



PROPWASH JULY 2015

From the President.



After reflecting on the past twelve months in and around the field it is obvious that we have advance some what from this time last year and as highlighted at our recent AGM meeting it has been a successful year for the club finishing the year with a total of 34 members.

With the annual AGM behind us it is now time to look forward to another exciting challenging year and we can be assured that conditions at the field will continue to improve until we complete the upgrade project currently at hand. With no new nomination from the floor for the declared vacant committee positions the current members were re-elected unopposed for the next twelve months.

With the major works completed on the toilet project focus has now been placed on the Pit Pavilion and the fabrication work has commenced on this structure to get it completed in preparation for site erection. Work is well advanced with the planned modification to the steel work to ensure it conforms with the engineered design for this to be erected as a free standing structure. All existing attachment on the original structure had to be removed and replaced with new steel in the appropriate places. The good news is all the required fabrication work on the structure has now been completed by Dennis and Ron over a period of the past six days.

We can't thank Humphro enough for the use of his facilities and equipment in order for us to achieve this but it is all behind us now. A sand blast and paint then ready for transport to the field.

There will be a need for site works conducted at the field prior to construction, it will mean the existing building will have to be demolished, foundation footing will need to be excavated and boxing formed in preparation for the concrete to be pored. Once this is done the columns can be bolted in place and the roof trusses will then be lifted into place then the concrete pit surface can be completed, the roof and wall cladding can then be fixed to the structure. That is what is required in a very brief description of what is planned to occur, however, rest assured that it will involve a bit more than that to complete the project.

This will require the full support of the members during the busy bees that will be organized to ensure we complete this in the safest shortest time frame so we can all settle back and enjoy the new flying environment.

With the two recent break-ins at the field several ideas have been discussed in an effort to identify who may be the culprits and prevent them from continuing this senseless vandalism. With the items taken each time being of minimal value concern is the damage and inconvenience that they cause which is disturbing.

The attached sign my work, however, the concern I have is they may not be intelligent enough to read and understand it.



The clubrooms extensions to include the toilets and storeroom commenced on the 12th March with the laying of the concrete foundation.



Once the concrete was complete the steel wall frames fabricated by Ken Lewis were put in place.



From here it all came together growing with every piece that was attached to the original club house.

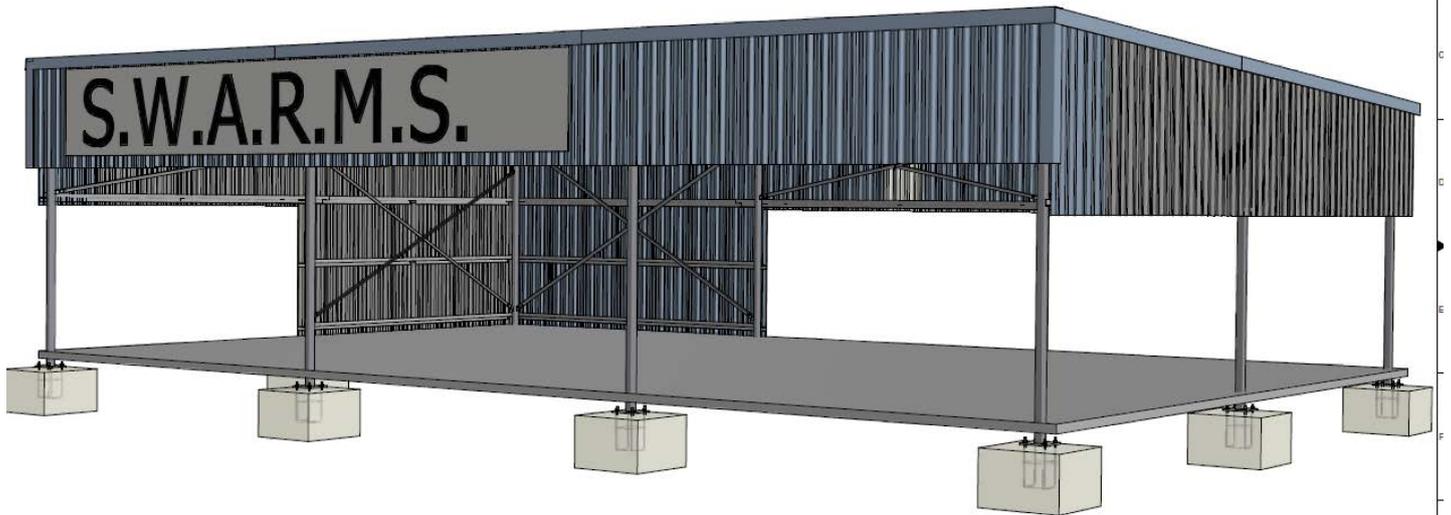


With all the frames secured in place it was time to clad the walls and roof



Before we knew it the existing club rooms had grown by 3 metres.





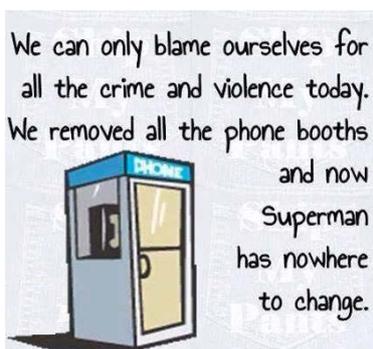
Above is the structure we are currently modifying, all the old steel brackets and cleats had to be removed and new ones welded to the trusses and the uprights as this is now a stand alone structure. The modifications are now completed it will be sand blasted and painted, transported to the field and be put back together and hopefully it will look like this when completed. (It will Dennis have faith)

The concrete floor pictured will extend over the full area of the pits which will make activities in and around the pits much safer with a good surface area to work in. The cladded area in the back corner is designed to be totally enclosed providing a store room for model assembly tables and any thing else that may be used on a regular basis in the pits, (excluding any rubbish)

There has been a lot of structural changed at the field over the past few months and this will continue on track and on budget until we achieve our goal. At the end of the day we will have dramatically improved the facilities for not only current members but for new members to have well into the future.



A blast from the past, this photo recently surfaced on face book with a lot of positive comments as you do tend to get on social media. The goose sitting peacefully on calm water waiting to grace the skies over the lake, it has had many a flight to the delight of those present at the time.



Thought I'd start to include some tips and info in Propwash. Starting off with Aerobatics and setup. First instalment below on throws then how to knife edge :)

TYPICAL THROWS FOR AEROBATICS

Typically the set up for an aerobatic plane on **LOW RATES** is as follows. If you are not going to do 3D, then these could be your only rates for aileron and elevator. Rudder should be on a 2 position switch.

Ailerons up and down 15 degrees, 20 degrees would be a very high roll rate. Pattern planes use only 10 degrees.

Elevators up 10 degrees, and down 12 degrees. Keep in mind that if your plane is nose heavy you might not have enough elevator to land at a slow speed so get your CG correct. You will probably need more down elevator than up elevator because when you roll to inverted the nose will drop and you will need 2 degrees of down elevator to fly level. If you started with 12 degrees of down elevator and you used 2 degrees to get back to level, then you have 10 degrees left to use. You should be able to make just a little bit too tight of a loop either upright or inverted. Adjust the throw after flying the plane so that when you push or you pull at maximum that the loops are about the same diameter. You want a little more elevator than is necessary to make a nice loop in case you need to make a correction because you were too late with the elevator or you are flying downwind. Flying the downwind part of the loop requires more elevator than flying the upwind part of the loop.

Rudder left and right at as much as possible on high rate. You need lots of rudder for hammerheads, but for normal flying set up low rate to do a little more than knife edge flight. Keep in mind that due to the amount of right thrust in the engine that the measured deflection required for a little more than knife edge flight will be different from right to left. So if you wind up with 18 degrees of deflection to the right and 25 degrees to the left, don't be surprised. You are setting the rudder up on low rate with a little more than knife edge flight so that if you are late with the rudder and you are dropping a little that you can correct back up to level.



TYPICAL EXPO FOR AEROBATICS PLANES

There are many options though this is a good starting point. What you are shooting for is being able to fly on low rate or high rate with the same feeling with little stick movement. This way you can fly around to where you want to do 3D on high rate without the plane being overly twitchy.

Ailerons, Elevators and Rudder on low rate I use 30% expo which isn't much, just enough to soften the middle some. On high rate I use about 50-70%. Now when you move the stick just a little, it feels the same on low and on high rate. Remember Futaba radios this will be -% not +% as with JR.

Check your radio manual to make sure how the % works for you particular radio. Get this wrong and you have the opposite effect making everything VERY SENSITIVE! (aka Crash)

Aerobatic Manoeuvre to try!

(Courtesy www.3drcforums.com)



Knife Edge

Flying knife-edge means flying the plane with the wings in a vertical orientation. The wings do not generate any lift in the configuration, so the fuselage acts as a lifting surface. Generous amounts of rudder is usually needed to keep the plane from losing altitude.

Level of difficulty—Easy-medium

Entering from upright flight

Apply aileron to perform a quarter roll and give *opposite* rudder to keep the airframe from losing altitude.

Entering from inverted flight

Apply aileron to perform a quarter roll and give rudder input in the same *direction as the aileron* to keep the airframe from losing altitude.

Continued next page....

Steering

When flying knife edge, the elevator is used to make turns. Apply down elevator to turn towards the belly of the plane and up elevator to turn toward the canopy. When turning, you will probably need to make some rudder and aileron adjustments to keep the plane in a stable knife edge.

Altitude is typically controlled using the throttle. An interesting fact about knife-edge is that it is very hard to stall the plane when in a knife-edge orientation. Therefore, reducing throttle input usually yields a gentle descent. Rudder should be used to control the angle of attack, rather than the altitude. Due to the characteristics of the fuselage as a lifting surface, it is usually quite easy to fly knife edges with very high angles of attack.

Exiting

The easiest way of exiting a knife-edge is obviously to do a quarter-roll back to upright or inverted. However, you may also apply rudder to either put the plane in an up-line or perform a "half hammerhead" to put the plane in a vertical dive.

Common mistakes

Wrong rudder direction

This mistake has probably caused the demise of many airframes. There are two basic rules of thumb:

When entering from upright, apply *opposite* rudder to aileron. When entering from inverted, apply rudder in the *same direction* as the aileron.

1. When the canopy is facing you, apply rudder towards the *tail*. When the belly is facing you, apply rudder toward the *nose*.

Too much rudder input

The higher the angle of attack, the more coupling between the control surfaces you are going to have. When practicing knife-edges, it's wise to start using more throttle and less rudder to keep the plane flying.

Tips

Most airframes have some coupling between the control surfaces when flying knife-edge. This can be mixed out with a computer radio and it is strongly recommended you do that to make sure you are not constantly fighting to keep the airframe at a steady orientation.

Practice entering and existing knife-edges in a simulator or up high until the rudder direction becomes second nature. This will make your knife-edge flying more enjoyable and less nerve-wrecking. *And you'll save money on airframes too...*



Few happy snaps from the Scale Aerobatics competition (IMAC) at Wagin last weekend.

Was good to have the big extra re-certified (thanks Adrian) and be back flying again after spending most of summer fishing!

Fantastic flying at full size airfield at Wagin. Plenty of support from the local community and council for aero modellers with several jet meets being held recently at the site too.



Bit rusty, had a bit of an oops after landing by turning when the plane hadn't slowed down enough...bitumen is grippy and some horror sideways bounces and skips resulting in cracked landing gear plate.... &*\$%\$#



Woodys B29 - Take 2

Some fantastic photos by Les Fenn of Woodys B29 on maiden after repairs from last years crash.

Flown very well by Steve Coram and smiles all round! (and I think some settled heart rates after)



Steve, Woody and Ray.



FOR SALE— KRILL KATANA 28% (50cc)

Composite Airframe, DA50 Petrol Engine, Power box Distribution. Quality hardware throughout. Missing Aileron Servos, everything else complete. Never Flown. Located Bunbury
 Contact Guillian 0419 922784
 To inspect or make an offer.



STOP PRESS!

The new mower that was passed for purchase at the meeting has now been purchased and has been used and Brady is very happy with the outcome.

After wheeling and dealing Brady was able to purchase the \$5,000 machine for \$3600,50 too good a bargain to miss here.



If you are on Facebook here is a link to a really cool radio control space shuttle!
Rocket launch and RC Controlled glide and land!

<https://www.facebook.com/RCnation941/videos/881623735261011/>



SWARMS is on FACEBOOK

www.facebook.com/swarmswa

Peter Brien

Sad news in early July to hear of the passing of former AWA President Peter Brien.

Peter was instrumental in the MAAA purchase of the SWARMS field. And frequently attended our club for various jet, scale and IMAC events.

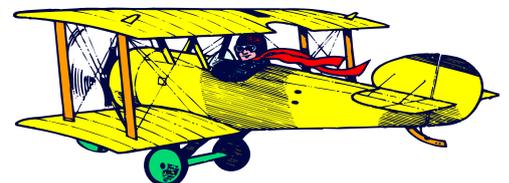
Peter will be always be remembered for all his solid dedication and foresight which strongly progressed Aero modeling in Western Australia.

He was a friend to all and his presence, enthusiasm and passion for flying will be forever missed.

From SWARMS our condolences to his family and all his good friends.



Catch you when we fly into the next edition



**Any info or images for
PROPWASH?**

Email to editor@swarms.org.au