



Tale Feathers

December
2013

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Hi Club Members

Welcome to another issue of Tale Feathers. I hope you will all find something of interest. Thanks for all the positive feedback. The negative stuff received appropriate consideration.

The usual Disclaimer:

Articles and comments by the Editor and contributors may not necessarily reflect the views of the Club Committee, probably won't be Politically Correct, but will be published anyway.

HOUSEKEEPING

Please remember that this newsletter is an information exchange and an open forum for anybody to have their say.

Please email stuff to me, (a Word, Excel or PDF document) be it technical, human interest, Club stuff, building/flying tips or if you just feel like a bit of a (polite) rant.

A warm welcome to a returning Club member, Steve Littlewood and I hope you have many enjoyable flights and soft landings.

Photos (in JPEG format) are always welcome.
(Animal/bird/model photos courtesy of the Editor. A range of Hi-res copies available on request.)

Club Corner

Working Bee's

It seems that the enthusiasm for translating the Club Development plan into reality is continuing without letup.

By now, the containers should be parked on their engineer-designed footings, the donated stove functioning properly, the new kitchen plumbed and most rubbish removed. The new tables and chairs on the outdoor veranda are proving much more weatherproof than the old ones.

The majority of members have reacted to the changes with great enthusiasm and the Committee would like to thank all those who have given their time, effort and support to this current round of improvement of our facilities for all to enjoy.

Committee Note:

Jordan Kendall and myself have made the annual Christmas donation to our Landlords, Bruce and Wendy Harris and it was greatly appreciated.

The Harris's are very supportive of the changes planned for the Club, particularly the extensive grass-mowing.

TOTAL FIRE BANS

Members are asked to respect the policy of declaring the field closed during total fire ban days.

STILL FOR SALE

A selection of discounted, brand-new gyros.

All are solid-state and can be turned On/Off/Mode or Rate adjusted from your Transmitter. If you are planning a large model or perhaps a twin, a gyro is a great way to add some peace of mind. These gyros work equally well with all brands of radio system.

Futaba GY401 single-axis Heli or aeroplane gyro



This gyro is new in original box.....\$80

Futaba GYA 351.....2 available



This is a single-axis, dual-servo output gyro suitable for any size aeroplane. It will drive one or two servos for roll or pitch control. Tx switchable.

New in box.....\$100 ea.

Futaba GYA 352



This very capable & reliable aeroplane gyro is dual axis, driving two servos. E.g. roll and pitch dampening. Tx switchable. New in box.....\$150

Offers considered-Contact: Ian on 0427 602 388

...And on another subject entirely...



"I'm pretending to be a Panda! Do you reckon I'll fool Mum?"



This is a new newsletter being circulated. If you would like to be added to their distribution list, just send an email to wmanaustz@gmail.com There is one article in this issue which I thought could be interesting to members. It is reproduced here courtesy of WMAN-Australia

"New free flight field for the MAAA

There seems to be considerable reaction to the announcement by MAAA of the intended purchase of land near West Wyalong to be used for free flight activities.

The contentions point seems to be that although West Wyalong is a good location to occasionally hold free flight events for competitors from around the world, when it's not in use for that purpose, there are only approximately 200 free Flight modelers in Australia who may use it from time to time.

Reportedly costing in excess of \$500,000, the site is 465klm from Sydney, 572klm from Melbourne, 942klm from Adelaide and 1109klm from Brisbane. That's an enormous distance to travel and brings into question the viability of a model airfield in such a remote location. It could be argued that this is an enormous amount of money to spend on so few. We have seen Cootamundra's utilization rate so low as to put it verging into the category of white elephant, could we be about to see the same with West Wyalong?

There is no doubt West Wyalong has ideal topography for free flight as the area is very flat with wide open spaces. However the area can be bitterly cold in the winter and is extremely flood prone. Summer temperatures on the other hand can be consistently into the forty degree Celsius with hot northwesterly winds adding to the discomfort on a very regular basis.

The town of West Wyalong is delightful. Accommodation is reasonable on the motel strip leading into town. Oh, and let's not forget all that clean fresh air. Would the MAAA like to respond to this item? We would be delighted to publish it." WMANAUST

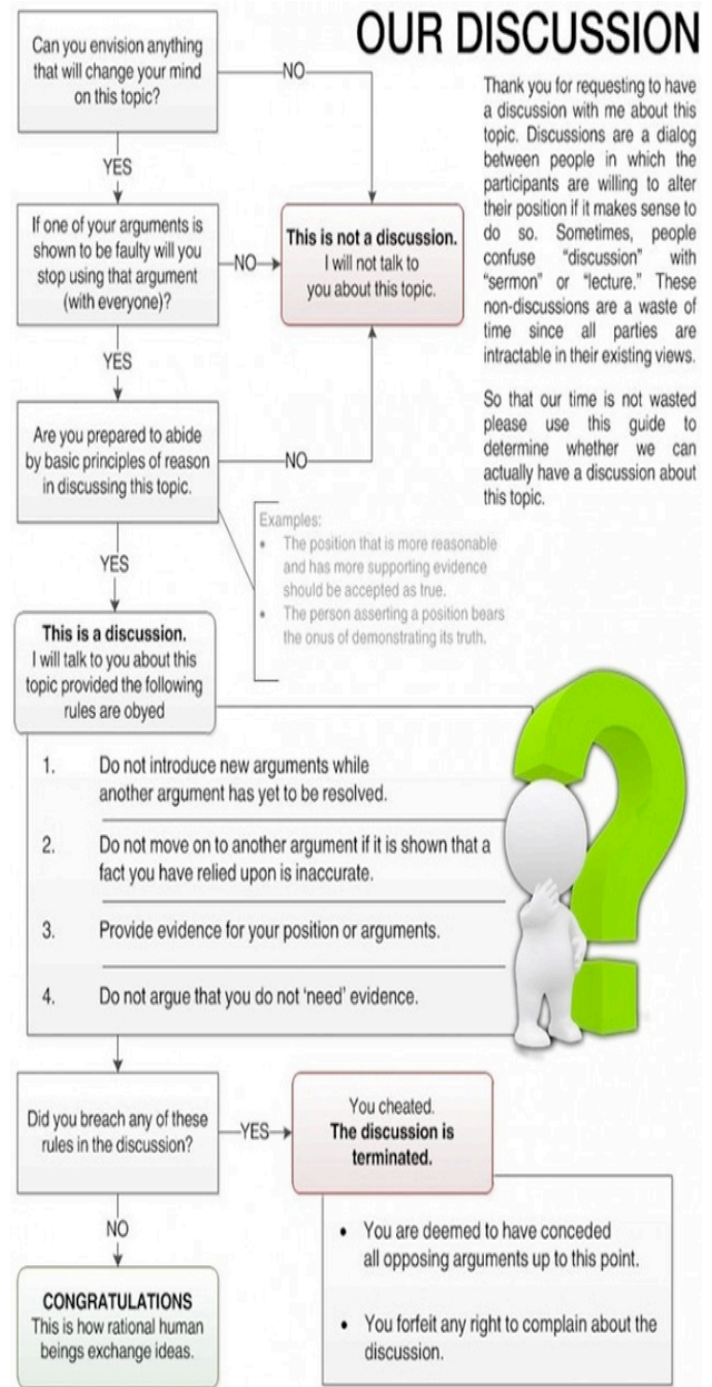
Interesting.

While my dim sims often sim pretty dim at times, these numbers really don't stack up too well if the info is accurate. Talk about being cashed up and nowhere to spend it!

I remember the AMA in the States went through this many years ago and started a giant dung storm when they created the National AMA site at Muncie, Indiana.

RE; Discussions

The following flowchart has been submitted with the suggestion that it could be applied when negotiating an extension of flying field curfew with our wives/partners. Other applications spring to mind, but this will do for now.



TECH TALK

Continuing the efforts of trying to find explanations for some of those mysterious crashes for which there is no apparent reason, particularly with the general trend toward larger/faster/heavier models. But first:

Fuel;

A thought from Steve who points out that the methanol in fuel is hygroscopic to a very high degree i.e. attracts and absorbs water, particularly from the air and it's also highly poisonous.

Water is not a desirable component of fuel and in the case of methanol, a fairly high percentage can be

held absorbed where it can't be seen. If you try to get your engine to burn it, however, expect some problems in the form of hard starting, difficult tuning, poor reliability and a lousy idle after the glow driver is removed.

Having a loose-fitting cap on your fuel can, will allow the methanol to absorb a lot of moisture from the air through any period of humid or wet weather.

Methanol fuel is best stored in an airtight container that is totally opaque to light. Fuel shouldn't be left in the model tank, even overnight.

THE DREADED DOWN-WIND TURN

Things have been a bit quiet lately, so I thought I'd stick my head up again and maybe start some healthy discussion. (Or get it shot off! Refer to Flowchart)

The subject is the old bogey about turning downwind and the apparent loss of airspeed that results from the increased tailwind component.

It should be understood that the factors involved here apply equally well to models as they do to full-scale stuff. Models and full-scale ones fly because of the same set of rules. We're stuck with them and they can't be changed if it's inconvenient.

The discussion looks at two schools of thought;

- Those who believe it's dangerous because the sudden tailwind that results from a downwind turn causes a loss of airspeed and lift;
- And those who say 'no problem' because lift is a function of airspeed, and not groundspeed.

Let's look at the two viewpoints first and then look at other factors that can play tricks on unwary pilots.

Case 1.

The case for loss of airspeed in a downwind turn:

Proponents say, "It is dangerous to make a slow, low-level downwind turn because the inertia of the aircraft causes it to lose airspeed as it turns from a headwind to a tailwind.

Example: If your aircraft is flying at 60kph directly into a 20kph headwind, then you have a groundspeed of 40kph. (60-20)

If you make a fairly sharp turn so the wind is behind you, the aircraft will not instantly accelerate to the new groundspeed of 80kph (60 + 20), because it has a certain amount of mass, which has inertia. Therefore, it will take time to accelerate from 40kph to 80kph, and during this time the tailwind will cause it to lose airspeed and therefore lift.

Smaller, lighter models will be less affected than heavier ones."

Consideration:

Although this explanation seems logical, it has a major flaw, in that it is based on the belief that groundspeed somehow plays a part in the aerodynamics of a body that is totally supported by the air.

Case 2.

The case against: (No loss of airspeed in a downwind turn)

Proponents say, "There is no danger in making any downwind turn. Once airborne the aircraft flies in a block of air. That block of air may be stationary, or it may be moving, (when it becomes wind) but that makes no difference to the aircraft's flight within the air block. The aircraft's aerodynamics relate only to its movement through the air in which it is flying. Its geographical position is affected by the wind's speed and direction – but that is a navigational matter – not an aerodynamic one.

You can do steep turns 10 feet off the ground or at 1,000 feet, with no difference, regardless of wind strength (to keep it simple, we assume no turbulence or wind shear)."

Example: Assume you are flying directly into the same 20kph headwind at constant height, with a 60kph air speed. You therefore have a 40kph ground speed. (60-20=40)

Now if you make a 180°, level turn downwind, your new ground speed becomes 80kph, (60 air speed + 20 wind speed) but your airspeed hasn't changed.

The performance of the aircraft is only affected by airspeed, which is what makes it fly. Groundspeed only becomes an issue at landing or crashing time."

Consideration:

It could be said that the aircraft physically experiences this 40kph acceleration in the few seconds it takes to make the turn, but sadly, it doesn't. The acceleration is only in relation to a fixed point of reference on the ground. (You, the pilot)

However, the frames of reference are totally different; "in relation to the ground or pilot" reference and the "in relation to the surrounding air" reference.

Example 1:

Consider the "block of air" analogy used earlier.

Imagine a party balloon containing a fly was released to drift along past the Clubhouse with the prevailing wind. (No, it wouldn't be very happy) If the fly were to fly orbits around inside the balloon trying to find the way out, her flight path within the balloon would, of course, be circular.

If the balloon was transparent and you could see the fly from a fixed point on the ground, it would appear to be flying a series of interconnected ovals, yet it is maintaining a constant rate of turn and is therefore flying a circular path. (Trying to avoid bumping its ugly little head on the balloon walls)

This illustrates how a circular flight path within an air mass can be distorted by moving that whole air mass, depending upon your point of view.

Example 2:

Consider the situation where you are flying in a full-scale aircraft, unable to see out of the window because the fat head of the goose beside you is totally blocking the view, and the pilot is holding a constant angle of bank as he waits for descent clearance into Sydney. You idly contemplate the bubbles rising vertically in your glass of champagne sitting unrestrained on the tray-table in front of you and note that neither you nor the liquid show any sign of going faster as you turn down wind and slower as you turn upwind. It just doesn't happen.

Consideration:

While this thinking is aerodynamically 100% correct, scientific accuracy can ignore practical considerations and these are:

- Wind shear caused by surface friction
- Illusions that provide false impressions while

standing on the ground, flying a moving model aircraft

Part 2 of this article, Wind Shear and Illusions, will be continued in the January edition.

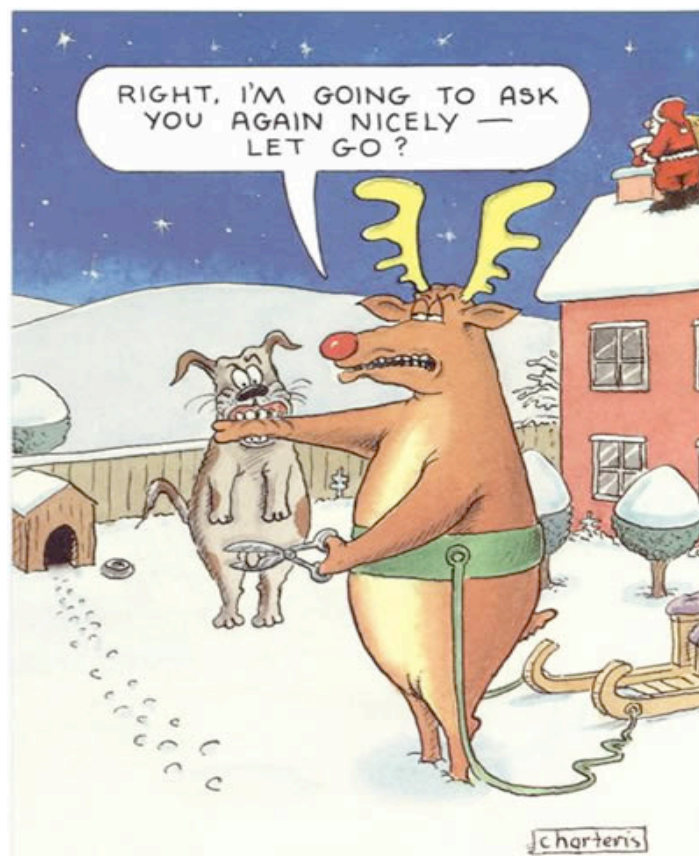
Chinese Aviation Philosopher, Confuse-Us says;

Engine Failure is defined as the condition that occurs when the fuel tank becomes completely filled with air.

The aircraft limits are only there in case you intend flying that model again. If no more flights are likely, there are no limits.



Don't stop doing things because you are getting old.... as you will only get old if you stop doing things.

Tale Piece thought from the Cat.

Merry Christmas, travel safely and come back home soon.

*For those who stick around;
Straight Take-offs, Soft Landings and stay off the tyres.*