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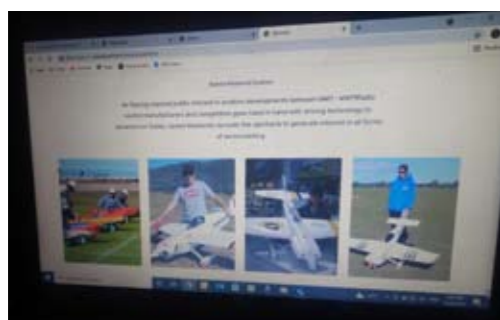
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Goodbye Air Racers,

Thanks to COVID this year is pretty much a write off so next year we have two events planned. Until we can hold another AGM the club is kinda in caretaker mode but looking forward to next year the club has spent a little money to purchase a few domain names and a website. Domain names are speedweekend.sydney, speedweekend.melbourne, speedweekend.org.au, speedweekend.com.au

If you click on the screenshots below left each will take you to two websites that are active. Until the club starts generating income again the competitors website is being sponsored by RCM News Racing for the time being. It will be handed over at a later date. Speedweekend Melbourne 2022 is a closed meeting with as many rounds of racing as possible. Speed Weekend Sydney 2022 incorporates a public display to celebrate 25 years since Adelaide Golden Era event. Racing on the Sunday finishes final heats for each category followed by a conventional air show for the general public. This format allows interstate competitors to make their way home early afternoon.

speedweekend.sydney



competitor website



airshow website



It's early days and details are yet to be finalised but the Sydney event is being supported by Aeromodellers NSW. As far as sponsorship goes at this stage we are looking for expressions. Until we get the PR activities sorted. For example The Flying Show is interested in doing

EVENT, AIRSHOW, INDIVIDUAL RACE SPONSORSHIP OPPORTUNITIES

FEATURED IN OFFICIAL PROGRAM - FLYBOYS & RCM NEWS WEBSITES - SPRUKED IN 30 SECOND PRE-RECORDED ADS OVER THE PA DURING THE WEEKEND

EVENT NAMING RIGHTS \$POA



HAMPTON MARQUEE

Small space (2.5 metres wide)
Large space 3.5 metres wide)
*(Includes free block ad in official program)



Australia's Top RC pilots



Concurs de Elegance
Best Cockpit
FUTABA FAASTEest Time **SOLD**

Hot Lap
Speed Comparison
KAVAN Best Landing
Worst Landing
Most Innovative
Red Mist Trophy
Drone Race
Super EZ Flight Training display



Speed Comparison



Hot Lap



Best Landing



Red Mist Racing



Worst Landing



Learn to Fly

KIT and SCRATCH BUILD



JR PROPO GOLDEN ERA - 100cc



RCM News GOODYEAR - 60cc petrol



WARBIRDS - 60cc petrol



TEXAN - 20cc glo

ALMOST READY TO FLY



FUTABA FORMULA 1 - 60cc petrol ARF



FLYING FUTABA F2 - 35cc petrol ARF



FORMULA 3 - 30cc petrol ARF



100 lap pylon 7.5 cc glo (0.46)

RADIO SYSTEM REQUIREMENTS

Frequency 2.4 GHZ - Receiver must be same brand as TX - Australian ACMA RCM Label Certification

Altitude Telemetry Sensor required for Golden Era - F1 - Goodyear- Reno

FAIL SAFE RACING SETTINGS Engine - Engine must stop

Carburettor Closed - Ignition off - Left aileron 3mm - Left Rudder 3mm - Elevator Neutral

a story for its You Tube Channel. The plan is to use that to land a spot on one of the breakfast TV shows. That will be supported by stories on the AMNSW community radio show and some instore promotion in Sydney hobby shops. Bob Carpenter at HMAAC has a good working relationship with Rotary and that opens up more PR possibilities. Another idea is business cards for the Sydney event. I know whenever the subject comes up it sparks interest from modellers and general public. Better than writing details on a piece of paper, cards are easily carried so if a conversation comes up you can hand the person one.

The Nemesis featured here was purchased secondhand by myself for Stephen Green. Thanks to COVID 19 the model sat in my shed until the planets aligned for the RC pilot network model transport system to it across the New South Wales - Victorian border. It made it to Albury and sat out back of Albury RC Models for a couple of months. Thanks Rob Sargent. As soon as Melbourne was allowed out Greeny made a bee-line for the border. It's no secret the hobby industry has been kicking goals since men empowered by Government Permission have been scuttling back to their sheds the past two years but there is no truth to the rumour he was worried that Rob would sell it. The model is ready to fly when Melbourne emerges from Lockdown Number 6.

Looking forward to next year, hopefully lockdowns will be a thing of the past and international shipping will go back to some sort of normality. Apparently the ship that blocked the Suez Canal did some damage with one million containers caught up in the backlog. Supply of new Seagull ARF product is yet to be determined as Vietnam is in lockdown with export restrictions too. As a sign of good faith the club has ordered six Nemesis from Hobby Supplies Australia. If that doesn't happen there are enough models around now to race. Speedweekend.com.au website has a Buy Swap and Sell page to help. Over to you Greeny.

Racing ARFs by Stephen Green

Whether you are racing Formula One or Formula 2, a Cassutt in Goodyear or an MSX-R in Formula 3 there are five key components of the airframe that are worth considering upgrading for racing. It has been quite a few years since I reviewed the Nemesis with the OS GT 55 for F1 so some of this may be out of date. Not so if you happen across a second hand model or even new in box that is a few years old.

After collecting this particular model and giving it the once over I decided to use it to promote Formula 2. I'm a bit thingy about racing in the entry level categories but it may be interesting to see how close to the pointy end I can get with the smaller capacity Zenoah 26cc engine. Hobby Supplies Australia is the Australian Agent for Zenoah and is supporting the club's Speed Weekends. I have a new Nemesis on order for F1. It turned out the owner Tony is the son of Bruce Grinter. Bruce was a fantastic builder of model planes and competed in F3a in the 70-80s. Tony happens to hold a world record for 26cc powered model boats. He carries the range of aero engines and spares too. Starting at the front, this model had no spinner. From memory it was originally supplied with a 95mm diameter plastic spinner. I've never been a fan of plastic backplates but the aluminium backplate spinner manufactured by Phoenix Models is also 95mm. I ordered one from Model Flight which arrived from interstate the next day. Isn't the Internet wonderful?

Competition Tip. Note the green mark I put on the backplate. Should the engine kick the propeller nut loose this makes lining up the four bolts easier. A little extra time taken isn't a problem for sport flying. Not so on the startline. If the model is rolling before the count down starts you can complete the take off and race.

The somewhat soft plywood in the early production versions was upgraded in latter versions



Speedweekend promotional plane fitted with a 26cc engine to highlight the point having the quickest model is no guarantee to finish first

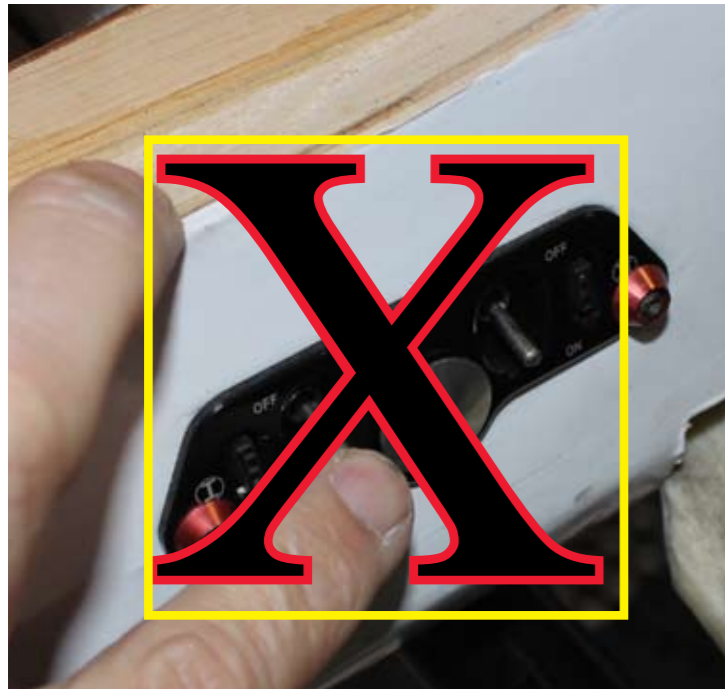
and having checked that upgrade out I would be comfortable competing in Formula 2 as standard. Not sure about Formula One. Until my Nemesis arrives I cannot say if the harder ply is still supplied. Ditto for the wing tube. The standard T6 alloy tube has proven up to the job in F1 and I'm making the assumption this has not changed. Installed in this model was a twin toggle switch with integral fuel dot. Looks quite fancy to a new modeller but I ditched that thing straight away. Toggle switches have proved to be notoriously unreliable in piston engine model aircraft. It wouldn't pass scrutineering.

Securing the canopy highlights another subtle difference between sport flying and competing. No significant change in flying characteristics should yours blow off in flight but this will result in a zero score in a heat. The design is such that if the bolts are torqued sufficiently the ply mounting flange bends then the metal thread bolts tend to unwind. Nylon bolts don't really help. Locktite on the metal threads isn't much

use either. Even if it dried in time before the first round of racing what if you have to access inside? The ply mount needs to be supported to prevent it bending when the bolts are tightened. It's a simple job. My models have a simple glider type canopy latch. Fiddly to do but worth it.

Each wing panel held in place by two bolts. If you happen to pop the blind nut out during transit it quite easy to fix. The bolts work fine but you should monitor this until you have a few flights on the model. I replaced them with socket head black nylon Dubro bolts to make tightening with a ball tip driver easier. Turned out that nylon is quite soft and the bolts unwound in a race at Cootamundra and I lost one wing at Cootamundra.

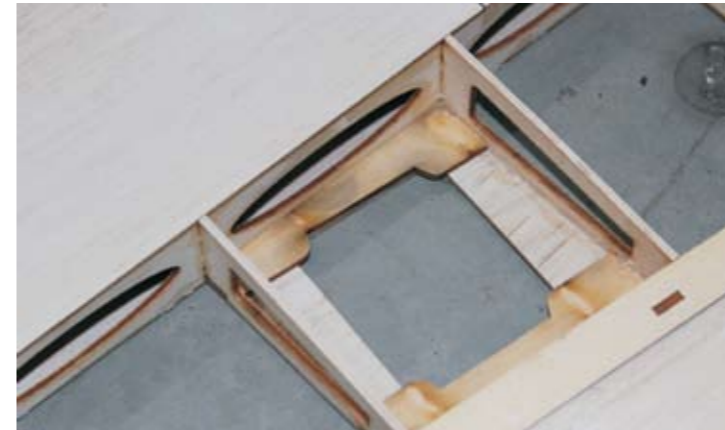
Two components that haven't needed attention or modification are the hinges and control linkages. Both survived aileron flutter at 200 plus kph booming the 55cc Nemesis around at the Shepparton Mammoth Scale when one of the



Ditched the Toggle Switch and went for the manufacturer's model

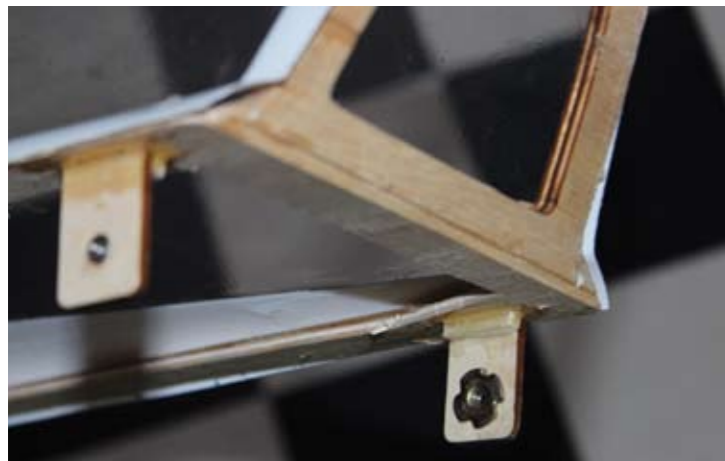


Wicking in thin cyano is the easiest way to prevent this coming loose



Add additional ply in each corner

Thin CA for the Cassutt wing plate too nut



Stiffen the canopy mounting flanges aileron servo mount assemblies fell out in flight. It hung off the aileron horn until landing. The ply plate doesn't provide much parent material for the screws to grip. A small ply doubler glued into each corner fixes that. Wicking thin cyano into the servo rail glue joints is the minimum fix but prising the joints apart and gluing with epoxy is better. No problem with those CA hinges. Provided you wick enough thin cyano in.

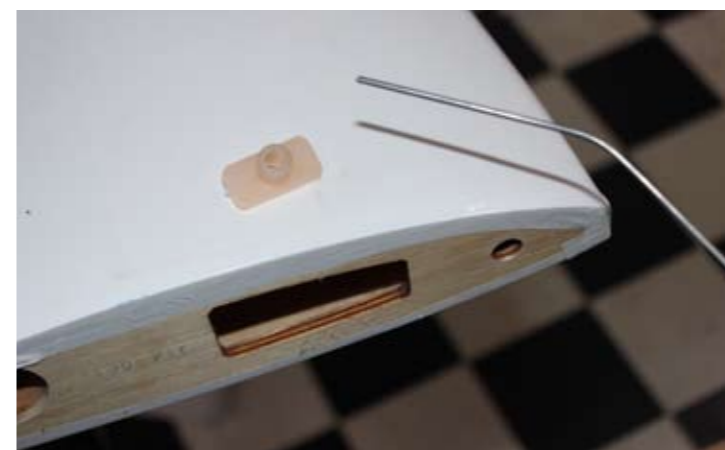
The standard factory cowl mounting method with the Nemesis will work in the short term but with the bigger engine the holes in the fiberglass flog out rather quickly. I've tried a number of methods and eventually settled on Dubro Cowl mounts in both Nemesis and Cassutt.



Keep an eye on the wing bolt torque

These last two items might be out of date because the soft ply fire-wall and undercarriage plate in the early production runs was replaced with what appeared to be significantly harder birch ply. Which I can verify if this remains the case when my new Nemesis arrives.

In the meantime should you happen to purchase a second hand model, which has that softer ply, the engine mount bolts remain tight but as the wood compresses over time the engine starts to move slightly. Left unchecked this can lead to a catastrophic failure if the glue joints in the fire-wall let go. Knocking out the fire-wall is easy. A couple of blows with a 16 ounce hammer will



Loose blind nut fix A

do it. Competitors have used aluminium sheet fibreglass and carbon fibre but laminating two pieces of 6mm aircraft or marine grade ply for a fire-wall and gluing 1.5mm ply doubler each side of the existing engine box has proven reliable with the OS GT 55 Nemesis and GT 60 Cassutt reviewed in RCM News magazine.

Ditto for the ply flange in the wheel spats. If the wood compresses over time the axle will rotate. Which can lead to tripping the model up. Replacing the wood and adding a simple a locating pin prevents the assembly rotating. During a



Loose blind nut fix B



Dubro cowl mounts



Fire-wall replaced with two pieces of 6.5mm aircraft or marine grade plywood with 1.5 mm ply doubler each side of the engine box

heavy landing, load from the two piece aluminium undercarriage is centered right in the middle of the ply undercarriage plate. I've managed to snap the this plate in half on both my Cassutts and the OS 160 powered Decathlon I raced in Red Bull at Cobram 2012. Removing the wood plate and replacing with higher grade ply is an easy fix.

The Nemesis is not so easy. Being so easy to land I haven't seen anyone having a problem therefore replacing the undercarriage plate is not a major consideration, Nevertheless, applying Murphies Law one could laminate a doubler over the top. If you manage a dumper and bend the soft aluminium undercarriage legs do not straighten them on the plane. Chances are you will break the glue joints or worse, break the plate in half. If the model club doesn't have a vice you can borrow my vice grips and use my tow bar. The one piece .60 size Dubro

fibreglass undercarriage worked fine on my 6kg Spacewalker and this is now set to be trialled in this F2. A two piece version is on my heavier Cassutt. These modifications have proven over time to produce a reliable airframe. In order to finish first one must first finish is the first requirement for racing enjoyment.

Understanding the rules is another. For example, final results are tabulated by dropping each competitors worst score. Losing a wheel, the canopy, a control surface or even the spinner in-flight the Jettision Rule applies. Which results in a zero flight score. One pylon cut adds ten percent to your flight score. Two cuts and it's a zero. So, if you get a cut it is wise to fly a little wider. In Formula 2 the twelve inch propeller pitch and the maximum RPM limit even up the playing field to give a first time competitor the same potential as the more experienced. Knowing how to operate your model is another.



Trialling Dubro's fibreglass undercarriage as a replacement for F1 and F2



Hard ply wheel spat flanges

In F2 the difference between 10 inches and 12 inches of pitch is around ten kph. Compared to sport flying setting the mixture running higher pitch props takes a little getting used to. Start off rich and slowly lean it out. What you are looking for is the engine to remain on song on the tenth lap. Even though it is widely recognized that petrol engines can often be left once the needle setting has been achieved sometimes a little tweak helps. For example the engine is on song for an early morning first round when



Bolt drilled through undercart leg acts as anti rotation pin

it is cold. Later in the day when the air temperature rises significantly burping and coughing indicates it needs to be leaned out slightly. Which is why all my racers can be tuned without having to remove the engine cowl".

Thanks Greeny. Next issue we will cover engine cooling in my F1 and race craft. But wait. There's more on the next page. Greeny's getting older. The Mexican's are getting a little teary eyed.

Scratch build Lil Misty Goodyear Racer project

Scratch Build Racer

“My affinity with the Goodyear class air racing planes started when I was a kid. Back in 1971 when I first began flying RC a few of the big names in Australia competed in both aerobatics and pylon at the Nationals. Let me tell you the sound of four racing engines wailing on the start line calling for my Dad against McGrane, Angus, Prosser, McFarlane, De Chastel is something to experience. Flying those things is even better

Success competing at the top level gradually got harder as both categories became more specialised. In 1972 the engines were pulling 18,000 RPM. Now its 36,000 and much of that credit goes to an Aussie by the name of Ranjit Phelan. Ram-jet’s engines and FAI Mustang designs blew everyone away in the late 70s.

Racing is brilliant fun. Even if you are not flying. It’s great to watch. I started in 2.5 cc Quarter Midget class and called for Dad in FAI F3D. Nostalgia has its place but that’s enough for now. Fast forward fifty years and for me that high pitch wailing has been replaced by the grunty sound of four big petrol engines. I’ve reached the stage of being a little over punting ARFs around and have always wanted to build a high speed scale model. Although the Cassutt isn’t as pretty as a Shoe-string, Rivets, Little Tony, or El Bandido it’s simple design suits my building skills to a tee.

During the Melbourne COVID lockdown, the first one with the curfew, I set about culling my fleet to get what remained airworthy. That program was quite successful. Then that old affliction common to many an aeromodeller took over. Alas, my recently aquired new Foka glider project and the F100 sitting in Dad’s garage I committed to have been put on the back burner.

In my defense I am also quite the bit over complicated aeroplanes at the moment. The glider is simple enough. No four flap wing to program, fixed gear spoilers and a tow release. Not so the Spitfire, Mr Smoother, Miles Hawk and F100. Like trail bikes or a boat by the time those things have been up-acked, trailer unhitched and cleaned a whole day is lost. Big model jet flying has the added bonus of being very much like operating a two stroke outboard speed boat. Twenty litres is enough for eight flights on the 13 kg thrust Super Sabre. My



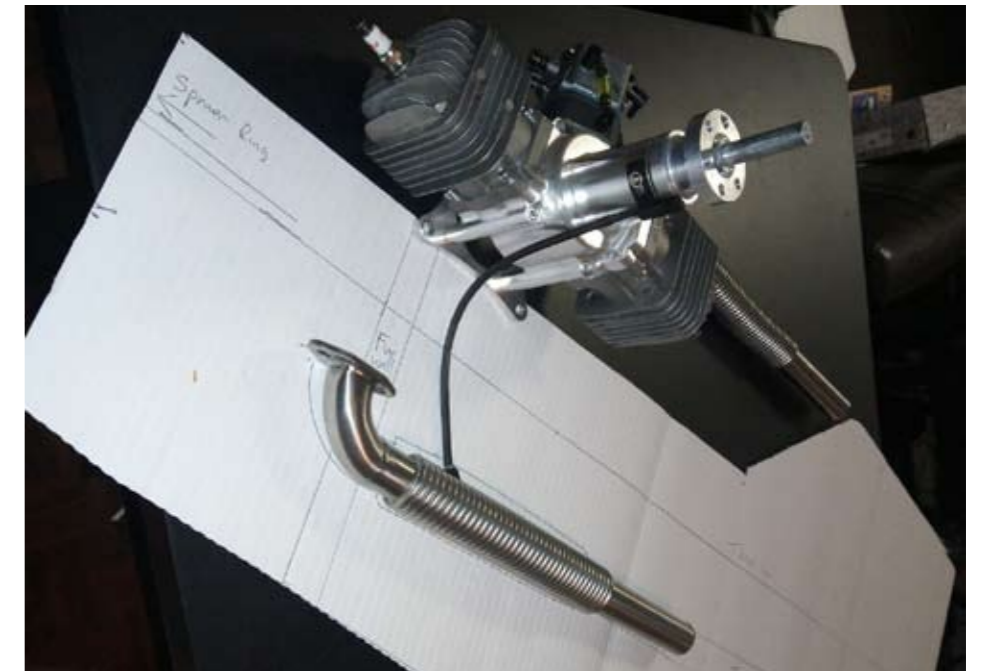
Measured from the three view



Mockup to avoid gross errors

mates now cart sixty litres to the field. Not only is this project fast, simple, and cheap to run, before I get too old it represents unfinished business.

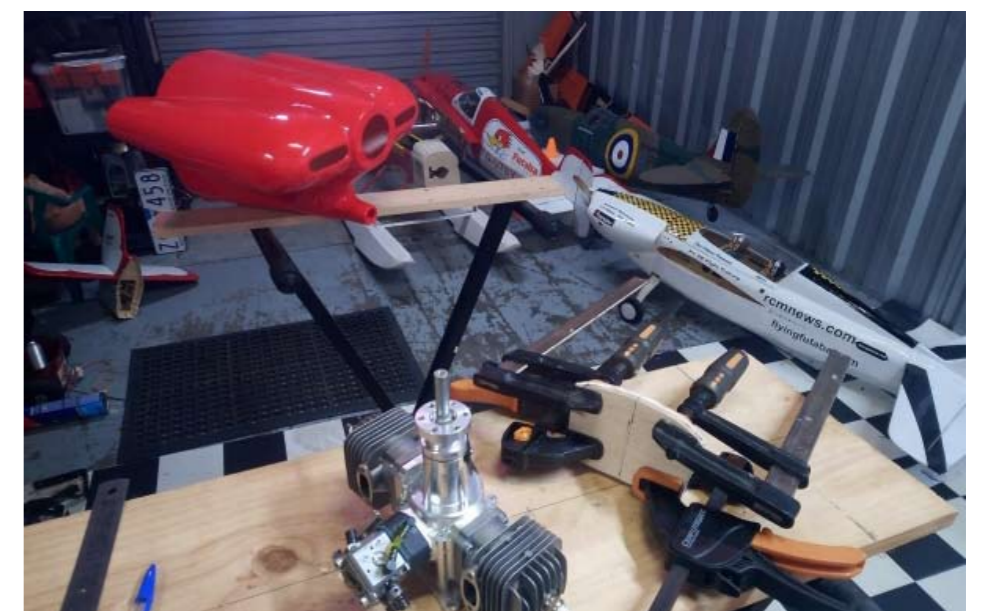
I’ve never bothered doing a plan to do a scratch build. Not that I’ve done many however the lesson learnt from my second 100 Lap Pylon Little Stick remains indelibly stamped. Designed from memory it proved unstable, due to lack of tailplane area. It was Kraft versus Futaba back then. We don’t speak of my first attempt when I took



Twin tuned pipes

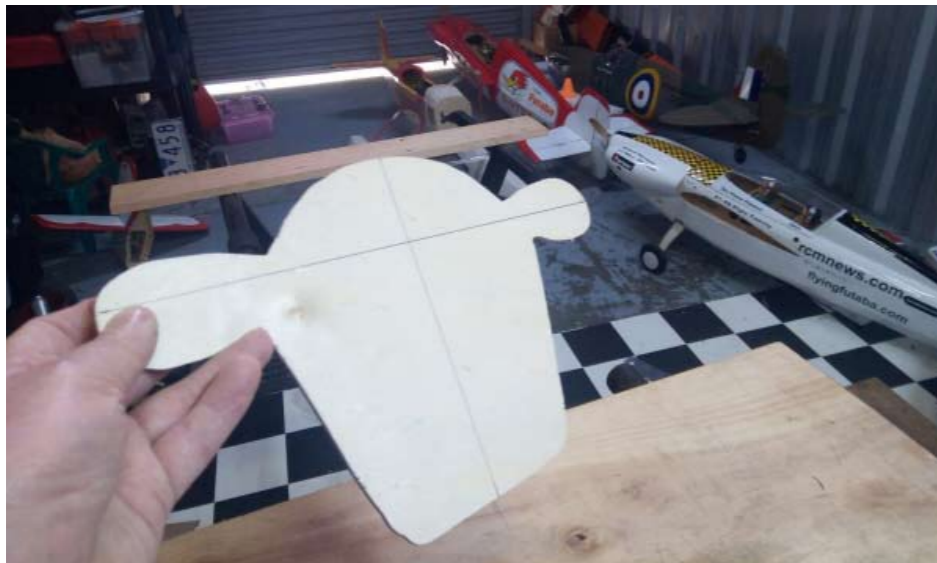


Splicing fuselage sides



Laminating the fire-wall

DIGITAIRE for SPEED GOODYEAR TROPHY RACE



Cowl rests on this former



Engine box with undercarriage and tank mounts



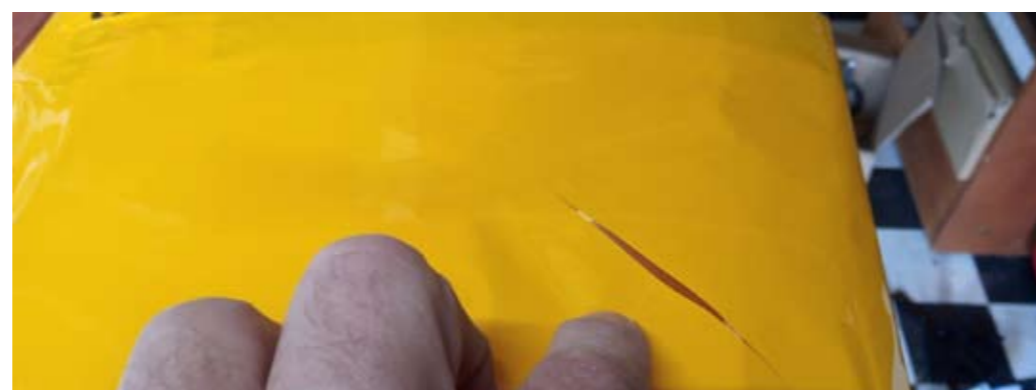
Twin tuned pipes



Indoor heli flying while the glues dries

out the Futaba Sales Australia entry on the first lap. My model was confetti which went through Tony Cincotta's engine. So this project is also based on the "If it looks right is usually is" standard. It began with a trip to Office Works for a roll of corrugated plastic to draw the outline. Which reduces the chance of a gross mistake.

To get thirty five percent scale a multiplication factor of 24.25 by the measurement from the three view soon had of the fuselage and wing profiles cut out. Checked the engine installation to route the twin exhaust of the process easy. Wing panels will be skinned with 2mm balsa. Ordering balsa online, as most of us have to these days, I added a couple of extra sheets in each size just in case of a particularly heavy



Oops. Rotor blades sliced the Stick wing quite nicely

or light sheet. Weight isn't really going to be a issue so organising someone with a vacuum bagger isn't required. That process is where you coat the skins and cores with epoxy then scrape as much off as you can. Virtually no epoxy left, if you place your hand on the wing skin and it almost feels touch dry that is about right. The wing goes back into the outer sleeve then into a sealed plastic bag connected to an air pump. One atmosphere ensures an even amount of air pressure and the upshot is light and incredibly strong.

I couldn't bring myself to throw out the spare Seagull Cassutt engine cowl and tailplane - fin assembly. The air intake profile differs slightly than Lil Misty but it's so close I'm using it. Empannage is a perfect match. Recycling is in vogue.



Ordered a lightweight PGB carbon wing joiner tube from Big Bruce Racing



25mm thick MH30 aerofoil for 2mm balsa skins



Basically I drew the datum line, worked out the fire-wall and front bulkhead, guessed the side and down thrust to mount the cowl then slowly worked aft



Waiting on a wing tube so the fuselage aft of #3 bulkhead will be completed



My fleet of racers

A few people are interested to do something new which is why we have just a few simple rules. Based on the Continental 0200 engine plus a little to cover the engine we chose a 300mm minimum cowl width. Easy to measure and almost every type was built to the minimum. Maximum of twenty foot wingspan on the full size is another.

On the model the 4 inch diameter wheel with 1.2 inch minimum width is easy to measure and easy to procure. The final criteria is a fuselage minimum at the bulkhead behind the pilot. Which will be based on Steve Wittman's Bonzo. He happened to design it around a small pilot so my Cassutt will be a little deeper but it won't be any wider. Incidentally Michael Lynch drew up a set of plans based the 3 views of the Whitman design in these reference books and the cowl dimensions are so far out of whack I was gobsmacked. The 300 mm rule fixes that.

Measured it up and ordered the wood but before I made a start the next job was to finish sorting out a few models for when we are allowed out again. Right now I am on the Sco-Mo-Dough being paid the \$750 per week to build model planes. I repaired my Ugly Stick and the Spacewalker too. Put that on floats and completed re-jigging the engine cowl on the Spitfire before the balsawood arrived for this project. The Miles Hawk and Mr Smoothie Golden Era models can wait.

Completion date depends on lockdowns but planning to have Lil Misty finished for the P&DARCS Scraeth and Kit Built Rally in November. Dad' Zirolu Spirfire will be there too. That is one big model which requires a model trailer. Dragging that out of the lock up puts it in the all day out trail biking - boat category. Another reason why a simple plug in wing Cassutt in a Corolla appeals.



Dad's DA 85 Miles Hawk Speed Six with Moki 60 Mr Smoothie



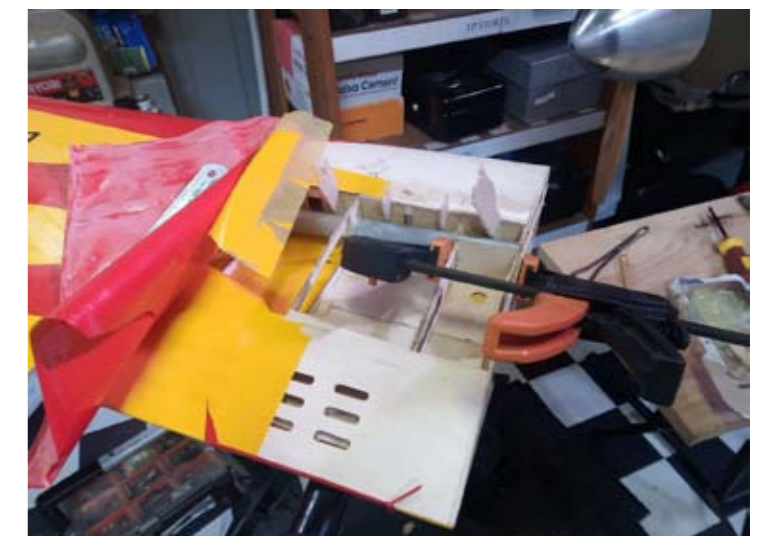
How to make an Ugly Stick uglier



Snoopy flies again



Like many repairs it was much less effort than first thought



We had the engine running but the gear was removed for another project



Paint the cowl, install the gear and she's good to go

THE FUTURE

Before before I started flying we used to go to Wagga for the Melb versus Sydney thing. I've been involved behind the scenes in a few big events since and where are they now? Los-



Runups - scale safety cones are cute ing Cobram was a real embarrassment for me. VMAA not seeing any value in a big capitol city event like Sandown remains one whereas that mindset is totally different at AMNSW. Having seen efforts fall over time and time again what needs to happen for Air Racing to continue into



It would appear I got bored and named the rest of the pilots. Or did I?



This one is authentic



RCM News Racing's F2 promo plane to attract new competitors



Couldn't help myself

but down the track the whole shebang lives and dies on availability of ARF products. Radio control systems are the heart of our hobby. So to kick the thing off and tie it in with a little history I called Brian Simpson (Futaba) and Steve Richardson (JR) to gauge their interest. Those are the two oldest brands that support competition in this country. A few of the Golden Era in-line protagonists remain keen so if you are interested in ARF availability, a click on each particular Seagull Model on the Buy Swap and Sell page will take you to the Model Flight website where you can enquire. It will take at least six months for any product to arrive. So get onto it now.

The financial boom at MAAA has been lowered to reduce operating costs. Sport flyers whinging about subsidising competition flyers getting louder events will have to pay their way. When we get out of lockdown I will be shooting a few promo videos as that is the preferred way these days. Information in a newsletter on what competitors are preparing was instrumental in getting the first Adelaide Golden Era off the ground. Now we do it websites and You Tube".

Thanks Steve, Until next time remember it's bank then yank. I must get onto that Rivets.