



# BIGGIN HILL AIRPORT BUGLE

*News from our Airport at Biggin Hill - established 2005*



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## HARMONY IN CURVES

Our Ozzie correspondent, Bob Needham sends this perfect picture from a local Aussie Air Show at Kempsey Airport near Sydney.

Whilst these curves may appear harmonious, another type of aviation curve is the “*Ground Loop*”, which from a safe distance can provide some amusement for the observers, and some expensive damage in just a few seconds for the owner or the embarrassed pilot.



## UNDERCARRIAGE FAILURE

Why is it so clumsy getting out of this thing, the flight seemed so delightful and I don't remember having difficulty getting aboard..! The pilot said, he thinks something broke, must admit the wheels look a bit wonky.?

## LET'S STUDY THE PROBLEM



Are you ready for this pilot, you are at the beginning of the runway facing into wind, and are in one of those nose wheel things that doesn't ground loop, “*Really is that so*”, yeah, trust me..!

## NOW WATCH MY TAKE-OFF



Luckily, I am non-radio, therefore I will not be distracted by idle advice of runway direction from the tower. I will pay full attention to my flying skills.as taught to me by my old Instructor. ‘A tail dragger pilot from the old days..

## THE BAR STOOL PILOT



After the days flying unfortunately bumped into the Bar Stool Pilot, who began to tell us how difficult tail draggers were in his days, Mumble, mumble. The beer is flat as the bar, the aerodrome is dying.

to be consumed by a huge housing project 'Spotters' will have, no where to spot planes.

## HANDLING THE TAIL WHEEL

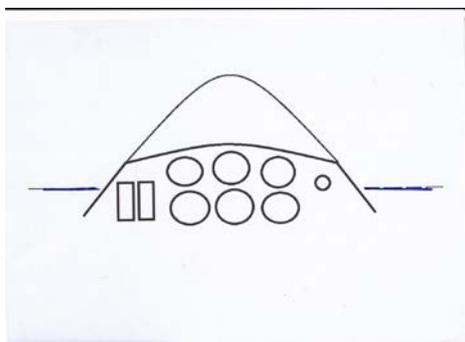


Before embarking on a flight in a Tail Wheel aircraft it is a good idea to sit in the aircraft for at least 30 mins to familiarize the controls.

The two little eyes bottom left of above picture are the heel brakes. Yes they are and require a pair of shoes with hard heels are a must.! These brake pedals are tiny.. Study the cockpit well as there is little time during your first initial flight in this British built Auster aircraft.

If you get an opportunity to sit in the aircraft again before flight, you will benefit, because, once you start rolling down the runway or across the grass, there will be little time to recollect what you have observed by just sitting in the aircraft. Your Instructor has already carried out his briefing and you are more confused than ever.

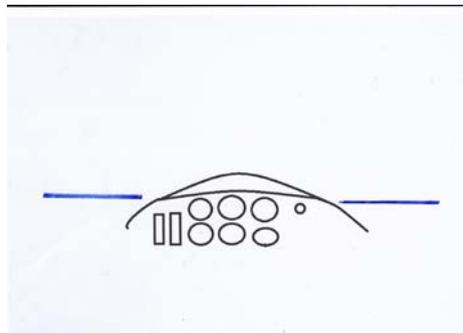
***This is it..!!***



The view ahead is limited initially with the aircraft nose blocking your vision, which will change rather rapidly as the brakes are released and power is applied smoothly and positively. Use of the rudder is now very important in keeping up

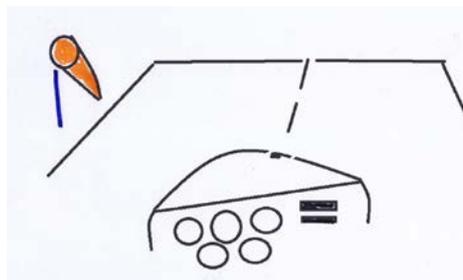
with the desire to keep straight, is the primary target!

The elevator is beginning to have some responsive feel for lowering the nose to the estimated flying attitude? (*not forgetting the rudder*), which is still a major flying control until the flying machine is airborne flying in all three axis



Now is the time to re-trim for level flight and centre the 'Slip Needle' or centre the ball as the case may be.

## RETURN TO AERODROME



Oh no! a crosswind, what now? Keep calm, correct approach speed, allow aircraft to crab down centre line, wings level, rudder central.

Continue descent until you are sure you are going to land maintaining back pressure, until the estimated touch down.

Yaw the aircraft with rudder to line up with runway centre line, use the rudder positively to keep straight a little brake may be helpful, aileron into wind, ***Wait until all motion has ceased.***

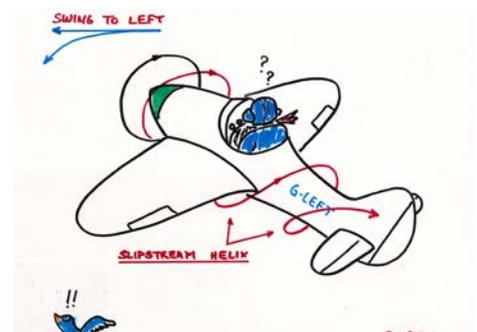
Keeping the Control Column fully back apply sufficient power to move the aircraft back to dispersal utilizing tail wheel steering, differential braking, do not use the

brakes excessively, aircraft brakes are not the best in the world.

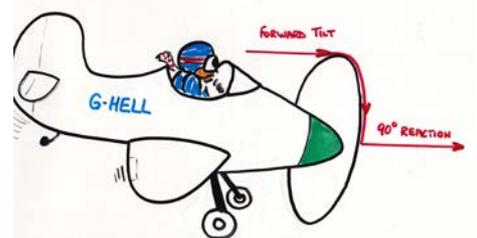
## THE GROUND LOOP



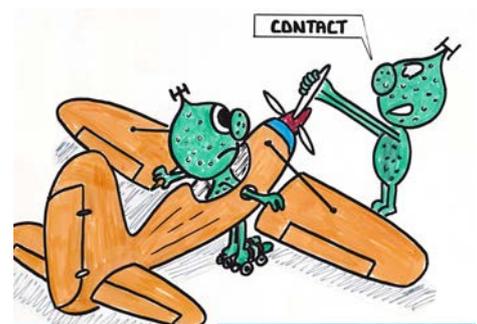
## GROUND LOOP FACTORS



## THEY ARE MANY & VARIED



## EACH ONE IS DIFFERENT



## IT GETS EASIER LATER ON

## LEARN TO KEEP STRAIGHT

The primary role at this stage of your flying career – keeping straight is essential, do not relax until the machine is cleanly airborne and climbing to altitude.

Don't forget to trim carefully 'ball' in the middle, enjoy your flight.

## DIRECTIONAL FACTORS

Learning to fly at the Club Bar is interesting, the conclusions of some techniques are amazing and interesting.

If these stories don't amaze you, they will certainly inspire you to observe more carefully, and try to understand their logic.

## THE BAR STOOL PILOT

Is always there and has some wonderful stories that he shares with his many pilot friends from the old days.

They all learned to fly when tail-wheel aircraft were difficult to fly, flight instruction books were scarce. There are many of these aircraft still flying, apparently just as difficult to handle as they were in the old days.

## ASYMMETRIC FLIGHT

A true story of a pilots actual crosswind technique as explained in front of an enthralled audience.

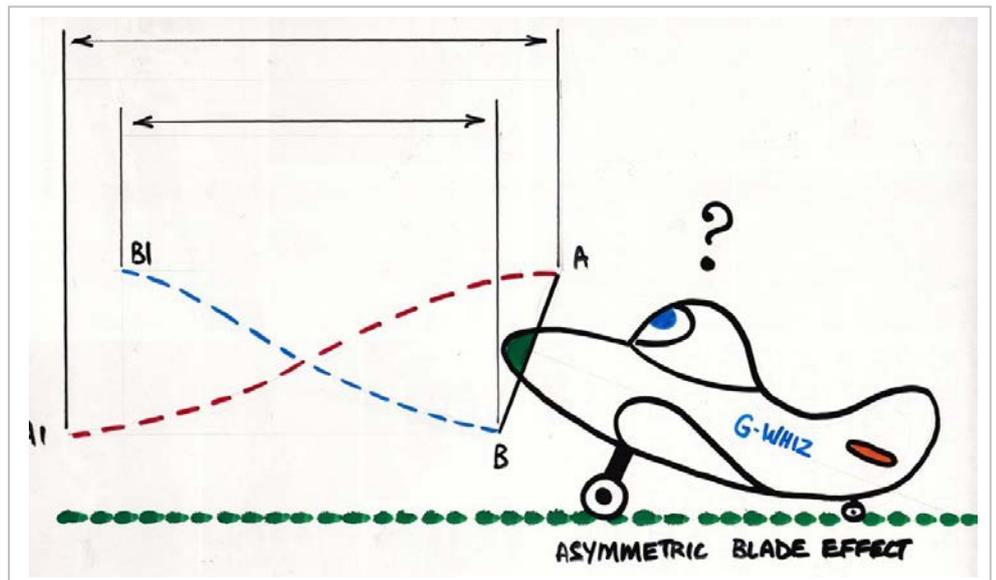
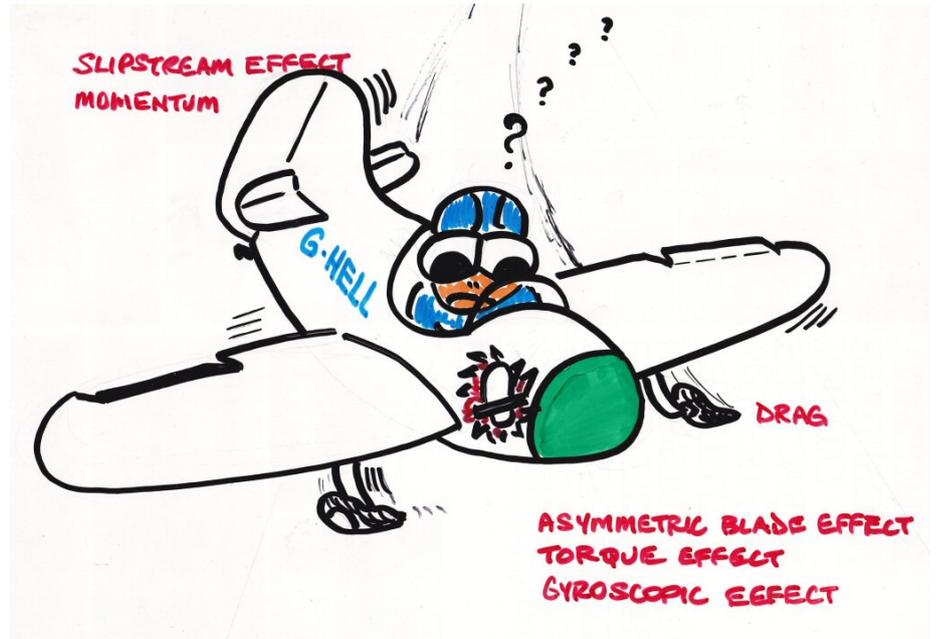
Adjustment to asymmetric power: helping the pilot to line up with the centre line of the runway!

He made no mention of the crossed controls which would exist because of his mis-use of power.

## TEXT BOOK DIAGRAMS

All references to ground loop articles are accurate and precise, although not understood out of context.

All sketches and diagrammatic forces indicated are bound to be misunderstood, although the verbal dialogue by the bar pilot sounds convincing should never be considered, his version should never be considered as an accurate conclusion of diagrams or the written word will only create a diabolical misconception of the true facts, when most needed.



## IDENTIFYING THE EFFECTS

Which combine against your intentions during the take-off period. Suddenly, you become more confused than ever, with the Bar Stool Pilots version

- Asymmetric Blade Effect
- Torque Effect
- Slipstream Effect
- Gyroscopic Effect
- Drag Effect (Undercarriage)
- Differential Brakes
- Crosswind Limits
- G-forces
- Centripetal force



A couple of Minor Prangs Milou, but No Ground Loops.