Holdfast Model Aero Club Inc.

Volume 13, Issue 4
July-Aug 2022

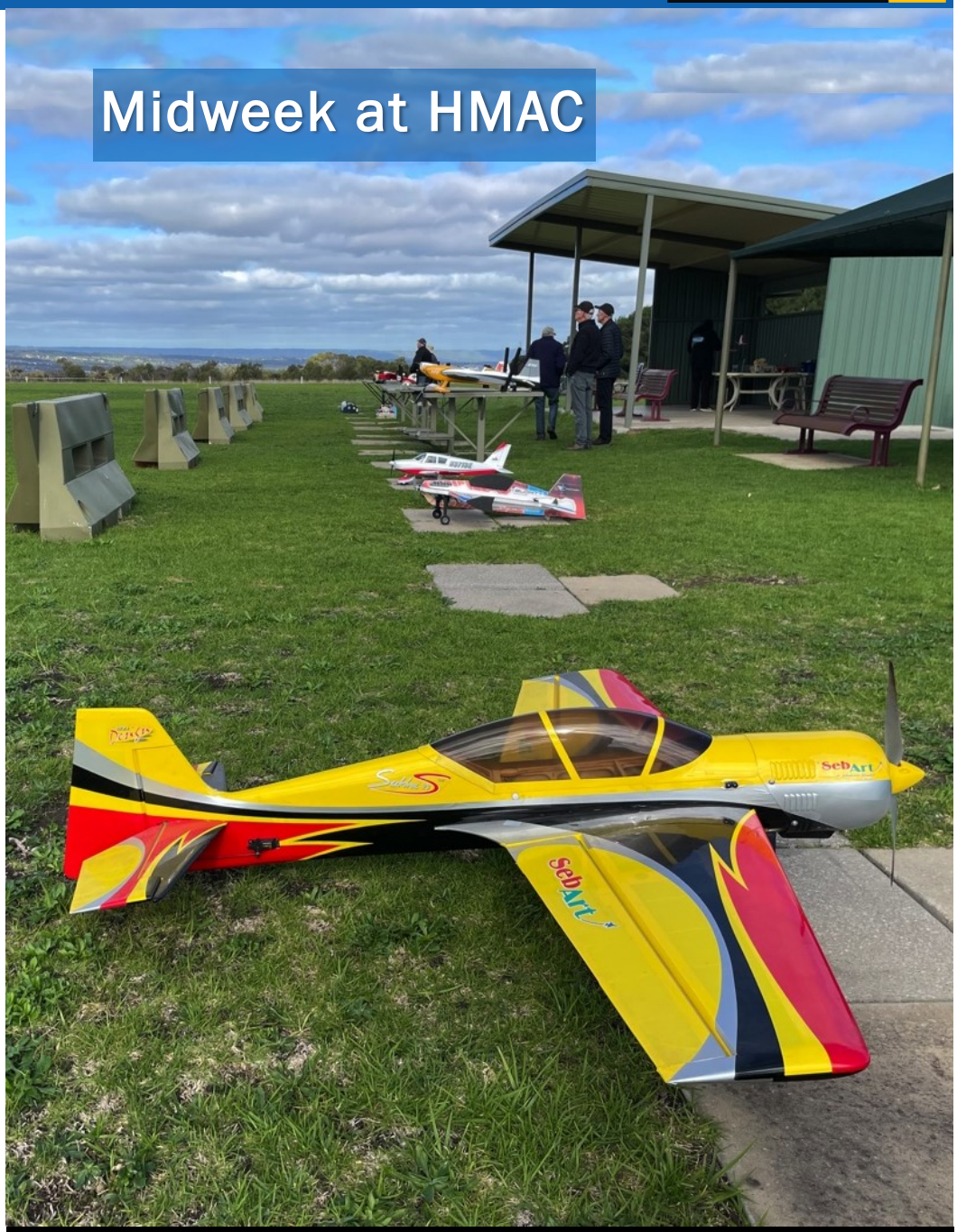
HOLDFAST BUZZ

Inside this issue:

Annual General Meeting
Friday Aug 5th
ZOOM

Join us online and get involved in running the Club

Midweek at HMAC



A rare calm but cold day attracted a nice array of models

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

Terry Gold

"It has been an honour to serve this club"

From the President

I've just finished writing my last President's report for the AGM. You have probably heard that I won't be standing for President again. It has been an honour to serve this club. I'm not going anywhere, and I expect to be flying more in the future, so I will be around. I also plan to help in other ways besides being on the committee. If you are reading this prior to the AGM, please consider volunteering some time to help if you aren't doing it already.

In my AGM report, I talked about how we as a committee are always trying to balance safety with fun. Flying model aeroplanes is probably much safer than playing soccer or football – I'm guessing – but we must work at safety. A moment's inattention with even the smallest foamy can result in an injury to ourselves or others. That said, crashes will happen, and some say if you aren't crashing occasionally you aren't learning. One of my instructors said that every plane has an expiration date, but we just don't know when it is.

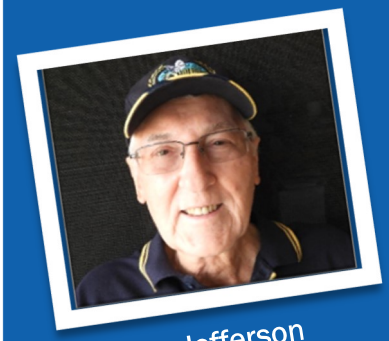
That got me thinking about my own crash and safety record. I soloed my first model aeroplane in March of 2019, so I'm still pretty new at this. I've had three crashes that were write-offs, and one was far enough over the fence that an incident report was requested. Although that one turned out to be a mechanical failure, it was still pilot error because I didn't get the ESC servo connection plugged into the receiver securely. From that crash, I learned to double-check servo connections and to fly within our flight boundaries to avoid crashing out of bounds. If you aren't sure where the boundaries are, we now have an updated map of the field posted in the shelter at the flight line, so please check it out.

This past Sunday was the latest round of the MASA Trophy competition. It's a fun fly event designed to get people out and flying at other clubs. Geoff and I participated in the event before this one, but we couldn't get anyone to volunteer for Sunday's event, so HMAC was marked as a no-show and awarded zero points. The next competition will be at our field, so with the home field advantage, I hope we can get some of our best pilots to participate and make up for last Sunday. Failing that, I will have to fly again!

The last couple of times I've been at the field the flight line has been very busy and everyone was having fun and flying safely. Although we have elected to have our AGM on Zoom, it seems like the cold weather isn't keeping many from getting out and flying when we get a sunny day. I'm looking forward to flying with you all and I very much appreciate the chance I've had to serve the club. Although you can stop calling me "President" I will still answer to "Kenny" as I plan to continue looking after the dunny, so let me know if it needs attention.

Cheers,

Terry



John Jefferson

Forces of Nature

vs

Model Planes

Some more

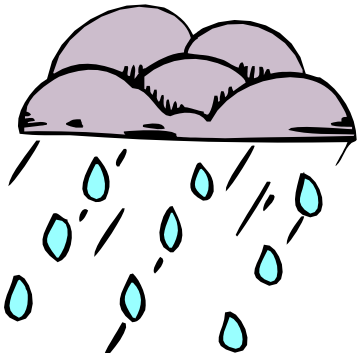
Principles of Flight

from John Jefferson

Pylon Racing Results

5 June 2022

Event cancelled due to weather



3 July 2022...

Open class pylon

Pete Robertson (HMAC) 103

Tom Jacobsen (Noarlunga) 100

Greg Leigh (Noarlunga) 87

Graham Paterson (HMAC) 58

Standard class pylon

John Jefferson (HMAC) 74

Bryan Christie (HMAC) 64

Barry Grivec (HMAC) 2

Electric class pylon

Trevor Pearce (Connie) 101

Greg Leigh (Noarlunga) 91

Ground School – Control Secondary Effects

In the previous article we looked at some principles of flight relating to the primary function of controls. This time we'll look at some secondary or further effects of controls, in particular the ailerons. As before, 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.

As we know, the ailerons control the angle of bank and rate of roll. Let's say we are flying straight and level and wish to turn to the left. The normal procedure would be to bank to the left and apply enough up elevator to stop the nose from dropping (some left rudder may also be required depending on the actual model); then level the wings and elevator once the turn is completed. So why does the nose drop when in a bank and no up elevator is applied? It's because the equilibrium of the aircraft has been upset. In straight and level flight the aircraft is in equilibrium – the lifting force of the wings is equal to the weight of the aircraft and the

Continued next page

Ground School *(cont)*

thrust of the propulsion unit is equal to the drag generated by the aircraft. Bank to the left and as a result:

- the lifting force is tilted out of the vertical and is not able to balance the weight;
- the aircraft will commence a sideslip towards the lower wing;
- the up-rushing air will tend to yaw the aircraft in the direction of the slip, i.e. nose down.

Oops, the aircraft is going down fast. Some corrective action is needed so you level the wings and pull up, but not too aggressively as you could over-stress it.

To summarise, the *primary function* of the ailerons is to control the angle of bank and rate of roll, while the *secondary or further effect* of using the ailerons is yaw.

Now you know why it's imperative that a turn is balanced with enough up elevator to keep the nose from dropping.

Aileron drag is another aspect that may have an adverse effect on the aircraft. It generally occurs on certain aerofoil sections when aileron is applied. When banking the aircraft (let's do it to the left again), the left aileron goes up and the right aileron goes down, and the aircraft rolls to the left, so far so good. Now the interesting bit; since the whole wing is at a positive angle of attack, the up-going (left) aileron reduces both lift and drag by reducing the effective angle of attack and camber. At the other end of the wing the down-going (right) aileron increases lift and consequently generates greater drag. The differences in lift created by the ailerons bank the aircraft, but the unequal drag causes a yawing movement in the opposite direction (in our case, to the right). Not a smooth way of flying.

How do you overcome this? Use rudder when turning – as mentioned in the previous article, modern transmitters can be programmed so 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.

Another way is to incorporate some differential between the ailerons, i.e. arrange for the upward moving aileron to travel further than the downward moving aileron. Again, modern transmitters can be programmed to do this, but you need a separate servo on a separate channel for each aileron. Alternatively you can set this up mechanically on a single (central) servo or two separate servos. The trick is to set the servo arm forward from centre so the resultant movement of the aileron is more upwards than downwards. If using a single servo for both ailerons you would need a special type of drive horn. It could be a disk or a multi armed horn. The idea is to hook your ailerons so that the circular movement results in a small downward aileron movement and simultaneously has a large upward movement on the opposite aileron. It sounds a bit complicated but just check with your friendly Instructor to set it up correctly.

It may be a model but the principles that apply to its flying ability are the same as apply to full size aircraft. Knowing these principles and being aware of what you can do to better control your model will make it a pleasure to commit to aviation and make you a better pilot. You've got to be happy with that.

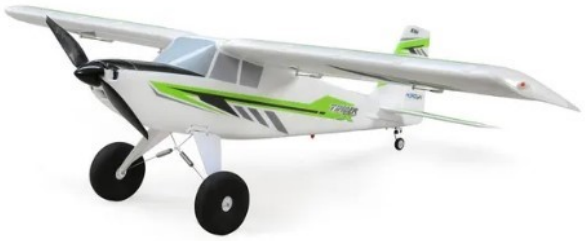
Postscript for followers of my Extra 300s saga

At last, the new fuselage has been completed and equipment installed. Appropriate settings have been made on elevator, rudder and ailerons. The (third) maiden flight will take place when the weather is ideal; but given our wet and windy start to winter it may be a while. No hurry, it'll happen in good time. Watch this space.

John Jefferson

Here is another straight talking article from our retiring CFI Andy Hollitt, who has done a great job over the past two years.

Andy has put in a huge effort to keep the LIFT training system on track despite the weather and to organise improvements with equipment.



AGING AND FLYING

From the Chief Flying Instructor

Andy Hollitt

Unfortunately, our flying doesn't seem to improve with age, quite the reverse! But there are ways we can continue flying safely as we get older. We must accept and adapt.

It may be time to 'downsize' from that nitro powered warbird (with very effective camouflage!) to a plane which flies slower and is easier to judge orientation. Don't tell anyone, but many of my planes have asymmetric colour schemes - one wing tip painted red and dark 'invasion stripes' on the underside of just that one wing.

We're fortunate to be able to wander in to Modelflight and buy an EPO foamie which flies great. Many of these planes have electronic stability, which you can use to assist you flying safely for many years to come, or you can switch it off.

Weighing under 2Kg and being made of EPO, these planes mitigate the risk of damage in a crash and are surprisingly robust. They don't disintegrate like a balsa model and if you pick up all the pieces you can often glue it all back together. Suggested models are the Apprentice, the Turbo Timber and the Multiplex Fun Cub and Easystar.

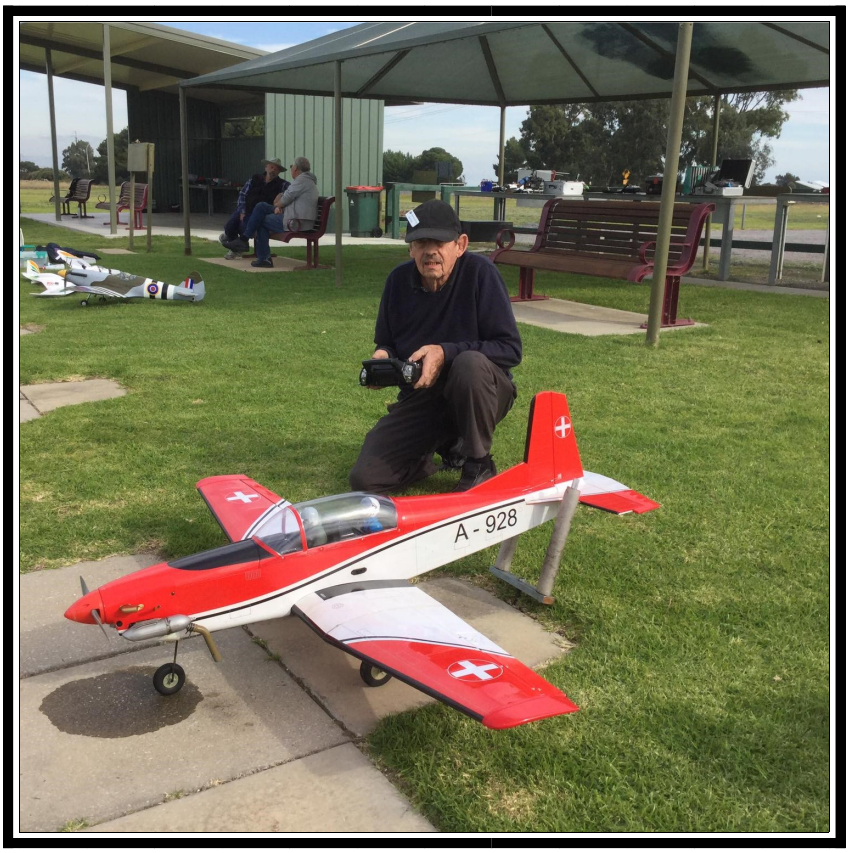
Recency is also an issue. If you haven't flown for 6 months and then take to the sky with a brand-new Spitfire, it's likely to end in tears. Instructors can help you. They are willing to test fly and trim your model. You can also fly with an instructor using a buddy box system and a club Apprentice to get your confidence back. Instructors will also stand next to you on the flight line to offer words of encouragement and to help where necessary.

Consider the fun you can have chasing lift with a motor glider. Gone are the days of bungee and winch launch. Hit the throttle and up you go. Once you've reached height and throttle off, the prop folds back and you're gliding. They are easier to keep up with as they fly slow and are easier for orientation with such a large wingspan. Tip: paint the entire underside of just one wing. Suggested model is the Radian.

Downsizing even further we go to the range of UMX models which weigh in the order of 150gm. You're not going to kill anyone with one of these! They fly great, even with a little bit of wind and are fun to fly. The suggested Model is the UMX Timber.

Andy

"Norm had been associated with HMAC for over 25 years"



Vale Norman Tottey

It is with great sadness that the Club wishes to advise the passing of well known and popular member, Norm. He was that familiar cheery bloke who could be seen on just about any day that was at least half suitable for flying. Always willing to have a chat about his latest project, Norm had been associated with HMAC for over 25 years and will be sadly missed. Norm was aged 86 years. The following information was provided by his son Graham:

"He fell ill on the 22nd of June and was transported to Flinders Hospital for treatment. His condition deteriorated and he went to sleep on the 7th of July and did not wake up the following morning.

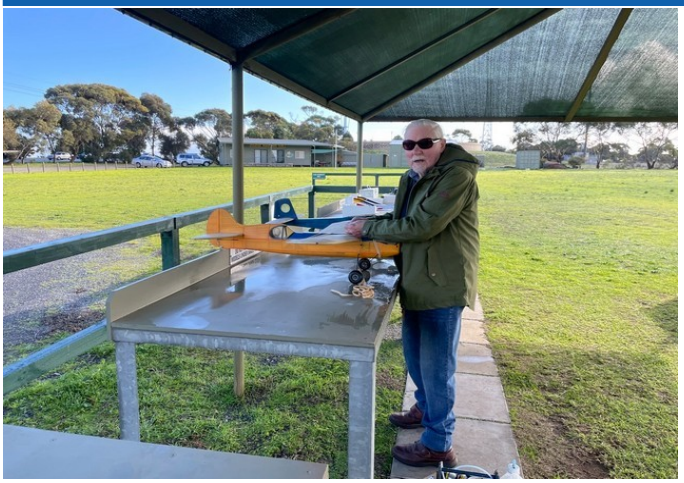
Norman was a long term member of the Holdfast Model Aero Club and loved spending time "up the hill" flying his models and chatting with all the other flyers. He loved his gilders, power planes, helicopters, drones, boats and the odd car/buggy as well and he was always looking for the next new toy to buy and play with. Unfortunately, not all his planes made it back in one piece but that never dampened his enthusiasm and his favourite tool "super glue" was used to fix almost everything from broken planes to cuts from propellers that probably needed a stitch or maybe five.

He will be greatly missed by his 3 children Susan, Jane & Graham, his 2 grandchildren Christina & Michael and his great granddaughter Rebecca".

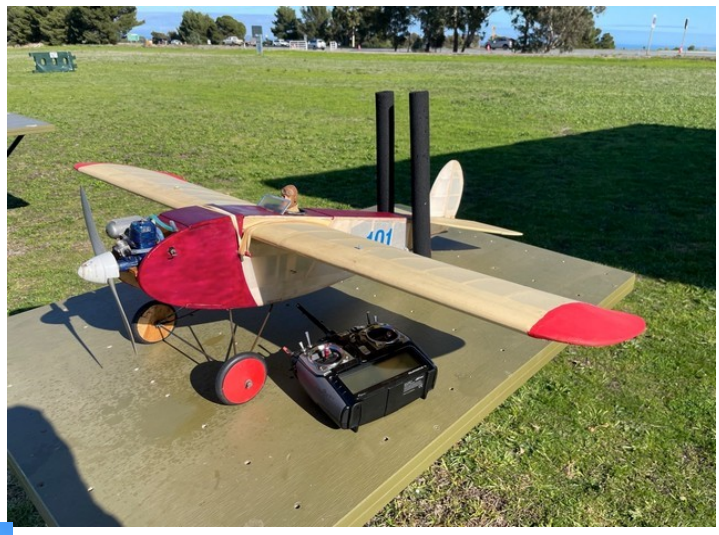
Footnote: All of Norm's modelling collection has been kindly donated by his family to HMAC for disposal.

Kingsley Neumann - Secretary

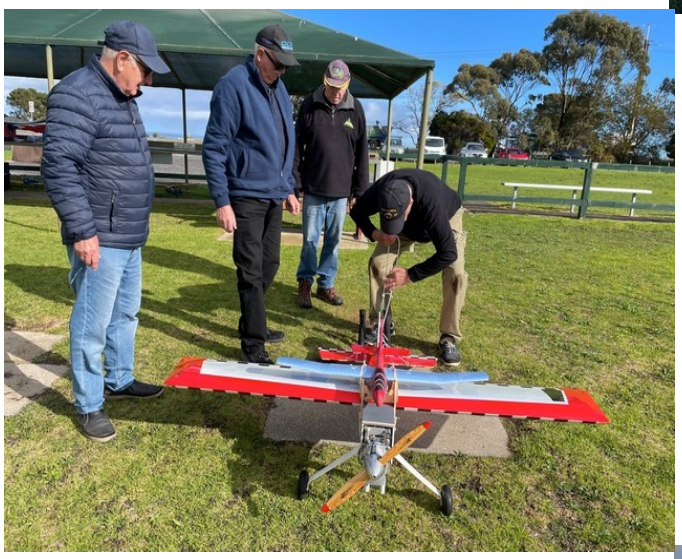
On the Flight Line



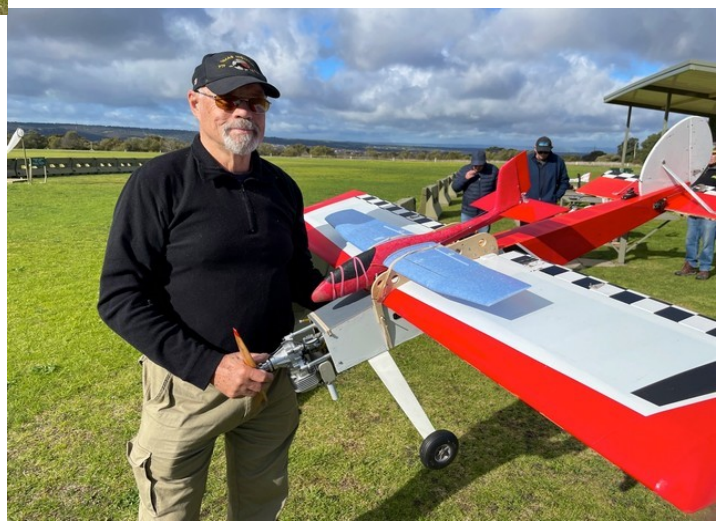
(L) Merv Harris prepares his model 91 “Dancer” which is actually the model of a model plane designed to look like a racing machine of the 1930’s. Three channel, IC powered of course!



(R) Merv’s model 101 “Huntington H12” is based on a very early full size production machine that was powered by a 12HP motorcycle engine. It looks the part and flies well.



(L) John Muckalt secures his large Ugly Stick powered by a 35cc Gas motor before an engine start. Onlookers (L to R) are Jim Gardiner, Mike Hallsworth (glider operator) and Garry Head



(R) John Muckalt with his tug plane set up for a *Piggyback* launch. This will work eventually but the first flight revealed an alarming flex of the glider’s wings, which interfered with the balance and flight characteristics of the powerful tug!

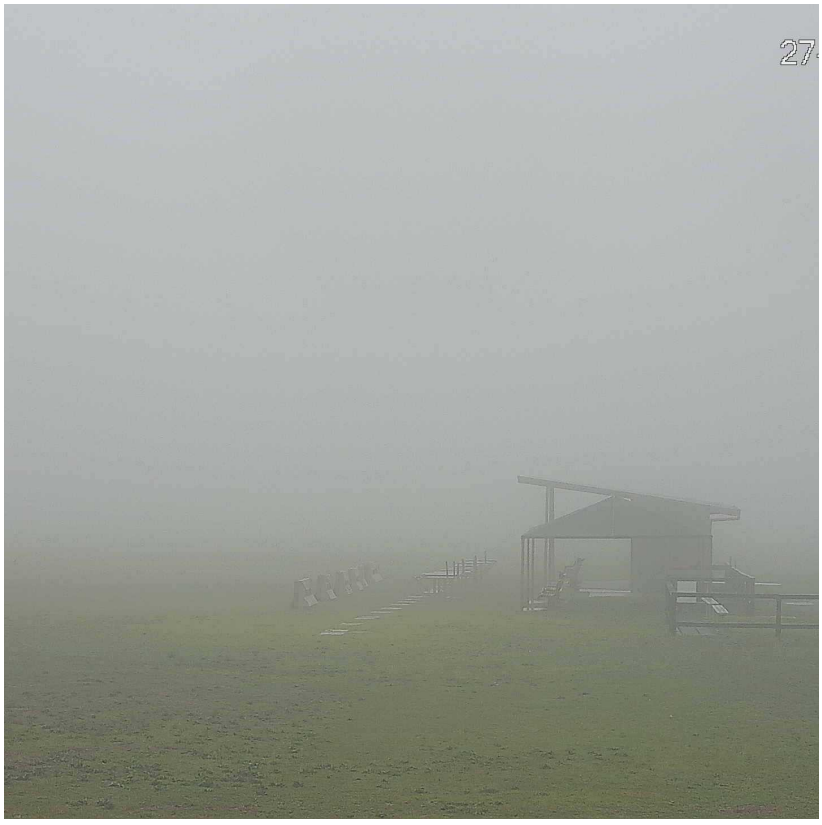
You wouldn't fly in this, would you?

Well believe it or not, some people have been known to try it out when the cloud base lifts a bit. Never be tempted to try and scoot around under low overcast. Not even those puffy white low level clouds. Believe me, once you lose sight of your model you will almost certainly crash your model. And it is in contravention of Civil Aviation Safety Regulations. The law says that you must maintain continuous visual contact with your RC plane or drone. That's right, drones too! Even if you have an FPV onboard camera and you intend to fly by looking at your transmitter, you must have an observer right next to you and that person must maintain visual contact by direct line of sight.

HMAC provides excellent weather information on our webpage. Check it out

You can check wind and weather forecasts and also view the present weather

Don't lose your lovely model in the Murk!



Weather Conditions at HMAC

Our webcam shows snapshots of the flying field at 5 minute intervals during the hours of 5:00 am – 8:00 pm. You can navigate the most recent 5 photos using the buttons below the photo. Please note that the latest image can be up to 10 minutes delayed from current time. The current weather information is live data coming from the weather station at the field.

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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.

New Members

At the time of going to press there are no new members to welcome due to the proximity of the end of the financial year.

However we are pleased to report that so far 82% of last year's members have renewed.

We welcome back the following Members from previous years:

Barry Grivec, Scott Bown and **Sonny Carroll**.

Shortage of Instructors

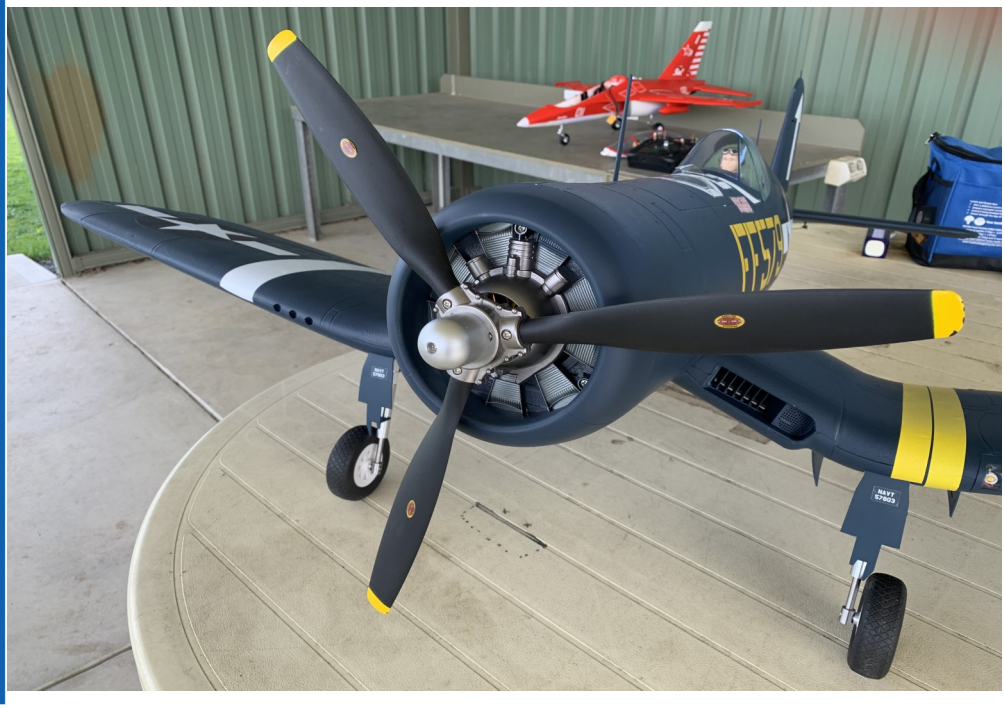
The Club really needs additional Flight Instructors. You will need Gold Wings before entering a trial period as a Club Instructor. An experienced MAAA Instructor will initially mentor the newcomer and eventually invite the Club Instructor to attend an MAAA Instructor course which is usually held in our Clubrooms using computer based equipment.

UPCOMING EVENTS

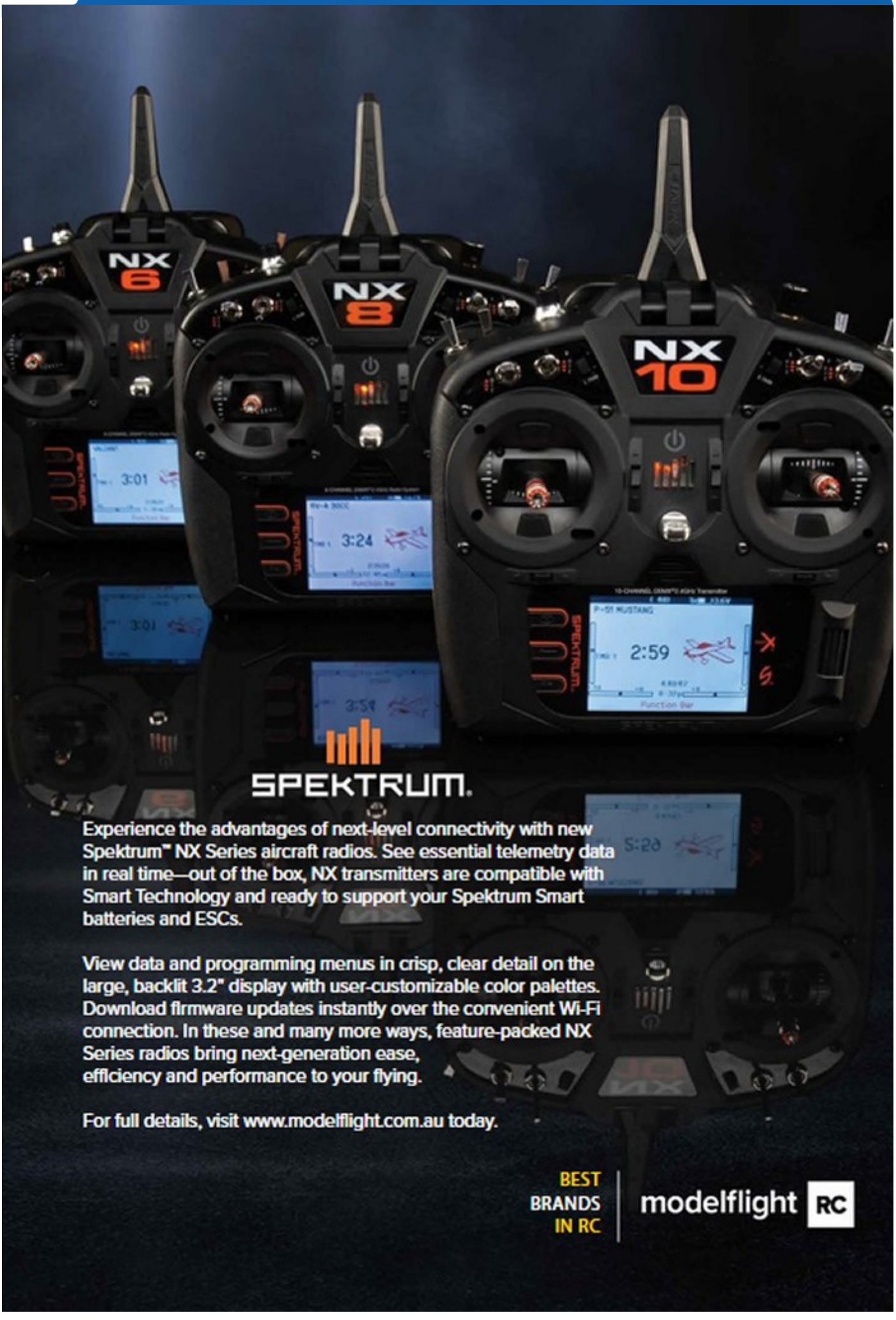
Fri Aug 5th	AGM
Sun Aug 7th	Pylon
Fri Sep 2nd	Social
Sun Sep 4th	Pylon
Sun Sep 11th	Comp

MASA Trophy hosted at HMAC (Details TBA)

A couple of mean machines were sighted recently on the flight line



Watch out for this beautiful pair expertly flown by Sonny Carroll - Corsair F4 (front) and a fast Electric ducted fan Yak jet fighter (rear)


NX 6
NX 8
NX 10
SPEKTRUM.
Experience the advantages of next-level connectivity with new Spektrum™ NX Series aircraft radios. See essential telemetry data in real time—out of the box, NX transmitters are compatible with Smart Technology and ready to support your Spektrum Smart batteries and ESCs.
View data and programming menus in crisp, clear detail on the large, backlit 3.2" display with user-customizable color palettes. Download firmware updates instantly over the convenient Wi-Fi connection. In these and many more ways, feature-packed NX Series radios bring next-generation ease, efficiency and performance to your flying.
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