Holdfast Model Aero Club Inc.

Volume 10, Issue 3
May 2019

HOLDFAST BUZZ

Cherokee Champ!

Here is Kai Duffield after maidening his first model an EFlite Piper Cherokee. With the help of John Jefferson they got the plane trimmed up nicely and it flies great.

As you can see, Kai was stoked and parents Peter and Sarah were also very happy with the model's performance.

Keep up the good flying Kai!

Inside this issue:

Geoff's awesome display and Minister David Spiers trying out the simulator (inset)

The Club was represented at the Glenthorne National Park open day by Geoff Haynes, Ian Faulkner and Kingsley Neumann. We had a nice booth setup with photos and a Flight Simulator provided by Geoff. Our display was quite popular, especially with young kids. Minister David Spiers popped in for a quick fly. Thank you to the guys for representing HMAC

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 Chris at buzz@holdfastmac.asn.au for inclusion in a future edition of BUZZ.

From the President


Kingsley Neumann

"...Treasurer Geoff Haynes does a great job with the figures and the meeting accepted his budget without any changes and more importantly no increase in Club Fees..."

Rain, at long last! The field is turning green and hopefully those cracks will start to close. Unfortunately, we have lost a few days of flying due to the weather but we have also been able to enjoy some perfect autumn weather with light winds and sunshine.

Chief Flying Instructor Kim Whitburn has noticed some errant flying at the field. Please read his article and note that our Flying Rules are there for the safety of all members and observers.

I want to thank some people for their extra efforts at the Club. Henry Tomczyk has been busy with his whipper snipper and blower keeping the pits area very neat and tidy. Henry and Don Nairne have also been busy laying strips of buffalo grass on the edge of the pits shelter. New Member Terry Gold was seen with the barrow and shovel repairing cracks recently. John Tonkes in his untiring manner, has laid pavers around the engine test bench area. Don Nairne sourced the pavers at an exceptionally low price AND transported them to the field. Mike Mildren is often seen at the field busily attending to weed control and now fitting out of the shelves in the new shed. Rumour has it that Mike will be flying soon too! The Club will continue to thrive with Members willing to take on these manual tasks. It is much better to attend to work on a regular basis than it is to wait until a working bee. The committee will revive the idea of a Jobs list on the white board inside the kitchen area.

At the last Committee meeting it was a pleasure to meet elected Marion City Councillor Matthew Shilling. Matthew gave us a good rundown of what the council may be able to help us with. There are a number of information sharing meetings that we are invited to and there is a possibility of further grants through Council or State government funds. We were told that the Soccer Fields proposed for an area east of our field have been cancelled.

The BMX track will go ahead on the northern side of Majors Road adjacent to the Southern Expressway.

Our leased area continues to serve us well for our activities and Marion Council is pleased to have us involved in the Sporting Precinct along Majors Road.

The General Meeting on the 3rd of May was presented with a very clear indication of past, present and future spending. Treasurer Geoff Haynes does a great job with the figures and the meeting accepted his budget without any changes and more importantly no increase in Club Fees. We now await the MASA AGM to be held on Friday 31st of May to hear if the affiliation, including Insurance will be reviewed. As soon as we know the final figure, Geoff will circulate a notice of renewal to all Members which must be paid by 30th June. We do not have firm plans for a major project at the moment and in any case our preferred path for expenditure would be to seek grants rather than use Club funds.

The HMAC AGM is scheduled for Friday 2nd of August and that is when we elect all Office bearers. We have had the benefit of a very steady and hard working Committee. It is, however time to start thinking about a succession plan for the principle positions. People do become worn out and circumstances can change for anyone of them. The best way to cover this is for some younger people to get involved by nominating for Committee. With our Membership at an all time high we surely must have some eager people out there who want to get involved with management and ensure that we continue to prosper and enjoy our wonderful hobby.

Kingsley Neumann

President

Save the Dates

Join us for our **General Meeting** on **Friday 7th June**. The topic for this meeting is repairing foam models being presented by expert repairer, Ted Carter. There will also be videos and information about other building techniques. The following general meeting on **Friday July 5th** will be on Telemetry and programming ESCs.

Hybrid Model – Finished at Last by John Jefferson


John Jefferson

"…The Hybrid's weight reduction surgery was reasonably successful and now it was time to see how it would perform in the air. Hopefully much better given that it was 16% lighter than before …"

The Hybrid's weight reduction surgery was reasonably successful and now it was time to see how it would perform in the air. Hopefully much better given that it was 16% lighter than before.

Once again I waited for a suitable day to undertake the next test flight. The weather gods were kind early one Sunday morning so the commitment was made to take to the air. Pre-flight checks done, taxi onto the runway, power on and away she went, up into the wild blue yonder. A few clicks of right aileron trim as well as up elevator trim and she was flying hands-off; phew! The lighter weight was immediately apparent as she handled the flight conditions better than before. The landing was also easier given the reduction in stall speed. Two more flights followed and I was happy with the result.

Back in the hangar when I did the post-flight checks I noticed a couple of the weights I had in the cowling to get the centre of gravity correct had detached and were held magnetically to the casing of the electric motor. The weights I use are car wheel weights from my local tyre shop. They come in segmented sections with a sticky backing, protected by a plastic cover which peels off, and you attach the weights in a convenient position. I always thought they were lead weights, but in fact they are made of steel (probably coated with zinc); which is why they are stamped "Fe" – ferrous metal. That explains why the weights were attracted to the electric motor's magnets. I figured the reason the weights became unstuck was because their flat base did not make good contact with the round cowling.

So what to do, how do I fix this? I tried bending the weights to conform to the cowling's round shape but that did not work. The best solution would be to make another cowling with flat internal surfaces where the weights could be securely attached. The spare parts bin yielded enough balsa offcuts to make the new cowling. Some measurements were taken and drawn onto graph paper which served as a template to get the shape right. Balsa pieces were cut and sanded to shape and then glued together. Once the glue had set a final sanding and covering film was applied. Next step was to figure out how to attach the cowling to the front of the fuselage. I used a short length of kebab skewer inside the top rear of the cowling (similar to a wing locating dowel to centre it) and glued a small piece of thin ply to each inner side of the cowling so that the ply extended to each inner side of the fuselage. A small piece of thin ply was also glued to each outer side of the fuselage matching the position of the inside ply. This would provide a firm base for screws to hold the cowling securely. I then mixed up some two part epoxy thinned with methylated spirits and brushed it on the inside of the cowling to provide a good base for the weights to stick to. I must admit the new cowling looks better than the first one I made.

Déjà vu; here we go again, another test flight. This was a non-event, just a click of down trim to the elevator and she performed as well as could be expected. Two more flights and I was happy with the result. The post-flight check showed the weights were stuck firmly inside the cowling.

Now that there's no more to do to the Hybrid let's see how long it takes before I get itchy fingers and start contemplating another project.

THE LEGEND RETURNS

Introducing the DX8 G2. It gives you the same unbeatable combination of DSMX® signal security, intuitive programming and superb ergonomics as the original, plus:

- Programmable Voice Alerts
- 250-Model Memory
- Wireless Trainer Link
- Antenna Diversity
- 4-Model Types: Air, Heli, Sailplane and Multi-Rotor
- Model Sharing with Other Spektrum G2 Transmitters

See everything the DX8 G2 can do.
Go to modelflight.com.au right now.

SPEKTRUM
Innovative Spread Spectrum Technology

modelflight RC

VISIT US
130 Goodwood Rd, Goodwood

CALL
08-8186-4250

SERIOUS FUN.®

Flight Line Etiquette

"...All of us from time to time should review the relevant section of our By-laws to jog our memory and to reinforce HMAC field etiquette to our less experienced members ..."

While visiting our field recently I and a few others observed and experienced some poor on field conduct.

While everyone makes mistakes from time to time we need to always be mindful of other members flying their models and we all need to conduct ourselves according to our own club rules to ensure safety and maximise enjoyment.

The observations included:-

- Models taking off and landing in close proximity (a metre or so) to the flight line.
- No notification to other pilots flying at the time of their intentions to fly ie. "On the field" or "Taking off".
- Not adhering to the circuit pattern (left or right) being flown at the time.
- No communication with other pilots regarding their flying intentions (low level aerobatics & figure 8s). Of course the obvious happened with a pilot flying right hand circuits having to take evasive action as his plane was on a head on collision course with the other plane doing figure 8's.

All of us from time to time should review the relevant section of our By-laws to jog our memory and to reinforce HMAC field etiquette to our less experienced members.

Some relevant parts of our HMAC By-laws dated 4th August 2017

10 The Flight Line

10.1 A series of moveable barriers are provided for protection of Members on the flight line and pit area. When operating RC models from the flight line pilots should stand behind designated protective barriers.

10.2 When it is necessary to walk onto the field to get behind a model for take-off or to retrieve a model, the pilot should check the position of other airborne models and notify intentions by calling out 'ON THE FIELD'. When safe, the pilot may enter the area whilst keeping a watchful eye on other models. The pilot should return to the flight line or to the pits as soon as practicable.

10.3 Models must not be operated close to other pilots on the flight line. Models should not be landed close to the flight line. Take-off, landing or a flypast should never be closer than 10 metres to the flight line. Landings and take-offs shall not be made directly towards the flightline or the pits.

10.4 Taxiing inside the pit area is prohibited. Taxiing behind persons flying at the flight line is discouraged because pilots are concentrating on flying. Models should be kept close to the pits barriers. Models should not be taxied between individual barriers on the flight line or the pits.

Flight Line Etiquette Cont...

"...When operating RC models from the flight line pilots should stand behind designated protective barriers..."

10.7 A green ribbon Safe Tag (as described on the Holdfast Model Aero Club website) which ensures that the battery is not connected to the speed controller must be used to indicate that an electric model is not armed. An electric model not correctly displaying a Safe Tag is considered to be armed. Electric motors shall not be armed under the shelters. No armed electric model is to be left unrestrained or unattended in the pits.

10.8 The following protocols should be observed by all pilots:

10.8.1 Prior to taxiing onto the field in order to take-off, and if there are other aircraft flying, the pilot should notify intentions by calling out 'ON THE FIELD' or 'TAKING OFF'.

10.8.2 If an engine fails in flight the pilot should call out 'DEAD STICK' to alert other pilots. On hearing the 'DEAD STICK' call, other pilots should position their aircraft clear of the dead stick aircraft, giving that pilot landing priority.

10.8.3 Before landing a pilot should call out 'LANDING' and include the direction of landing unless it is obvious to all.

10.8.4 A landing aircraft has priority over any departing aircraft.

10.8.5 If there is more than one aircraft flying, pilots shall conform to an agreed circuit pattern (left hand or right hand).

10.8.6 Take-off and landing to the north requires a right hand circuit. Take-off and landing to the south requires a left hand circuit.

10.8.7 Certain wind directions may require operations not aligned with the normal north/south runway. This is permitted provided the model is not pointed directly at the flight line, the pits or the Public Area.

Flying Achievements

Award	Member	Instructors
Gold	Andy Hollitt	Ian Faulkner, Kim Whitburn
Silver	Michael Maloney	Ian Faulkner, Kim Whitburn
Bronze	Kris Duda	Ashley West, John Jefferson

Safety Reminder - Beware of Propellers!

An accident involving injury to a Club Member recently highlighted the need for all of us to take care when operating model aircraft. In this case it was an electric powered model that the owner was retrieving after a successful flight. Even though the owner had set up a throttle cut switch, he did not use it to ensure ground safety. The throttle control stick was knocked causing the model to move and strike the owner in the leg. There was a great loss of blood and a distressing injury. Fortunately other Club Members gave immediate assistance until the ambulance arrived.

Please remember to use a throttle cut setting (ask an Instructor if you are not sure how to do this on your transmitter)

Always treat propellers as possibly being "live"

Approach your model from behind when picking it up and keep clear of the prop!

Tech Buzz

3D Printing Made Easy

I sometimes want a 3D printed part for a project. Do I want to spend the money on a high-end 3D printer and various filaments? Do I have anywhere to put it? Do I want to spend (frustrating) hours learning how to use it? No, No and No Way!!
Fortunately there's an easier way... just text Tony Brown (Brighton) on 0416290929. Here's how it works:

'Hey Tony, I'm after a part off Thingiverse. It's a Fury Wing Front Bumper. You can make it out of what you think is good and colour doesn't matter, cheers, Andy.'

'Hi Andy, no worries. I'll print it in grey PETG tonight. It will be $15.'

In the morning Tony sends me pictures of the printed parts (he also did a spare). 'I'll drop it off this arvo.'

'Great, I'll leave $15 in the letterbox.'

So I had the bumper within 24 hours, fitted it to the airframe and sent Tony a picture of it with a thank you.

Have a look on Thingiverse, there's heaps of stuff for model aircraft and quadcopters and if you see something you want, print it the easy way!

Andy Hollitt

Warbird Retract Geometry (excerpt from Dave Platt article c 1970)

Most modellers are mystified by the geometry involved in the "rake forward when down – rake back when up" type of LG so very common especially in WW II.

The Spitfire, Mustang etc have this setup. Actually, it's quite simple. The LG unit or pivot line must be mounted at a dual angle in the wing.

Here's how to calculate what this angle must be:

a) Measure the angle of rake forward when the gear isdown, relative to a vertical through the wing chord. Example shown in figure 4 shows 8 degrees.

b) Measure angle of rake back when the gear is up, relative to the span line. Example in figure 5 shows 21 degrees.

c) Add these angles together and divide by 2. Eg (21+8)/2=14.5.

d) The pivot line must now be mounted in the wing at 14.5 degrees incidence within the section (figure 6) and 14.5 degrees toe-in (figure 7).

It will be found that if the modeller mounts his pivot line to this dual angle, the wheel will track true forward when down and lie flat in the wing when up.

Stephen Davies

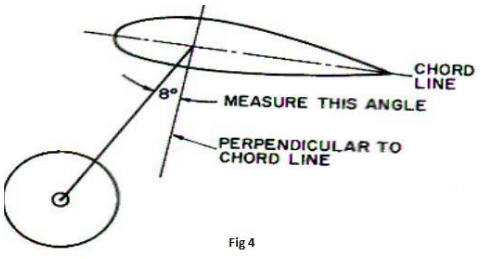

Fig 4

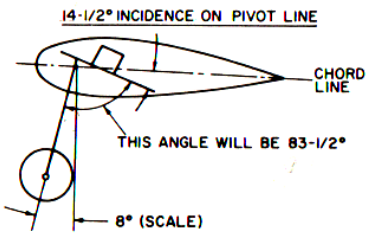

FIG. 6

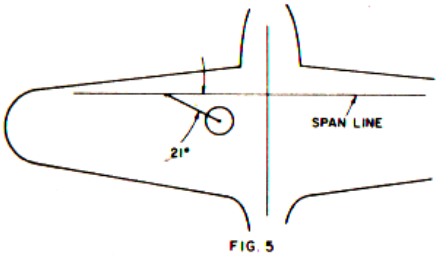

FIG. 5

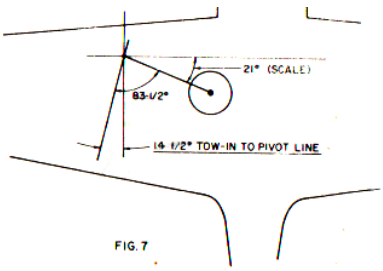

FIG. 7

HOLDFAST MODEL AERO CLUB
P.O. Box 94
O'Halloran Hill SA 5158
Club Phone: 08 8377 2708
Web: www.holdfastmac.asn.au
Newsletter Editor
Buzz@holdfastmac.asn.au

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.

UPCOMING EVENTS

- Sun Jun 2 - Pylon & Combat
- Wed Jun 6 - MASA Meeting
- Fri Jun 7 - General Meeting
- Wed Jun 19- Committee Meeting
- Wed Jul 3 - MASA Meeting
- Fri Jul 5 - General Meeting
- Sun Jul 7 - Pylon & Combat
- Wed Jul 17- Committee Meeting
- Fri Aug 2 – Annual General Meeting
- Sun Aug 4 – Pylon & Combat

Welcome!

We have some new members! Welcome to HMAC David Koukourou, Mike Hallsworth and Alan Springford. We hope you find being part of our club enjoyable and rewarding.

Pylon & Combat Competition Results

April 7th

Open class pylon
Tom Jacobsen (Noarlunga) 93
Pete Roberson (HMAC) 89
Graham Paterson (HMAC) 75

Standard class pylon
John Jefferson (HMAC) 51

Electric class pylon
No races

WW I combat
Barry Grivec (HMAC) 6
John Jefferson (HMAC) 1

WW II combat
Barry Grivec (HMAC) 1
John Jefferson (HMAC) 1

May 5th

Open class pylon
Tom Jacobsen (Noarlunga) 105
Graham Paterson (HMAC) 81
Pete Robertson (HMAC) 77
Pete Smyth (HMAC) 69

Standard class pylon
John Jefferson (HMAC) 72
Barry Grivec (HMAC) 32

Electric class pylon
Pete Smyth (HMAC) 86
Vin Pike (HMAC) 66

WW I combat
Barry Grivec (HMAC) 1
John Jefferson (HMAC) 1

WW II combat
No missions flown

Instructor Roster (Jun-Aug)

Date	Instructor	Instructor	Assistant
JUNE 2	John Jefferson	Kingsley Neumann	Ted Carter
JUNE 9	Geoff Haynes	John Muckalt	Don Nairn
JUNE 16	Kingsley Neumann	Kim Whitburn	Ted Carter
JUNE 23	John Jefferson	Ian Cole	Don Nairn
JUNE 30	Kim Whitburn	Geoff Haynes	Ted Carter
JULY 7	Kingsley Neumann	John Jefferson	Don Nairn
JULY 14	Geoff Haynes	John Muckalt	Ted Carter
JULY 21	Kim Whitburn	Ian Cole	Don Nairn
JULY 28	Kingsley Neumann	Geoff Haynes	Ted Carter
AUGUST 4	John Jefferson	Kim Whitburn	Don Nairn

The following instructors are often available and are invited to assist when they can:
Shawn Jones, Ian Williams, Ashley West, Dave Whitten, Philip Norwood, Andy Hollitt, Trevor Smith and Ian Faulkner.
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.