

Scary pop-ins

An instructor recalls how he nearly lost it when popping in and out of cloud to give a student some hands-on instrument time.

Name withheld

THOUGH THE INCIDENT I AM about to relate occurred some 30 years ago, it still gives me a shiver when I think of it. I had not been long in my first job as a flying instructor. I had planned a navigation exercise with two students that would take us from Canberra to Coolangatta, via Cessnock, Singleton, Port Macquarie and Lismore.

The weather forecast indicated VMC along our route and we set off as planned. Around Singleton I noticed a few scattered clouds. Instead of remaining clear of them, I decided we'd do a bit of instrument flying. We were flying at a quadrantal level well clear of terrain so I let the student flying get a bit of hands-on instrument time, making sure to apply carby heat as required.

Popping in and out of cloud was fun until we stopped popping out. We were caught in cloud. I took the controls and tried to keep the aircraft straight and level. I had no instrument rating of any kind, just some under-the-hood time.

We had to get out of the situation quickly, and the best way to do that would be to head east and let down when over the water. By our estimates, the coast shouldn't have been too far away.

I changed course to a heading that I believed would safely get us over the coast and asked a student to work out an estimate. We began an easy power-on descent and I was expecting to pop out of the cloud when I glanced up at the magnetic compass. I was aghast to see that the compass and the DG heading differed by some

30 degrees. We were descending over the hills!

I applied full power and began a maximum effort climb until we were at a safe height. I then re-aligned the compass and DG, worked out where the aircraft was and headed due east. This time I was careful not to descend.

Shortly afterwards we broke out of the cloud into clear air. Greatly relieved, we continued the flight without further incident. Just how close I came to flying into a hill or just losing it I'll never know.

-Highly commended, awarded \$500

ANALYSIS: ON THE CLOCKS

By John Chesterfield

Entering cloud on a VFR flight is illegal and sets a poor example to students. That said, the author's decision to turn away from high ground and make a gradual descent over water was correct.

The 30° error between the compass and the directional gyro (DG) was probably caused by an unserviceable DG (with excessive drift) or failure on the part of the pilot to conduct regular synchronisation checks. These are vital on long cross-country flights.

VFR navigation is dependent on flying accurate headings.

If you have limited instrument experience and find yourself caught in cloud, you should focus on the artificial horizon (AH) and trust what it tells you. If you visualise scattered cloud above the horizon bar and basic ground features below it, the AH becomes a window through the cloud.

An occasional glance at the turn coordinator and vertical speed indicator (VSI) will confirm what the AH is showing. Don't try to fly the VSI or airspeed indicator (ASI) – these instruments have significant lag if the vertical performance is changing. You might like to consider regular instrument flight refresher training. It's not expensive and could one day save your life.

When flying at the same level as scattered cloud it is difficult to determine the extent of cloud cover ahead. One technique is to look ahead at the cloud shadows on the ground – this can give you an indication of increasing cover. If the cover ahead starts increasing to the point that a descent in VMC might become impossible, an immediate descent below the cloud base is needed. This may require a course reversal during the descent to stay VMC.

Radar coverage today is far more extensive than it was when this incident occurred. If you find yourself in a situation in which a descent through cloud offers the only option for a safe flight termination you should seek help. Ask for radar vectors to cloud break. Controllers have minimum altitude information on their screens and if you follow their instructions you will keep clear of terrain.

If you are not instrument-rated, say so. Controllers have been trained to give simple instructions to non-rated pilots who encounter IMC.

John Chesterfield is an approved test officer for instrument and instructor ratings.