter-clockwise, which pulls the needle away from the spray bar opening. The high speed needle often has a thumb screw for manual operation, while the low speed is adjusted with a small screwdriver.

The high speed needle controls the total fuel flow into the engine, and affects the engine's behaviour from half to full throttle. The low speed needle tends to have more of an effect from half throttle down to idle. So the high speed mixture is set with the engine at full throttle; the low speed is set after throttling back to idle. See detailed procedure below.



Tuning Procedure

- 1) Start with the factory recommended needle settings. If you have no idea what these settings should be, use the Needle Starting Point procedure in the next section (below).
- 2) Start the engine.
- 3) With the engine or aircraft secured, open the throttle to full.
- 4) Lean the high speed needle slowly and watch and listen:
 Too rich: lots of smoke, low pitched sound
 Leaner: reduced smoke, sound starts changing to higher pitch
 Leaner still: little smoke, max rpm reached
 Too lean: very little smoke, max rpm can be heard falling off. Open the needle valve up 20 or 30 degrees from this point. If you have a tachometer, open the needle about 300 rpm less than max.
- 5) Still at high throttle, perform the **pinch test**. Briefly pinch then release the fuel tube going into the carb. If the engine momentarily speeds up, then slows back down, you're done. If the engine does not speed up, or quits, then it is too lean; richen the needle some more.
- 6) Now throttle back to idle; let the engine idle for a couple minutes.
- 7) Now perform another pinch test. This time pinch and hold the line. The engine will want to speed up and die (since you are effectively leaning it out). If it speeds up immediately, it's too lean, richen the low speed needle. It should take 4-6 seconds to speed up and begin to die. Any longer and it's too rich.
- 8) Also check the throttle transition. With the aircraft secured and engine idling for a couple minutes, advance the throttle quickly to fully open. If the engine hesitates, the low speed mixture is too rich.
 Frequency: The low speed needle will seldom need adjusting. Do the pinch test for the high speed mixture before every flying session.

Needle Starting Point Procedure

Use this procedure if you don't know where to set your needle valves for initial operation.

- 1) Open the high speed needle 4-5 turns from the closed position.
- 2) Fully close the low speed needle valve.
- 3) Place a clean piece of fuel tubing on the carb inlet. (It needs to be clean because you're going to blow into it!)
- 4) Open the carb barrel from the closed position, about 20% of the full range.
- 5) Now blow into the fuel tubing while opening (richening) the low speed needle.
- 6) Stop turning the needle as soon as you feel or hear the air blowing into the carb.

This will be a small flow of air. Remember that you want a small flow of fuel at low throttle, so this is a good starting point.

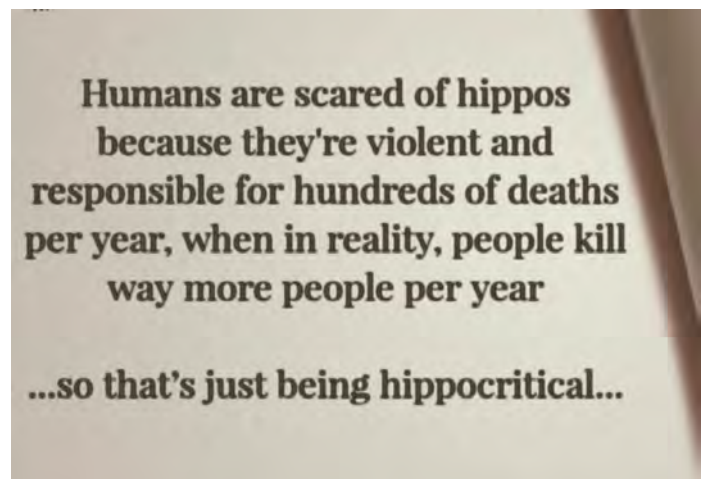
- 7) Fully close the high speed needle.
- 8) Open the carb barrel to the full throttle position.
- 9) Now blow into the fuel tubing while opening (richening) the high speed needle.
- 10) Turn until the air flows freely into the carb. This will be a large flow of air (compared to the low end needle setting). Remember that you want a large flow of fuel at full throttle, so this is a good starting point.

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There are three kinds of men. The one that learns by reading. The few who learn by observation. The rest of them have to pee on the electric fence for themselves.

Better to remain silent and be thought a fool than to speak out and remove all doubt.



Roll balancing RC airplanes

Roll, or lateral balance to give it its proper name, is an often overlooked task and isn't as critical as longitudinal balance, but an rc plane that has one side heavier than the other will have a tendency to naturally roll and turn to the heavier side, making your life on the sticks a bit harder. Also, a heavier side will almost always result in that wing dropping when the plane stalls, potentially putting the plane in to a spin.

The usual cause of a plane being out of balance laterally is unequal weights of the wings.

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The usual cause of a plane being out of balance laterally is unequal weights of the wings.



For smaller rc planes, say about the 40" wingspan mark or less, it's quite possible to hold each piece of string in each hand:

Let the plane hang freely on the string - see if it wants to roll to one side or another. If it does then you need to add some small ballast to the wingtip of the lighter (higher) side. Add only enough to make the plane hang so that both wings are level.

Taping the ballast to the wingtip is an easy method, although you might want to take the trouble to set them into the wingtip and cover over them to hide them. Bear in mind that adding larger bits of tape will actually add weight in addition to the ballast.

For rc airplanes with foam wings, pushing a small gauge nail or panel pin into the foam is a great way of adding any necessary weight, and it can be easily hidden with suitable paint or marker pen.

So there you have it... two easy methods of balancing rc airplanes. As already mentioned, the longitudinal balance is **very** critical if you want to keep your plane in one piece. Lateral balance isn't so critical but is worth doing anyway.

Recently a plane of mine needed 10 grams of weight on one wing to even things out, and it did make a real difference to how it flew - so do take the time to balance your plane both ways.

A correctly balanced rc airplane will always be safer and easier to fly, and won't need as much trimming at the transmitter.

Catch you when we fly into the next edition in 2020. Happy Flying, regards Ron.



So, then, to roll balance your plane simply hang two lots of strong string from something stable (*i.e.* a ceiling), each piece being in a large loop. Put one around the propeller shaft, between the spinner and the fuselage, and the other around the rear of the fuselage, as close to the tail as you can get. If possible insert a small-gauge pin or screw into the very rear of the fuselage to hook the string around, as shown right. This gives a more accurate result since the plane can hang more freely.