



HOLDFAST BUZZ

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modelflight RC



New Shed is the Boss

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Our Club's new tractor storage shed was completed in December by shed builders Shed Boss from Victor Harbor. Electrical work has been completed and a big thank you to volunteers who helped dig the trenches for the new cabling. Shed Boss were very generous and gave a refund on the shed because we are a community group. The new shed will provide ample storage for our tractor and other equipment.



General Meeting - Feb 1 Save the Date!

Join us at 7:30pm on Friday 1st February for our general meeting. From 6:00pm there will be a fun fly (weather permitting). See page 2 for more information.

The HMAC newsletter is your vehicle for sharing information, experiences, building projects, etc. with your fellow members. If you have photos of your latest model, a construction in progress or handy tip you'd like to share, please send it to Geoff/Chris at buzz@holdfastmac.asn.au for inclusion in a future edition of BUZZ.

From the President



Kingsley Neumann

“... Safety is always top priority for all Club Members. Please remember to check your equipment and to remain within the approved areas ...”

Welcome to 2019! We had a quiet start to the year with some extremely hot weather. Our dedicated band of volunteer Instructors were given a well-deserved week off over the holiday break but we are back into full swing again. The success of our LIFT program is amazing. Club Membership continues to climb and is now past the 120 mark.

The instructor team, led by CFI Kim Whitburn, is constantly trying to work out better ways of continuing the learning progress for students. A typical Sunday morning will see anything up to 12-13 students and four Instructors. We will try and split the numbers up a bit and one easy way to do that is to offer mid-week training. We do need more Instructors however. We welcome Phillip Norwood and Geoff Haynes to the group and there are others to be announced shortly.

Our HMAc Training Log book and syllabus is under review. It is very important that we follow the standard lessons and record achievements. Our training fleet of E-Flite Apprentices continues to serve us well despite some bingles. Ted Carter does a great job with repairs and spare parts.

Safety is always top priority for all Club Members. Please remember to check your equipment and to remain within the approved areas. I will publish reminders about safety in every newsletter.

The Committee continues to monitor and control all aspects of Club Operations. Perhaps it would be nice to have a wide open 50 hectare paddock with no obstacles, but we do not have that luxury. We do very well with what we have in our prime and convenient location. We will continue to enjoy our facility with the cooperation of you, the Members.

Our regular monthly competitions kick off again this Sunday, Feb 3rd, with pylon racing and combat.

Hopefully we will keep the interest up with the amazing Assassin flying wings. They can be flown with a bit of rough and tumble out in the middle of the field under controlled conditions. No harm done if you do hit the ground. Details of how to get involved in this exciting new development are available from Secretary Ian Faulkner or Committee man Chris Flynn. Not many newcomers have had the experience of actually building up their own plane and the Assassin electric flying wing is an extremely simple and fairly cheap way to get started.

The weather is not conducive to Working Bees in January but we will be calling out for help as soon as things cool down a bit. There is always work to do, so watch out for reminders. We are always complaining about the weather but please don't forget that the HMAc Field is available to Club Members with Solo approval seven days a week. Electric powered models are not subject to noise restrictions (unless they happen to be unusually powerful ducted fans or similar). Members can get a gate lock combination and a shed key from Mike Mildren and fly in the early morning or evening calm. Please remember to lock the shed and the gate when you leave.

One reminder remains: The Department of Environment can declare the O'Halloran Hill Park closed on Catastrophic Fire Ban days and the gate will be locked with a special padlock. A sign will be attached to the gate and the bans usually last from midnight to midnight.

Kingsley Neumann
President



February General Meeting

Please join us on Friday February 1st for a general social meeting. We will start with an evening fun fly session commencing at 6:00 pm, followed by the general meeting at 7:30 pm. There will be one serious and important item of business at this meeting concerning one of our members so please see your email for more information.

Recently Observed Violations of Club By Laws.

Sometimes we are not as careful as we could be in the operation of our models. Sometimes circumstances beyond our control can cause a model to be put in an unusual situation. It can happen to all of us. If you take care to only operate your model in accordance with the Club By-Laws, you will minimise the risk of endangering other people.

Here are some common ones:

1. Landing, taking off and overflying the runway closer than 10 metres from the flight line barriers.
2. Landing and taking off directly towards the flight line. Taking off to the NE, E or SE away from the flight line is OK, but the 10 metre rule should still be observed. Landing into the wind requires a great deal of care and you must not point your model directly towards the flight line. Aim to land on an angle, avoiding the flight line barriers if necessary. There really is plenty of room. Assess the flight conditions before launching and if it is not safe then wait for another day.
3. Flying too far north of the field and therefore infringing the Majors Road area.
4. Not displaying a Green Safe Tag to indicate an unarmed electric model in the sheltered areas. If you don't have a Safe Tag please secure your model with a ground anchor on the normal pits places for IC powered aircraft. Do not arm your electric motor in the shelters and certainly do not run any model engine in the shelters. Use the pits or the pit tables.
5. Leaving a vehicle for extended periods in the pits car park. This area is strictly for loading and unloading equipment. Your vehicle should be moved as soon as possible to the large car park. The purpose of this rule is to give everyone easy access. Nobody is permitted to park on the field or even next to the shelters at ANY time.



The Club By laws are available here:

<https://holdfastmac.asn.au/general-info/flying-rules-and-regulations/>

Don't forget your Pre-Flight Checks!



Hybrid Model Build - Finishing Touches - by John Jefferson

A lot of productive time is spent in the workshop when you make a flying model, although sometimes it seems you don't make progress when you have to stop work and figure out a solution to something that is a little complex. So it was when I spent time designing and making a removable top hatch for the hybrid.



I decided to make the hatch big enough to access the ESC and receiver as well as having enough room to secure and remove the LiPo battery before and after flights. In addition I included the cockpit as part of the hatch to keep the cockpit location where it looked best (a bit of aesthetic designing there). Making the hatch base fit exactly to the opening on top of the fuselage required accurate measuring which was drawn onto graph paper which in turn was used as a template. After cutting, shaping and gluing some balsa the hatch was almost complete. The next task was to figure out how to secure the hatch to the fuselage. I ended up copying the classic wing attachment method, that is, a dowel up front and bolt at the rear. Very secure indeed.



I made a simple cowling, deciding not to spend time trying to shape it into a typical sport aircraft appearance. Besides, I wanted easy access to the electric motor in case it needed maintenance or replacement.

The rest of the build comprised making the rear fuselage turtle deck, supports for attaching the fin and then the rear half of the air scoop to match the scoop's shape on the trailing edge of what was the Mustang's wing.

OK, ready for the covering. My left-over parts bin included lots of grey covering so that was the colour I'd use. The bonus was that the grey reasonably matches the Mustang's silver wing. Finicky bits first; tailplane, elevator halves, fin, rudder and top hatch. The rest of the fuselage followed – too easy. My usual method is a three step process; first, use a covering iron set on medium heat; second, increase the heat setting and go over the covering again; third, finish off with a heat gun being very careful not to hold the gun in one place too long. Covering film exposed to too much heat will very quickly destroy itself, as I found out some years back when I first started using it.

"... The next task was to figure out how to secure the hatch to the fuselage. I ended up copying the classic wing attachment method, that is, a dowel up front and bolt at the rear ..."

Right, what's next? Fin and tailplane glued into place. So far so good. Fit hinges to the elevator halves and rudder and glue them in place. Oh no! I forgot to fit the "U" shaped joiner to the elevator halves. I intended to use a single control rod to the joined elevator halves but that cannot work without the joiner. The easy solution was to make a bifurcated control rod, i.e. "Y" shape so that both elevator halves are operated by a single rod.

Getting closer to the finishing line now. Time to fit the electrics; motor, ESC, receiver, rudder and elevator servos. Set all the control surface movements then add low rates (my preference being 75% of high rates) and some exponential (aileron and elevator 20% each, none for rudder). I'll see how those settings are during the test flight and make adjustments if needed.



With my planning I expected the centre of gravity to come out near enough to one third of the wing's mean aerodynamic chord. However, it ended up tail heavy! Too late I realised that in my calculations I forgot that the plan I used as a guide was for a glow engine model, and my electric motor was not as heavy as a glow motor. Oops! My intention was to use a 4S 2200 mAh battery, but now I'll use a 4S 4000 mAh battery as that will give me extra weight up front. Even with the bigger battery I had to add 180 grams of lead. Getting a bit too heavy now; coupled with a higher wing loading than I expected the maiden flight will be very, very interesting indeed. That's what can happen when you modify a plan.

Just when I thought I'd finished the build I realised the undercarriage legs were too short and would result in the propeller mowing the grass during take-off and landing, something it wasn't meant to do. The plan's glow motor would have used a smaller propeller than my electric motor's prop. Another easy fix and longer legs were fitted so now there's plenty of prop clearance.

Finally it's ready for the maiden flight. I'll make sure the conditions are just right before I commit to the sky. Hopefully my expectations will be satisfactorily met. Let's wait and see!



Flight Trimming a Model Aircraft - by Kim Whitburn



It's quite common that a lot of people aren't sure how to properly trim their model aircraft. It's not just a matter of trying to fly straight and level while clicking the various trim buttons to adjust.

Below is a guide on how to accurately trim a model aircraft. Of course if you are an inexperienced flyer, it is advisable to get either an instructor or skilled RC pilot to assist you on trimming your model.

Flight Trimming a Model Aircraft

TRIM FEATURE	MANOEUVRE	OBSERVATION	CORRECTION
Engine Thrust Angle	From straight flight chop throttle quickly	<p>A. Aircraft continues level path for short distance</p> <p>B. Aircraft pitches nose up</p> <p>C. Aircraft pitches nose down</p>	<p>A. Thrust is correct</p> <p>B. Decrease Down thrust</p> <p>C. Increase Down thrust</p>
Centre of Gravity, Longitudinal Balance	From level flight roll to 45 Degrees and neutralise controls	<p>A. Aircraft continues in bank for short distance</p> <p>B. Aircraft pitches nose up</p> <p>C. Aircraft pitches nose down</p>	<p>A. Trim is correct</p> <p>B. Add nose weight</p> <p>C. Increase tail weight</p>
Yaw	Into wind, do inside loops using elevator. Repeat test doing outside loops from inverted entry	<p>A. Wings level throughout</p> <p>B. Yaws to right in both inside and outside loops</p> <p>C. Yaws to left in both inside and outside loops</p> <p>D. Yaws to right on inside and left on outside loops</p> <p>E. Yaws to left on inside and right on outside loops</p>	<p>A. Trim is correct</p> <p>B. Add left rudder trim</p> <p>C. Add right rudder trim</p> <p>D. Add left aileron trim</p> <p>E. Add right aileron trim</p>
Lateral Balance	Into wind, do tight inside loops	<p>A. Wings are level and aircraft falls to either side</p> <p>B. Falls off to the left in loops and worsens as loop tightens</p> <p>C. Falls off to the right in loops and worsens as loop tightens</p>	<p>A. Trim is correct</p> <p>B. Add weight to right wing tip</p> <p>C. Add weight to left wing tip</p>
Aileron Rigging	From level flight pull to vertical clime and neutralise controls	<p>A. Aircraft continues along same path</p> <p>B. Aircraft tends to go to inside loop</p> <p>C. Aircraft tends to go to outside loop</p>	<p>A. Trim is correct</p> <p>B. Raise both ailerons very slightly</p> <p>C. lower both ailerons very slightly</p>

Reference: <https://www.4-max.co.uk/pdf/How%20to%20Flight%20Trim%20a%20Model%20Aeroplane.pdf>



Flying Achievements

Award	Member	Instructors
Solo	Bryan Christie	Dave Whitten, Kingsley Neumann



2018 Annual Awards

Ross Lloyd Memorial Award For Outstanding Services to the Club 2018



Ted and Nat Carter
For Outstanding Service to the Club and engraved shield for Perpetual Trophy 2018

President's Appreciation Award 2018



Mike Mildren
For Dedicated Service to the Club

Flying Competitions



Open Class Pylon
First Place 2018
Graham Paterson (514 Points)



Standard Class Pylon
First Place 2018
John Jefferson (198 Points)



Electric Pylon
First Place 2018
Greg Leigh (369 Points)



WW1 Combat
First Place 2018
Barry Grivec (11 Points)
WW2 Combat
First Place 2018
Barry Grivec (6 Points)

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Newcomers to R/C modelling are catered for by setting aside every Sunday morning from 10 am when qualified instructors will teach all aspects required for the safe operation of the model. During the training period no other models are allowed to fly, ensuring the least possible distractions to the student.

Pylon & Combat Competition Results

Due to the Holiday season, no competitions were scheduled in December or January. Competitions resume on Sunday February 3rd.



Welcome!

The Club extends a warm welcome to new members Lachlan Cooper, Bryan Christie, Darrell Phillips, Peter Schwerzel, Robert Howard and Kai Duffield who have joined in recent weeks. We are pleased to have a bunch of new members and hope you all feel welcome.

UPCOMING EVENTS

- Fri Feb 1 - General Meeting
- Sun Feb 3 - Pylon & Combat
- Wed Feb 6 - MASA Meeting
- Wed Feb 20- Committee Meeting
- Fri Mar 1 - General Meeting
- Sun Mar 3 - Pylon & Combat
- Wed Mar 6 - MASA Meeting
- Wed Mar 20 - Committee Meeting
- Sun Apr 7 - Pylon & Combat



Instructor Roster (Jan-Mar)

Date	Instructor	Instructor	Assistant
FEB 3	Kingsley Neumann	John Jefferson	Geoff Haynes
FEB 10	Kim Whitburn	Luke Szarek	Ted Carter
FEB 17	Kim Whitburn	Kingsley Neumann	Geoff Haynes
FEB 24	John Jefferson	Luke Szarek	Ted Carter
MAR 3	Kingsley Neumann	John Jefferson	Geoff Haynes
MAR 10	Luke Szarek	Kim Whitburn	Don Nairn
MAR 17	John Jefferson	Ian Faulkner	Ted Carter
MAR 24	Kim Whitburn	Kingsley Neumann	Geoff Haynes
MAR 31	John Jefferson	Kim Whitburn	Ted Carter
APR 7	Kingsley Neumann	Kim Whitburn	Geoff Haynes

The following instructors are often available and are invited to assist when they can:
 Shawn Jones, Ian Cole, Ian Williams, Ashley West, Dave Whitten

The Club is fortunate to have a dedicated band of Instructors and Assistants who offer their services to learners almost every Sunday. We would like to have more people on the Roster to ease the workload. If you can help please speak up and we can arrange the necessary Instructor Course. Gold Wings standard is a prerequisite for all Instructors.