Holdfast Model Aero Club Inc.

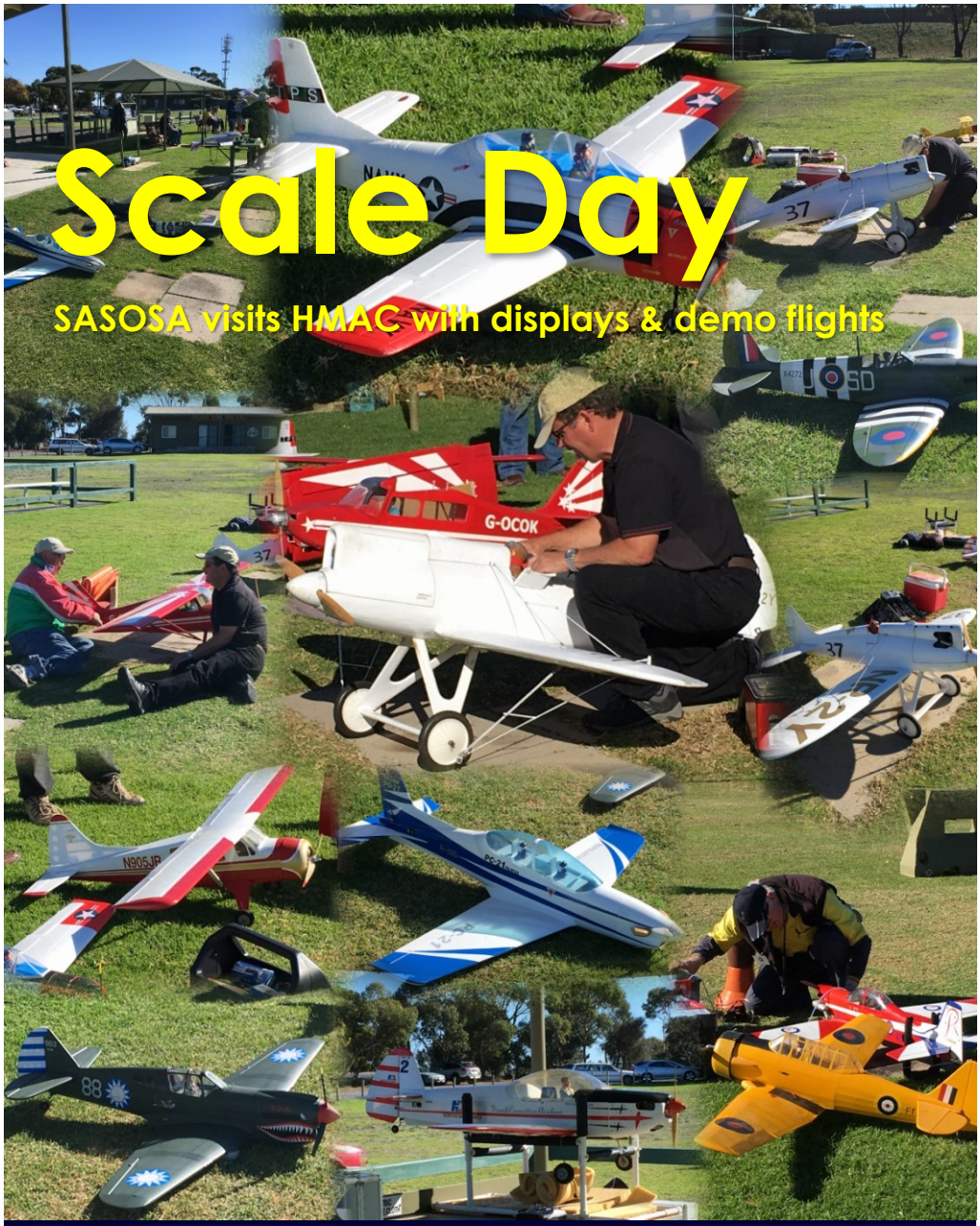
Volume 8, Issue 3
May 2017

HOLDFAST BUZZ

Inside this issue:

June 2nd - Save the Date!

Join your fellow members at the HMAC General Meeting on Friday June 2nd. Steve Nelson will be talking about his experiences in full-size aircraft - both flying and building!



We were blessed with fine weather for a change when Scale Aircraft Association of SA members brought along their models for both static display and demonstration flights on May 21st

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

From the President

Kingsley Neumann

"... remember that if you have used our HMAC training and assessment process, the Solo Standard only authorises you to fly certain models and only at our field ..."

The Committee has decided to review the Club By-Laws. It is amazing how any document of this nature can quickly become out of date. Members will be informed of any proposed changes and will have the opportunity to debate and eventually vote for or against them at a General Meeting.

The most obvious changes in recent times have been the almost complete acceptance of 2.4 GHz radios and the sudden appearance of Multi Rotor "Drones". There is obviously a lot of interest among our Members as well as from outside the Club. As I have previously stated the place to setup and operate a drone is in the designated Helicopter Training Area. However it is quite easy for drones with their various tracking abilities to get out of the area and head towards the no fly zones such as Lonsdale road. So please be careful and learn to understand all of the control functions.

Traditionally we have accepted that HMAC fixed wing flyers might appear at the field with a helicopter. Members have usually sought help from more experienced Club Members for the initial flights and then gone ahead with self-teaching. This system is probably the best way to go with Drone set-up and practice. It is important to get advice from experienced Drone flyers from within the Club. The Internet can be used as a guide but there is no substitute for one on one guidance and Instruction from a fellow Club Member. This is the direction in which we will head when introducing new By-Laws.

The MAAA Wings accreditation is an excellent way of improving your flying and recording your status. I have been looking through the registered Members for their Wings achievements and it is surprising how many do not have any recorded Wings achievements. I know that most of these people are very competent flyers but I would like to see some Wings standards recorded. Sometimes our Members come to us from a self-taught background and just have not got around to doing the "test" Believe me it is not difficult to get Bronze or Silver. The Gold is not too bad either and just serves to tidy up some of those less disciplined manoeuvres.

Please also remember that if you have used our HMAC training and assessment process, the Solo Standard only authorises you to fly certain models and only at our field. If you want to attend a Fun Fly or similar event at another MAAA Club it is very likely that you will be asked to show your MAAA Card and Wings Status. Wings Tests can be done on any Sunday, preferably after the Flying Training sessions. The MAAA wings system is explained in the following links:

- MOP027 - Award of Wings and Instructor Rating
- MAAA016 – Power Bronze and Silver wings
- MAAA017 – Power Gold wings

Having drawn your attention to the very comprehensive MAAA site you might also notice the rules for operating Drones. The most basic rule for general flying of these machines is that Visual Control is required. There are exceptions and the national MAAA conference is being held this month in Hobart to discuss many aspects of drone operations.

And just finally, all Members are reminded that if you lose control of your flying machine and crash in any of the "No Fly Zones" you are required to notify a Committee Person as soon as practicable. Accidents do happen even to the best of us. We don't play the blame game; hopefully we can all learn from such incidents.

Kingsley Neumann
President

Multi-rotor Flying

The HMAC By-Laws are currently under review to accommodate helicopters and multi-rotor aircraft. In the meantime multi-rotor models must follow the helicopter rules. Hover practice in the area south of the shelter shed is permitted at any time provided no conflict with the flight line and remain 30m from the access road and persons not involved with the flight. Circuit flying by multi-rotors on the field is subject to normal fixed wing traffic. Demonstration flights can be made on the flight line by arrangement with other users at a mutually convenient time. Experienced Club members are available to assist any new multi-rotor flyers in setting up their machines. Ashley West, Dave Whitten and Ian Williams. have volunteered.

Ground School - Part 1 - by John Jefferson

This article is intended to help the club's newer members understand how our model aircraft respond to control inputs, as well as a refresher for the club's experienced members.

Do you remember getting a "Principles of Flight" hand-out from the club? It's been available for a number of years and provides an explanation of the basic principles of how an aircraft flies. Essentially the hand-out is a condensed version of the BAK (Basic Aeronautical Knowledge) publication which student pilots use when preparing to fly full size aircraft. Although we fly model aircraft, the principles are the same as they apply to full size aircraft, i.e. control function, forces acting on the airframe, climbing, turning, landing etc.

If you are a newcomer to flying model aircraft, it is strongly recommended that you familiarise yourself with the primary and secondary effects of the controls. If you are preparing to undertake your bronze or silver wings test, as well as demonstrating your proficiency in the air, the club also requires you to sit for a theory test which includes some of the elements outlined in the Principles of Flight. So, let's have a look at some of those elements.

Primary function of the controls

Ailerons

The ailerons control the angle of bank and rate of roll. If you move the stick a small amount to one side the roll is gentle. If you keep on moving the stick the roll is faster. Once you have achieved the desired angle of bank you need to centre the stick otherwise the model will keep rolling, and when inverted will likely start a spiral dive. Not recommended, particularly when the model is at low level, unless you are intending to execute a roll and take corrective action to stop it losing height.

"... when setting up for a landing, attitude and airspeed is controlled with the elevators while the rate of descent is controlled with the throttle ... "

Elevators

The elevators control airspeed. Yes, that's correct; once the model is flying it's primarily the elevators. If you raise the nose, the airspeed decreases, if you lower the nose the airspeed increases. The airspeed changes with every change of attitude. Accordingly, the elevators control the airspeed and attitude of the nose.

Rudder

The rudder controls movement of the model in the yawing plane, i.e. moving the nose left or right. The rudder is used to counteract slip (sideways slipping in towards the centre of the turn) or skid (sideways skidding outwards from the turn). When entering or exiting a turn the aileron and rudder are used together – left aileron and left rudder, or right aileron and right rudder. We are fortunate that modern transmitters can be programmed so that the rudder can be automatically operated in the correct direction whenever the ailerons are used. But beware, this may not be useful in situations such as aerobatic manoeuvres or when coming in to land. If you are thinking of setting up this function on your transmitter, it would be worthwhile to make it switchable, i.e. turn it on or off as needed.

Throttle

The throttle controls altitude. Yes again, that's correct. Altitude is maintained with an appropriate power setting. Reduce the power and the model will begin to descend. For example, when setting up for a landing, attitude and airspeed is controlled with the elevators while the rate of descent is controlled with the throttle.

So, to summarise, the four primary controls are:

- **ailerons** – which cause rolling/banking;
- **elevators** – which cause pitching movements;
- **rudder** – which causes yawing; and
- **throttle** – which controls altitude.

In the next instalment we'll look at some secondary effects of the controls. In the meantime, keep those thumbs busy on the transmitter sticks and burn some methanol/petrol, or squeeze some electrons out of your battery packs.

Flying Achievements

Solo	**Chris Flynn**	Instructors - Kingsley Neumann, Dave Whitten

E2K Electric Pylon Racing

Are you up for a challenge? Would you like to try electric pylon racing?

The club's competition day on the first Sunday of every month (except January and December) includes an electric powered pylon racer class as well as the traditional standard and open class glow motor powered pylon racers. The rules for the electric racers are based on the English E2K specifications which allow a 4S (four cell) battery to be used as the power source. This creates a very fast flying model which requires a lot of skill to control properly; being somewhat similar to the open class racers.

By contrast the standard class racers are "toned down" which makes them slower and therefore easier to control. It has been suggested a "standard" electric pylon class be introduced as a means of giving pilots an opportunity to race using an entry level model that is easier to fly than the "full house" racer. The key difference between the existing E2K set-up to the proposed set-up is a smaller battery, i.e. a 3S instead of a 4S battery. An added benefit is that the cost per battery should be less; you can't argue against that.

So, what are the requirements? You can check out the E2K rules on the following website: www.ukpylonracing.co.uk

With respect to the proposed "standard" electric class, the main things you need to know are:

Batteries
Any battery may be used, with a maximum of **three** cells (3S) and that, including any attached wires and connectors, does not weigh more than 270 grams.

Electric Motors
The only motors permitted will be:
Turnigy SK3536-1400kv Aerodrive XP Outrunner
Overlander Thumper V2 T 3536/05 Outrunner
NTM Prop drive series 35-36A 1400KV

Propeller
The only allowable propellers are:
Radio Active 8x6 propeller
APC 8x6 (203 x 152) i/c propeller

Speed controller
Your choice

If you feel like building a racer yourself the specifications on the above website provide all you need to know. If you want to speed up the building process then club member Bob McEwin can help you out by selling you a short kit which you need to finish off and fit out with the electric components.

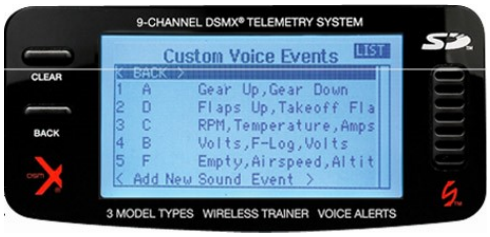
Come and check us out at the next competition day. The HMAC pylon racers would welcome you to join in the fun. You won't regret it.

Annual General Meeting - Friday August 4th

Please consider nominating for a Committee role at the upcoming AGM. All positions will be declared vacant so you can nominate for any position. Nominations in writing are preferred but will be accepted on the night. Treasurer John Boath is not available for re-election, so if you have some accounting knowledge and are familiar with MYOB, please consider nominating for this role.

Programming Your Spektrum Radio

As the majority of our members own Spektrum radios and the feature set becomes more comprehensive as new models are released, we are contemplating conducting an introductory course on programming Spektrum radios for anyone who may be interested.



Topics to be covered are:

- Introduction to Spektrum Radios
- Radio Jargon
- Basic Tx setup
- Detailed setup
- Trainer Modes
- Programmable Receivers
- AS3X setup

The target audience for the course is members who are new to the hobby and/or have recently purchased a programmable Spektrum radio and are unfamiliar with the basics of setting the various parameters to optimise control of their models.

The class would be held at the HMAC Clubroom and would run for approximately 3 hours.

If you would like to attend such a class, please contact Geoff Haynes (vicepresident@holdfastmac.asn.au) to register your interest. If we get enough takers we will organise a date and time suitable to the majority.

General Meeting Presentations

To give members a clearer picture of what to expect at our Monthly General Meetings, we make best efforts to publish a list of upcoming presentations for several months ahead. The currently scheduled presentations are listed below.

Month	Theme	Presenter/Details
June 2	Full-size Flying	Steve Nelson
July 7	General Discussion on Drones	Open to all attendees
Aug 4	Annual General Meeting	

Welcome to New Members

We extend a warm welcome to **Bob Weatherill** and **Michael Stoop** who have joined the club in recent weeks. We hope you continue to participate in this enjoyable, sometimes challenging, sport.

Looking to Buy or Sell R/C Gear?

Why not use our free Buy & Sell service on our Web Site. Send details & photos to Geoff Haynes — buzz@holdfastmac.asn.au

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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

April 2

Open class pylon
Graham Paterson (HMAC) 91
Tom Jacobsen (Noarlunga) 89
Finn Kanck (Noarlunga) 1

Standard class pylon
No races flown

Electric class pylon
Bob Tait (HMAC) 102
Bob McEwin (HMAC) 69
Drew Ames (HMAC) 57

WW I combat
No missions flown

WW II combat
No missions flown

May 7

Open class pylon
Pete Robertson (HMAC) 99
Graham Paterson (HMAC) 93
Tom Jacobsen (Noarlunga) 90
Finn Kanck (Noarlunga) 85
John Yianni (Connie) 85

Standard class pylon
John Jefferson (HMAC) 72
Craig Spratt (Connie) 66
Les Mepham (HMAC) 53

Electric class pylon
Greg Leigh (Noarlunga) 114
Vin Pike (HMAC) 109
Bob McEwin (HMAC) 85
Bob Tait (HMAC) 31
Ian Cole (HMAC) 18

WW I combat
No missions flown

WW II combat
No missions flown

SCHEDULE OF EVENTS

- Fri June 2 - General Meeting
- Sun Jun 4 - Pylon & Combat
- Wed Jun 7 - MASA Meeting
- Wed Jun 21 - Committee Meeting
- Sun Jul 2 - Pylon & Combat
- Wed Jul 5 - MASA Meeting
- Fri Jul 7 - General Meeting
- Wed Jul 19 - Committee Meeting
- Fri Aug 4 - Annual General Meeting

Instructor Roster (June - July)

Date	Instructor	Instructor	Assistant
MAY 28	Peter Robertson	Kingsley Neumann	Ted Carter
JUN 4	Max Thomas	John Jefferson	Geoff Haynes
JUN 11	Peter Robertson	Kingsley Neumann	Ted Carter
JUN 18	Max Thomas	John Jefferson	Geoff Haynes
JUN 25	Peter Robertson	Kingsley Neumann	Ted Carter
JUL 2	Max Thomas	John Jefferson	Geoff Haynes
JUL 9	Peter Robertson	Kingsley Neumann	Ted Carter
JUL 16	Max Thomas	John Jefferson	Geoff Haynes
JUL 23	Peter Robertson	Kingsley Neumann	Ted Carter
JUL 30	Max Thomas	John Jefferson	Geoff Haynes

The following instructors are often available and are invited to assist when they can:
Luke Szarek, Shawn Jones, Alan Ayles, Ian Cole, Ian Williams, Graham Paterson

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.