



HOLDFAST BUZZ

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**Buy and Sell
Day**

**Saturday
Nov 27th**

0900

**See details
on Page 5**



Club President Terry Gold continues to develop his scratch building skills. His latest model is an Electric Chaos. As can be seen in the photo it is a very lightweight version of the popular sports model Kaos (note the spelling) from 20 or more years ago. And it flies very well. Who needs ARFs?

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

“..this coming year HMAAC will be participating in the MASA Trophy event.”

From the President

Even though this newsletter is being published in November, it will be the last one of the year, so it makes sense to look back a bit at the year that is almost passed. And then a look to the future.

A year ago, I wrote this column on the day of the last lockdown of 2020. I'm writing this today as borders are set to open this week, with about 15,000 people queued up to enter South Australia starting tomorrow. Will this be another step towards the relaxing of travel and social distancing restrictions or more challenges to face in the coming year? I'm sure I don't know but given what we have come through as a club I'm confident we will be looking at another good year of flying. Like last year, today is a sunny day fit for flying as soon as I get this column done and it gives me hope that the wind and rain will be calming down a bit.

Last year we were able to do our Buy & Sell day during a break in the weather and restrictions. This year we got caught by the weather, but we have rescheduled for **this Saturday 27 November starting at 9:00 AM**. Even if you don't have anything you are ready to sell on the day, and you don't think you need another plane, come on out and have a sausage with the club and visitors from other clubs. It should be a lot of fun and the weather looks promising for some flying too.

As for flying and other clubs, this coming year HMAAC will be participating in the MASA Trophy event. Every other month in 2022 we will look for two or three people who want to travel to one of the other Southern flying clubs for an easy and friendly competition. We

aren't talking precision aerobatics but simple tasks that anyone with Bronze wings could have a go with. For instance, the task on the day might be to take off, do a circuit and land on a spot marked on the field. Closest to the spot gets the point. Or take off, power up for 30 seconds and see who can glide the longest before touching down again. The same people don't have to fly in each event so please consider putting your hand up when we announce the first event next year.

Also, look for the notice later in this newsletter for our Annual Trophy Day on **Sunday 5th December starting at 12.00 Noon**. Like last year, we will be doing this one outside so that we don't have to rent a hall and pay for catering. There will be awards, recognitions and hopefully – flying afterwards.

If the restrictions on meetings continue to relax, we will continue with our monthly meetings on the first Friday of each month. We had about 12 people last month and despite the small turnout, it was still a lot of fun with conversations about aerobatics, building, beginner's tips and stories about flying, both full scale and model. The last meeting for the year will be Friday 3rd of December.

I hope to see you all at the flying field, at the next meeting, and in the New Year!

Terry



Pylon Racing Results

3rd October 2021

No racing due to inclement weather

7th November 2021

Open class pylon

Tom Jacobsen (Noarlunga) 110
 Greg Leigh (Noarlunga) 86
 Graham Paterson (HMAC) 72
 Pete Robertson (HMAC) 68
 Craig Spratt (Connie) 64

Standard class pylon

John Jefferson (HMAC) 60
 Bryan Christie (HMAC) 36

Electric class pylon

Trevor Pearce (Connie) 99
 Greg Leigh (Noarlunga) 86
 Craig Spratt (Connie) 79



End of 2021 Racing Comps.

November 7th was the last day of racing for 2021. We continue to regularly attract pilots from Noarlunga and Constellation clubs who together with Holdfast pilots, participate in enthusiastic competition within their respective classes.

Now we'll take a break from racing until February 2022 when we expect the usual turnout of competitors with the possibility of one or two more joining our ranks in the new year.

Come and check us out when racing resumes. If you'd like to join in we're more than happy to help with advice and encouragement.

See photos on the next page of some of the competitors from other Clubs as well as our own stalwarts.

Inclement
weather in
October

Come and check us
out when racing
resumes.



Bryan preparing his racer with interested onlookers Graham, Pete and David



John, Greg, Craig and Tom having a rest break after finishing their four heats.

BUY & SELL DAY

Sat Nov 27th 2021, 09:00am



The open-air format continues at our Club field this year. Admission is free but you must provide your own setup (e.g. table, chairs, shade etc.) if you bring items for sale. No commission taken. Sell direct.

The field will be open from 8:30 am to set up. MAAA members with Bronze Wings or higher are welcome to fly at the field (no turbines). A sausage sizzle will be available. Covid19 restrictions apply. Please register by QR code or paper form on entry and always observe social distancing.

Support Our Club

Enjoy delicious treats and refreshments at our Sausage Sizzle



Enter the Draw for the chance to win a \$500 Modelflight shopping voucher



Free Admission

Sausage Sizzle & Refreshments available

Come & Fly Too
Must be MAAA member with at least Bronze Wings

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HOLDFAST MODEL AERO CLUB

Cnr Lonsdale Rd & Majors Rd
O'Halloran Hill SA 5158
08 8377 2708

www.holdfastmac.asn.au



“This time it was only about a metre off the ground when the left wing dropped”

EXTRA 300s – Maiden flight No 2 - John Jefferson

It was Groundhog Day (with apologies to Bill Murray and his 1993 movie of the same name)...another attempt at a maiden flight for the repaired Extra 300s.

Building the new cowling and wing were finicky tasks but I was happy with the outcome. With the new firewall I was careful to ensure there was enough right and down thrust to counteract prop torque. The centre of gravity was where it should be as specified in the plan without resorting to adding weight to either the nose or tail. The wing's angle of incidence was positive as established with my incidence meter.

Once again I waited for a good day weather-wise to try to get the model into the air. At the field I connected the battery and undertook a range test as well as a failsafe test; so far so good. OK, onto the field, point it into the gentle northerly breeze, apply power, bit of a longish ground run, lift off and then it happened again. This time it was only about a metre off the ground when the left wing dropped, I tried to level it out and land immediately but the left wing dropped again, the model hit the ground and cartwheeled. Fortunately there was no damage, thanks to the model's relatively slow speed and recent rains that softened the field which helped absorb the model's kinetic energy. There was just a bit of muddy soil on the wing tips and propeller spinner. Not wishing to tempt fate I decided it would not be prudent to persist at the present time. Better to take the model home and undertake a post mortem with a clear mind to work out what was causing the problem.

At home in my workshop I looked at the plans and confirmed the model was built mostly in accordance with the specifications. Whilst the plans were for a glow engine set-up, I changed things to accommodate an electric motor and ESC, a battery tray and access hatch. I have a tendency to over-engineer models, making them stronger but also heavier than envisaged by the designer. A comparison between the weight of a 46 size glow engine with muffler and fuel tank against my electric motor with ESC and battery gave me a surprising result. I expected the electric set-up to be lighter than a glow set-up but it worked out that the electric set-up was about 50 grams heavier; not by much but still heavier.

As a result of my over-engineering and electric set-up it was obvious that the wing loading was too high. At speed this would not be a problem but taking off and landing as we know require slower speeds, which becomes critical with a high wing loading.

What to do? The challenge of getting the model to fly is too great to ignore, but the problem is to reduce the wing loading. This could be achieved by a weight reduction exercise, however, this would require extensive surgery or

perhaps a total rebuild. I'm leaning towards a new wing with increased area. This would be a simpler approach although it would no longer look as a scale model but a semi-scale or stand-off scale.

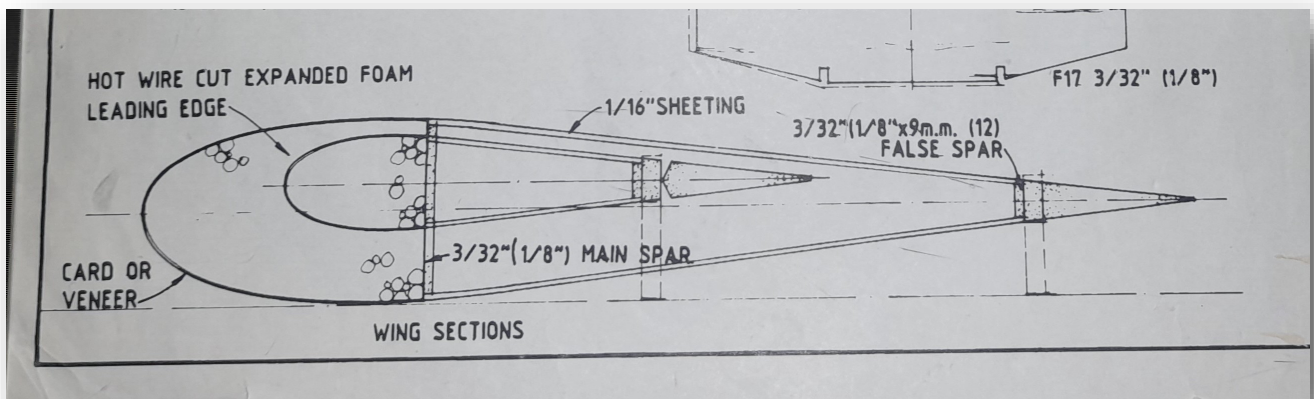
I'm determined to persist with getting the model to fly, so a new wing it is. Consulting with club member Bob McEwin we came up with a revised wing design using a different profile (NACA 0015) together with a greater area (longer span and wider wingtip chord). Hopefully this should improve the model's slow speed flying characteristics. Back to the workshop to continue the saga!

My spare parts bin had lots of equipment from previous builds and/or "retired" models. There was a 600 Kv electric motor, 100 amp speed controller, 6 channel receiver, servos and all sorts of hardware. I ended up buying a minimal amount of balsa as I had most of what I needed, and a couple of slim wing servos. The plan showed a single wing servo with torque rods to the ailerons, but my preference was for an individual servo on each wing (another plan deviation to be considered).

I think I spent some three or four hours just poring over the plan to get an appreciation of the build sequence and importantly, where and how my modifications would be made. During this process I found out what the "s" in 300s meant - single seat. Some full size Extra aircraft are two seaters whereas this one was designed for pilot only.

Enough pondering - time to get on with the actual build. Watch this space.

John Jefferson



Original Profile from plans



New Profile

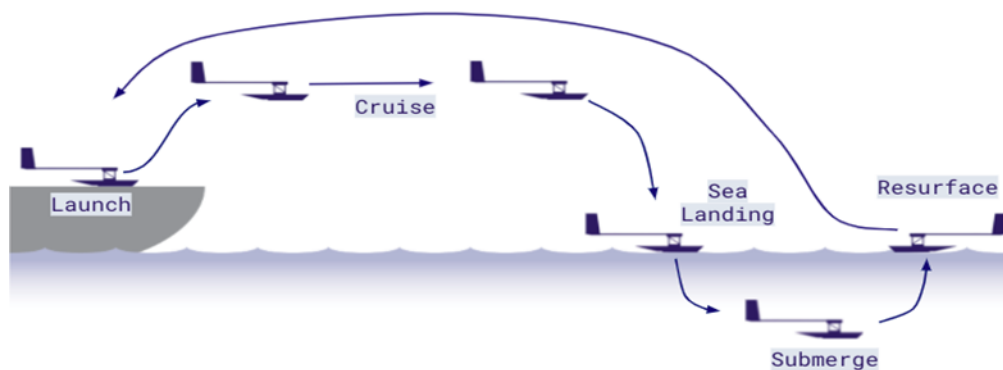
HYDRONE at HMAc

Hydrone, a University of Adelaide Final Year Mechanical Engineering Honours Project team, has spent the past year designing and building their own Unmanned Aerial Vehicle (UAV) for their engineering honours project. On the 25th of September, Ian Lomas invited the project team to Holdfast Model Aero Club (HMAc) so that ground testing and flight testing could be completed.

The Hydrone team is comprised of six undergraduate engineering students, each completing their penultimate or final year of aerospace or mechatronic engineering. The project seeks to design and manufacture an aircraft that's capable of operating in both the aerial and aquatic environments. An aircraft with these capabilities has a range of potential applications in the areas of marine biology, civil inspection, underwater observation, and defence.

The team has been working hard on the project to ensure that the cross-domain capabilities are successfully proven prior to the conclusion of the project in November 2021.

The mission is illustrated as follows:



Additive manufacturing has been used to produce 3D printed aircraft wings that are capable of passively filling and draining with water. Additionally, composite carbon manufacturing has been used to fabricate bespoke aircraft floats that are extremely strong and lightweight. Testing has sought to replicate all aircraft use conditions, including dry and wet motor testing, control system electronics, and structural rigidity.

A major design challenge that the project team encountered was the placement of the centre of buoyancy in conjunction with the placement of the conventional need to match the centre of gravity and aerodynamic centre to their appropriate locations. After the initial structural tests and inspections of the aircraft, it was suggested that the battery mounts be moved closer towards the front of the airframe, bringing the centre of gravity forward. This change was critical to the outcome of the flight testing, where a take-off, cruise and landing was successfully achieved with a flight time of just over 2 minutes. This was very exciting for the team as it proved that the aerial component of the mission profile is viable.

The project team are eagerly looking forward to conducting further flight testing and water testing in the coming weeks, and are very thankful for the support provided by HMAc and Ian Lomas.

Hydrone Test Flight Report

By Ian Lomas.



Ian Lomas with Honours students from University of Adelaide about to test fly the HYDRONE at HMAC

On Friday 22 October, I invited the team to HMAC to conduct some further flight testing. We conducted two successful flight tests, each lasting a few minutes. Their onboard computer recorded vast amounts of flight test telemetry data, which they can analyse and discuss in their final report.

Once again, the aircraft was relatively unstable, which I believe was due to a combination of the heavy mass, anhedral wings, centre of gravity location, and high drag from the floats. Furthermore, it continued to have a tendency to bank severely to the left, but I managed to keep it in the air and conduct the testing that the group required.

The first landing resulted in one of the wheels (that was attached to the underside of the floats) to break away. Hence, we proceeded to remove all of the wheels with the aim of performing a take-off with the floats alone. Duct tape was applied to the underside of the floats to reduce the friction between the underside of the floats and the grass. Furthermore, larger propellers with a larger pitch were installed to maximise take-off speed. The result was a near perfect take-off, and subsequently, another successful test flight. Unfortunately, upon landing, the socket that housed the carbon fibre tail boom cracked due to the landing impact loading, so we were unable to fly the aircraft again on the day. However, the team was able to repair the aircraft in time for the Ingenuity expo (held at the Convention Centre), where they had the opportunity to showcase their projects to the public.

Nostalgia by Kingsley Neumann

Have you ever had the pleasure of building and flying a Sig kit? Do you happen to have a Sig model in your present fleet? If so you will be very interested to know that the MAAA has started a campaign to celebrate the 100th birthday of Hazel Sig by holding a National event among the Clubs here in Australia.

Here is an extract from the initial advice message from MAAA President Tim Nolan:

Let's create an event called the MAAA National Sig Model Flying Event to celebrate Hazel Sig-Hester's flying life. Invite all clubs and pilots with any Sig designed aircraft or aircraft that Hazel Sig-Hester flew, such as her clipped wing Cub or the Spacewalkers, flying over a weekend.

Proposed Date 26-27 Feb 2022, or an alternate 5-6 March 2022, depending on weather.

On the 3 March 2022, Hazel Sig-Hester will turn 100 years of age, yes of Sig Manufacturing fame. <https://www.modelaircraft.org/sites/default/files/files/SigHesterHazel.pdf>. I have been in communication with people who know her personally and they advise she has all her faculties and is still living independently in her home. There is a surprise build and fly project underway with a large Spacewalker in the colours she made famous with her second husband Max Hester.

There would not be many aeromodellers in Australia or Internationally who have not owned, built or flown a Sig designed model aircraft. Their models cover all aspects of aeromodelling. The range includes free flight and control line models where they started, before moving into radio control, leading into larger scale models and more recently ARF models...

It is possible to purchase some of the Sig kits even today. Unfortunately postage from the USA and the exchange rate puts them into the ridiculously expensive category. With a bit of luck you might find one on line in Australia.

I personally have built and flown the Zlin 526, Ryan STA Special, 1/4 Scale Clipped Wing Cub, Astro Hog and Li'l Rascal. And I have a 1/3 scale Spacewalker new in the box, just waiting.. They all fly, flew or will fly beautifully. Photos are on the next page.

MASA Inter Club Competitions

Some of the older Members will remember fondly the exciting and challenging Fun Fly Competition events that were once a regular feature of activities within our Club. We had a number of tricky tasks such as maximum number of turns in a spin before recovering (banned after too many crashes), Carrier landings where the flight deck of a carrier was marked out and you had to take off and land within the small "strip" No arrestor hooks or wires!. And we had some easier ones like A timed circuit where you had to take-off on command and then land (touchdown) at an exact point in time. It was harder than it first seems but fun. Then there was the quickest circuit comp, where you took off and immediately turned into a low tight circuit and aimed to land back where you departed from. No other traffic permitted at the time.

Well the good news is that MASA has commenced a series of similar rounds for 2022. HMAc will nominate a team and it will involve travelling to another Club once every two months and also hosting at least one event at HMAc. We are in the Southern Clubs Group. Have a look at the concept as set out on the MASA home page. You don't have to be an ace, just a competent Bronze Wings flyer.

Link: [MASA InterClub Trophy](#)

Some of my Sig Models over the years.



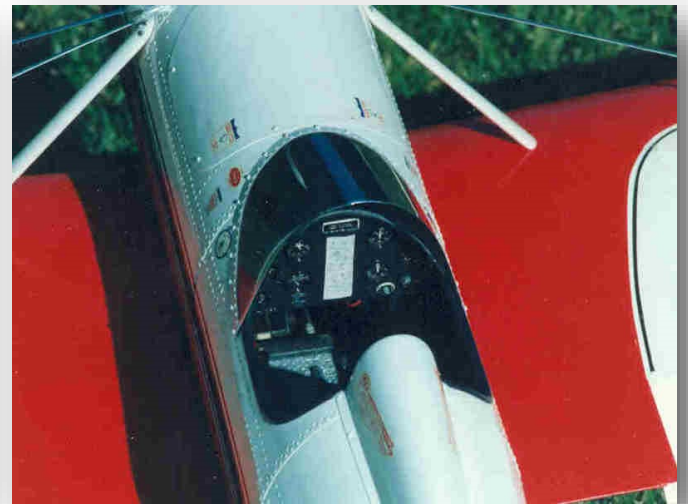
Sig Zlin 526



Sig Astro Hog



Sig Rascal



Sig Ryan STA Special



Kingsley and his 1/4 scale Clipped Wing Cub (favourite model)



UPCOMING EVENTS

Buy and Sell Day
Saturday Nov 27th
9.00 AM

General Meeting
Friday Dec 3rd
7.30 PM
"Show and Tell"

Annual Trophy Day
Sunday Dec 5th
12.00 Noon

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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

The Club extends a warm welcome to the following:

David Giraldi, Con Volgiannis, Leighton Porker, Kevin Botha, Fred Collas

We trust that you will enjoy the facilities at Holdfast and have a great time flying RC

Flight Training

CFI Andy Hollitt is doing a great job keeping the LIFT system going with a small group of hardworking Instructors. Mid-week instruction by arrangement continues. If you have Gold Wings you might like to try out as a Club Instructor. Please let Andy know. The Sunday roster is now published on the HMAc website. Students are advised of changes by Text Message.

Flying Achievements

Name	Award	Instructors
Bryan Christie	Gold (P)	Pete R, Graham P
David Baldwin	Bronze (P)	Andy H, John J
Grant Hiller	Bronze (P)	Kim W, Phil N
Con Volgiannis	Bronze (P)	Andy H, John J
Leighton Porker	Silver (H)	Ashley West

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Dual Output 600W charger**
2x 300W
\$279.99



**Ultra Power 60AC 60w AC Charger
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