

AIRCRAFT ACCIDENT INVESTIGATION  
SUMMARY REPORT

Reference No.  
AS/724/1011

1. LOCATION OF OCCURRENCE

Lower Light, South Australia	Height a.m.s.l. (ft) 50	Date 12.3.72	Time (Local) 1109.	Zone CST
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2. THE AIRCRAFT

Make and Model Cessna 172A	Registration VH-UEV
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3. CONCLUSIONS

(i) At 1109 hours CST on 12 March, 1972, a parachutist was fatally injured by impact with the ground following a free fall descent at Lower Light, South Australia.

(ii) The parachutist, Stephen Edward Palmer, aged 25 years, had previously made 28 static jumps and 5 free falls with delays of up to 5 seconds. The static line jumps included 19 dummy ripcord pulls. The accident occurred on the parachutist's first jump at Lower Light.

(iii) The parachutist was equipped with a back mounted type C9 main parachute and a chest mounted type T-7A reserve parachute, each manually operated by means of a ripcord. The reserve parachute was also fitted with a Sentinel/Altimaster Automatic Emergency Parachute Opening System and Sentry.

(iv) The main parachute was owned by the South Australian Sport Parachute Club. It had been used for a descent earlier in the morning and was then re-packed for use in the descent on which the accident occurred. The reserve parachute was also owned by the South Australian Sport Parachute Club. No evidence was found of any error or omission in the packing of either parachute which might have contributed to the accident.

(v) The Sentinel/Altimaster Automatic Emergency Parachute Opening System and Sentry fitted to the reserve parachute was manufactured in the U.S.A. by Steve Snyder Enterprises Inc. The altimeter incorporated in the equipment must be set to zero before leaving the ground and the unit is normally armed prior to the parachutist leaving the aircraft. The battery operated device is designed to automatically fire a cartridge, deploying the reserve parachute at a height of 1,000 feet above ground level, providing that the parachutist is falling at not less than approximately 30% of terminal velocity.

(vi) The weather was not a factor in the accident and the dropping zone was satisfactory.

(vii) The parachutist was not known to the officials of the South Australian Sport Parachute Club prior to the day of the accident. On that day he presented himself at the parachuting site and requested that he be permitted to make a descent. His log book was examined and in view of his experience, a free fall descent was approved using equipment loaned by the club. The proviso was made that the automatic emergency parachute opening system be worn with the reserve parachute and the operation of this system was explained to the parachutist.

(viii) The descent on which the accident occurred was from a Cessna 172A aircraft registered VH-UEV, owned by H.A. Ramsey and flown by Jiri Palladij, who was the holder of a valid private pilot licence and who held the necessary approval for parachuting operations. Also on board the aircraft were student parachutist, Robert Hinds, and jump master, Stephen Robert Swann.

(ix) Prior to departure, the altimeter on the automatic opening device fitted to the reserve parachute was noted to be reading zero. The aircraft took off from the Lower Light dropping zone and, at a height of 2,500 feet, Robert Hinds exited the aircraft. During the climb to 3,000 feet, which was the planned exit height for Mr. Palmer, the automatic reserve parachute opening device was armed.

## CONCLUSIONS (Cont'd)

Mr. Palmer left the aircraft cleanly but, instead of assuming the spread position, brought both arms to the chest and was observed by the jump master to be gripping and pulling the Bendix tube just above the ripcord handle on the main parachute. The fall became unstable almost immediately and at about 200 feet above the ground, the parachutist was observed to throw his arms wide into the spread position. The reserve parachute began to deploy, but full development did not take place in time to significantly arrest the descent.

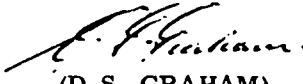
(x) When the main parachute was inspected after the accident the pins were found to have been extracted from the cones and the folded parachute, still contained in the sleeve, was beneath the pack in a manner consistent with the pack having opened at impact. The ripcord handle was partly withdrawn, also in a manner consistent with this having occurred at impact.

(xi) The ripcord handle of the reserve parachute was found to be still in its stowage pocket and the canopy had been deployed by operation of the automatic opening device. The automatic emergency parachute opening system was severely damaged by impact forces. A chamfered insulating sleeve was found to have been fitted, incorrectly, to the contact stop of the arming sector of the equipment. The possibility that this defect lead to a delay in the operation of the emergency parachute opening function cannot be excluded. The handbook published by the manufacturer of the automatic emergency parachute opening system contains a warning that it is an emergency device only, intended as an aid to safety and that it should not be solely relied upon by the user. When, during a descent, a parachutist is unable for any reason to deploy his main parachute, the correct procedure is to take timely action to manually deploy the reserve.

(xii) The parachutist suffered from a disability arising from a head injury sustained in 1963. It was established that he had been taking a prescribed drug which would have largely controlled the effects of his medical condition. The nature of his disability and the possible side effects of the drug necessary to its control were such that he should not have engaged in parachute jumping. It has not been possible to establish whether or not the medical condition of the parachutist, or the treatment which he was undergoing, contributed to the accident.

## 4. OPINION AS TO CAUSE

The cause of the accident was that the parachutist did not take action to manually deploy the reserve parachute when difficulties were encountered in activating the main parachute.

Release approved  (D.S. GRAHAM)	Designation Assistant Director-General (Air Safety Investigation)	Date 5.4.1973
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