

# THE MAGAZINE

Newsletter of the  
Moorabbin Aviation Group



## Change of venue for Wednesday night information evening. Now at terminal building at 7:30pm.

There is an information evening this Wednesday the 21<sup>st</sup> of June to provide information about the proposed upgrade of OKY and to receive feedback from members.

The presentation was to be done at the Flight Deck bar and grill at Moorabbin airport. Unfortunately it will be closed this Wednesday. So there is no opportunity to get together for a meal.

The venue has been changed to the airport terminal building which is 50 metres South of the tower, between the tower and the CAE Aviation academy. It is a short walk from the RVAC carpark.

In this issue  
BOARD NOTES

60<sup>th</sup> ANNIVERSARY

ATC VISIT

TYRE

MANAGEMENT

PROPOSED OKY

PANEL UPGRADE

SIGNIFICANT

SAFETY BENEFITS

WASH AND POLISH

### BOARD NOTES

MAG's aircraft upgrade policy stated that we were to upgrade one of the aircraft this year. Several factors, including the low \$AD / \$USD exchange rate and the types of aircraft that were being imported 15 years ago, have made this difficult and delayed our timing. Nevertheless, after considerable research the board has defined a preferred option and is developing a plan to deliver the best aircraft at the lowest cost for the group.



The first step is to explain to members what the board proposes and to invite comment to ensure that we are on the right path. The information evening this coming Wednesday is therefore a key event. Feedback will help to improve the proposal and the implementation plan. There is an article in this newsletter below that discusses some aspects of the proposed avionics which includes links to YouTube videos. Please do take the time to watch the videos as they will help to explain what the technology offers and will help in understanding the presentations on Wednesday.

MAG will need to accumulate funds prior to signing a contract to start upgrade works, so any significant upgrade will not happen until next year. The annual general meeting in November will be the time when the maximum number of members are together. So, I expect that the AGM in November will be the appropriate time to finalise all of the details. Any member who wishes to examine what is proposed and propose amendments or an alternative has five months to develop a case so that we arrive at the best solution.

Funds will be required no matter what upgrade is taken. We are proposing to ask members for funds in three amounts spread over at least a 12 month period starting in July / August to give members the best chance to manage the payments in their budget.

60<sup>th</sup> ANNIVERSARY  
& AGM  
Wednesday 25<sup>th</sup> of  
November

A date for your diary. The 60<sup>th</sup> anniversary of MAG and the AGM will be held on the 25<sup>th</sup> of November. If you have suggestions, then please contact Selwyn Favish and Gerald Smith who are organising the details.

ATC VISIT

The Air Traffic Control centre at Tullamarine provided an outstanding presentation and tour of their facility for a dozen MAG members thanks to organising by Ray Allen and Selwyn Favish.

TYRE  
MANAGEMENT

I reported in the last newsletter in March that that tyres did not need replacement in the 100 hourly in March. There was one flat spot on the C182 tyre since then and luckily the tyre just scraped through the 100 hourly completed last week. So, the extra care that people are taking is making a difference as we are not spending as much on replacing tyre. As you know we are encouraging people to roll the C182 forward during the pre-flight inspection to look for flat spots all around the tyre and to take a photo if they find one so that we can feed back to pilots who have caused the flat spot. This also brings the topic into memory so pilots can remember to take care.

PROPOSED OKY  
PANEL UPGRADE  
SIGNIFICANT  
SAFETY BENEFITS

The GNS 430 navigator and STEC 50 autopilot at the heart of OKY's existing panel represents technology that is 25 years old. It is not surprising that the latest equipment that is being proposed for OKY is a new generation in technology with significant safety benefits.

**ADSB IN**

A mid-air collision is one of the most likely causes of a fatal accident at Moorabbin. It is quite common for pilots to lose sight of the aircraft they are meant to be following in the circuit, or to fixate on the wrong aircraft. The proposed "ADSB in" transponder coupled with the G3X screen will allow pilots to easily identify traffic. Look at the following YouTube video to learn more about the G3X. <https://www.youtube.com/watch?v=m1yINkG1x1A>

**SMART GLIDE AND THE BLUE BUTTON**

Perhaps the strongest justifications for the upgrade are the improved safety features provided by Garmin's GFC 500 coupled with the GTN650 Xi navigator and GX3 display.

Flight Safety Australia January-February 2006 reported:

"On average, Australian air traffic controllers are called upon once every 10 days to assist a pilot in deteriorating weather. Of the reported occurrences, 60 per cent are above cloud and can't get down. The remainder are either in deteriorating weather, in cloud or have reduced visibility due to smoke or haze.... American research shows that 76 per cent of VFR into IMC accidents involve a fatality. ....The pilots of the 24 fatal aircraft accidents involving continued flight into IMC in Australia over the 10 years from 1992 to 2002 .... Fifty-four lives were lost in these accidents....

Spatial disorientation is the big danger. And it can happen a lot faster than you might think—just 178 seconds on average, about the length of a commercial on TV. That estimate is based on studies in the 1990s by aviation researchers at the University of Illinois. They took 20 VFR pilots and got them to fly into IMC in specially programmed flight simulators.

All of the pilots in the study went into graveyard spirals that would have ended in uncontrolled flight into terrain or rollercoaster-like oscillations that became so intense that they would have resulted in structural failure of the aircraft.

In repeated tests on the simulator the result was the same—all pilots lost control of the aircraft. The outcome differed only in the time required before control was lost which ranged from just 20 seconds to 480 seconds."

In 1995 MAG pilot Scott McLean was flying MAG's C182 XTK when it crashed at Warrnambool killing Scott and his two passengers. He took off shortly after sundown to return to Melbourne which was predicted to be VFR, however he was climbing toward low

cloud and drizzle ahead of an approaching front at Warrnambool. The investigation was inconclusive, however pilot disorientation due to loss of visual reference was a likely contributing factor.

The feature on the Garmin GFC500 that will assist with this problem is the famous “blue button”. Pushing the blue button on the autopilot will cause the aircraft to return to straight and level flight from an unusual attitude.

Some MAG pilots regularly fly with a partner in the right hand seat who is not qualified to fly. If the pilot becomes incapacitated, and if the pilot manages to push the blue button, or their partner does, then the aircraft will remain straight and level giving time for the pilot to regain control.

A second feature on the GFC500 is the “Smart glide” function. Depressing the “direct to” button for more than two seconds will cause the aircraft to turn towards an airfield that is in glide range and will cause the aircraft to set an attitude that will give the best glide speed. This frees up the pilot to work through the other aspects of handling an engine failure.

Watch the following video for more information.

<https://www.youtube.com/watch?v=y3idMj6s2XE>

The Flight Safety article mentioned that 60% of weather related occurrences were where an aircraft is trapped on top of cloud. I understand that in these situations ATC asks the pilot whether they have an autopilot, and asks other traffic for information about holes in the cloud, that might allow a visual approach. In the worst case, where there are no opportunities for a visual descent, and no radar coverage for vectoring, then it would seem that “Smart glide” functionality would, in an emergency, provide a way for an aircraft to orbit down to a field, virtually directly over the airport. Obviously, something that is not an approved approach, but may, after discussion with ATC and other experts at the time, be the best or only alternative in an emergency, and can be executed by pressing one button.

The pdf document attached titled “Autopilots are underrated Air Facts Journal” provides more detail.

### **Vertical guidance**

And, as well as the above, the panel will provide vertical guidance for runways for VFR flight. Particularly useful for NVFR when visual illusions can lead a pilot to make errors but also a great additional reference when you are flying into an airport that has different runway sizes to those you are familiar with, or terrain that makes approaches difficult to judge. Watch the following videos that are from GTN 750 and G1000 Nxi but have the same functionality in GTN650. Note the cautions over the dangers associated with assuming that a 3 degree approach angle would be acceptable.

<https://www.youtube.com/watch?v=-XzNtXO8lwc>

<https://youtu.be/sMdt203b5EY>

### **WASH AND POLISH**

Thanks to organisation by Mark Semer and attendance by members the aircraft benefited from a wash and polish on Saturday the 25<sup>th</sup> of March.

Thanks to: Ray Allen, Peter Cossins, Jan Frausing, Bill Holmes, Rod Hunt, Rob Lester, Robert Lyon, Peter Pless, John Riley, Mark Semer, Gerald Smith, Bill Spurrier, Nigel Weston.







