



“Swan Inter. Granted Wind Shear Detection Patent”

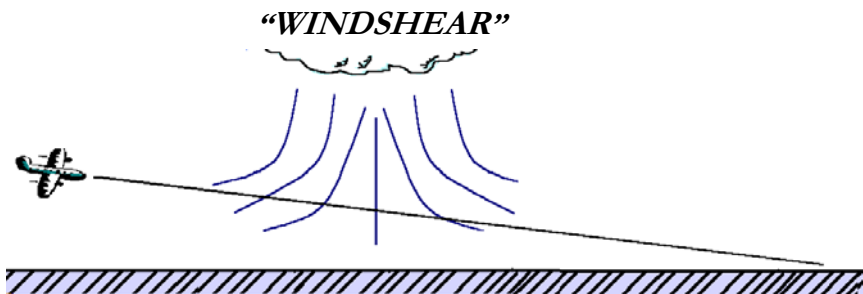
## WIND SHEAR DETECTION

Swan International based in Sydney, Australia has recently been granted the Patent for an Airborne Wind Shear Detection System. This Patent, issued by the US Patent Office, relates to a system for aircraft on-board detection and alerting of dangerous atmospheric conditions including Wind Shears which may occur during the landing and take off phase.

This unique Australian developed technology is focused towards an Eye-Safe, Laser Based Airborne Predictive Wind Shear Detection System for use in Fixed-Wing, General Aviation, Business, Regional and Transport Type Aircraft. This system will offer improved operational capability in Adverse Conditions by delivering Windshear Detection to a range of Aircraft not supported by current Radar Based Technologies.

The Swan Laser System for Windshear Detection utilises a range of components found both in leading-edge Fibre Optic and Solid State systems. This novel system operates in the Eye-Safe 1.5 $\mu$ m -1.8 $\mu$ m Band. A novel use is made of GPS for spatial determination and of a Fibre-Optic De-Modulator to derive the Doppler shift associated with the wind gradient.

Wind Shears result from rapidly changing wind conditions. On approach to landing, a performance-increasing headwind may be replaced by a performance decreasing tailwind. The Wind Shear Detector directs a Laser Beam in front of the Aircraft, receives a backscatter response and detects changes in Wind Speeds to give a Wind Shear Warning to the pilot .



The Swan Development was accepted for funding approval in 2003 by the Australian Government AusIndustry START Program. Development and initial testing of High Powered Lasers and related Detection Systems commenced at Macquarie Uni, Sydney in 2003. Swan International will conduct on-going Ground and Airborne Testing of the Laser Based Windshear Detection System from it's newly established facility at Bankstown Airport Sydney.

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