

Left: Kingaroy's new Discus VH-XKD being flown by Brian Allerby on the practice day of the Queensland Easter competition. In the foreground is the winglet of Greg Kolb's Discus 2

Improving your Gliding Performance

James Cooper

I WAS READING GEOFF HASTWELL'S ARTICLE ON IMPROVING YOUR GLIDING PERFORMANCE AND TWO POINTS STRUCK ME FOR CLARIFICATION.

Firstly Geoff states that *"You should fly with a little top rudder, indicated by the yawstring a little to the outside of your turn, used by some pilots."*

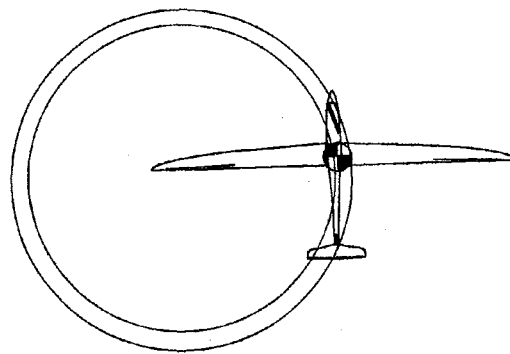
To clarify this point when we fly with the yaw string out to the side, as Geoff mentions, we are in fact flying with the glider straight through the air in the circle. The problem is that the yawstring is giving us false information.

Look at the diagram below. When turning in a circle the glider's centre of gravity rotates around the centre of the circle, and the air will pass parallel with the centre-line of the fuselage, at the centre of gravity.

However, as you can see on the diagram, the streamlines over the nose are to one side. If you choose to study further you will find that as bank increases this effect gets greater. Now, if a pilot flies with the yawstring straight he is in fact flying with the nose pointing down into the centre of the circle. Speed control then becomes very difficult as any change in aircraft attitude will tend to initiate speed build-up and then a battle with the aircraft. Fly with the yawstring as shown and things settle down.

I have had many comments saying that this effect would be only a few degrees. My comment is, sit in the back seat of a twin and look at the front yawstring and the back yawstring and you will see them at quite different angles once you are set up in the turn. Students may learn to fly much quicker if they are given this tip when they first learn, not when they come to a coach.

One further point that Geoff brings up – *"Fly on poorer days."* This was brought to light recently on one Saturday. Here in the West, once a month the three local gliding clubs compete by flying a 300km task with turning points at each of the three clubs. On this occasion the conditions were forecast to be super with 7,000 to 10,000ft climbs.



I set off early to add an extra 300km to the clubs' task in an attempt to win the Australian OLC. Unfortunately, conditions proved to be a little different. About two hours into the flight I was still not getting above 2,300 agl, and 600km was not on, so I had a go at getting around the clubs' task, finally landing at Narrogin having flown 250km.

Only one other pilot managed 99km, the rest flopped back on the field. Why was this? Please understand that I am not trying to blow my own trumpet, but I am noted to be the first to launch and fly away before the inversion has broken. With hours of practice in these conditions the Saturday was quite the norm to me. Others wait for the weather to boom and then are not able to fly when conditions deteriorate or never develop. So the answer is, if you want to fly in all conditions, fly in all conditions.

Just a further point, on a day like I mentioned, in a competition there would have been a devaluation of the day because of the low level of starters or finishers, not because the day was unsuitable, but because the pilots could not cope with the conditions. Well, perhaps this is another reason why I don't fly comps but stick to long distance flying.

competition. This was not a problem at Chinchilla. Current Open Class champion Tony Tabart flew, as did former National champions Bruce Taylor, Shane McCaffrey and a couple of champions from an earlier era, Dennis McCaffrey and Mal Tuit. With many of these competitors planning to fly at Dalby, there will be a suitably high level of competition.

The scoring worked very well thanks to many helpers for the official scorers. It was a pleasant relief on the first morning to hear the contest director say, *"that there were no changes to the published list of turnpoint coordinates."* How often has that not been the case? The idea of having virtual start points that were not connected to ground features was rejected by pilots at the pilots' meeting, which is something we need to learn from.

Once again, we learnt the importance of running an efficient launch operation. On the first day we were one tug short, but this was fixed for the second day. Also by the second day the ground crew were back in the swing of it and an efficient launch ensued. We only hope that by the time everyone gets to Dalby, pilots will be able to be in their cockpits and ready to launch before the tug lines up in front of them!

Otherwise, a friendly co-operative and safe approach to the event seem to carry organisers and competitors through any minor hiccups that occurred.

As to progress with organising Dalby. We are working closely with the local council to organise ground facilities for the competition. Our search for sponsors is being successful which will help keep costs down. Provisional entries are coming in, including some from New Zealand and one from Western Australia.

If you are planning on coming to Dalby, an email advising of your intention would be much appreciated and help us to firm up our expected number of entries. The official entry form will be in the July edition of Soaring Australia.

In the meantime please advise me of your intentions or send any questions you may have to <rhenderson@
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