



## **\*\*Skydiver Advisory\*\***

Jointly Issued by the U.S. Parachute Association  
and the Parachute Industry Association



Reports indicate that 2009 was the safest year for skydiving in the U.S. for nearly five decades with regard to fatalities. To grasp the statistical significance of this, one also has to realize that more than 10 times as many jumps were made in 2009 as in 1961, the most recent year with fewer fatalities than 2009. Although skydivers and the whole industry collectively should be proud of this accomplishment, there is room to do even better. In this regard, the United States Parachute Association and the Parachute Industry Association are collaborating to take a look at various fatalities that, although low in overall numbers, are still important to consider.

One example is low reserve deployments. Research shows that in the past 10 years there has been about one fatality per year in the U.S. in which, for uncertain reasons, the jumpers struck the ground without a fully functional reserve parachute after *apparent* reserve activation at a sufficient altitude. Although most of these incidents occurred after the automatic activation device (AAD) initiated reserve deployment, others occurred after a manual reserve ripcord pull or activation by a reserve static line (RSL). PIA has tasked its Technical Committee to collect and review relevant data, to work within the industry in order to identify any trends or specific causes and to make any relevant recommendations.

Possible factors may include, but are not limited to, body position of the jumper, the reserve pilot chute getting caught in the burble, inhibitory actions by the jumper, entanglement with the jumper or other equipment, condition of the container and reserve components, exact combination of components utilized, fit of the reserve canopy in the container, AAD setting or functionality, reserve packing methods, container design and reserve pilot chute spring strength, as well as various combinations of these factors and other factors that have yet to be determined.

USPA and PIA want skydivers and riggers to be aware of these factors and related issues and to take the following three actions.

- 1) Each skydiver should carefully review and set personal altitudes for main canopy deployment, initiation of emergency procedures and reserve ripcord activation that provide more than sufficient altitude for full reserve deployment. USPA's Basic Safety Requirements require C- and D-licensed jumpers to initiate main canopy deployment by at least 2,000 feet above the ground. However, this is a minimum deployment altitude which, particularly with today's slower-opening main canopies, provides very little time for initiating emergency procedures should the jumper experience a pilot-chute-in-tow or certain other high-speed main canopy malfunctions. Higher main deployment and emergency procedure altitudes can help ensure there is more time to successfully deploy a reserve parachute.

Skydiver's Information Manual Section 5-1 recommends that emergency procedures be initiated by at least 1,800 feet above the ground for B- through D-licensed skydivers and 2,500 feet above the ground for students and A-licensed skydivers. In order to accomplish

this, it is imperative that main deployment be planned and initiated at sufficient altitude to obtain a functionally open main parachute by these emergency procedure minimums.

- 2) When a reserve parachute is due for a repack, each owner should put his rig on (fully adjusted with the main parachute packed to simulate a total malfunction) and, in the presence of his rigger, pull the cutaway handle and reserve ripcord and have the rigger observe the pilot chute launch. Following this, with the aid of the rigger, carefully place the harness and container on a flat surface (or perhaps on someone else's shoulders) and have the rigger extract the reserve freebag from the container by the bridle. Any anomaly to a normal, unrestricted pilot chute launch and freebag extraction should be thoroughly investigated and documented by the rigger and reported to the equipment manufacturers and PIA's Technical Committee. Use this opportunity to ask the rigger any questions about the equipment and obtain a working knowledge of the parachute system.
- 3) Skydivers should review their equipment owner's manuals (including harness-container, reserve canopy, main canopy, AAD and visual/audible altimeters) and should consult an instructor, rigger and/or the equipment manufacturers with any questions or concerns. Skydivers using AADs should understand that they are strictly backup devices and are not intended to replace training or timely manual execution of emergency procedures. AADs may or may not initiate reserve parachute deployment at a sufficient altitude, depending upon various combinations of circumstances. There have been numerous reports of skydivers who decided to take no action on their own and to just "wait for the AAD to activate" for various reasons, which is contrary to recommended procedures. All skydivers should review proper emergency procedures and be prepared to manually deploy the reserve parachute before ever reaching AAD activation altitude.

Any equipment questions should be directed to the appropriate manufacturer(s). Any component or deployment anomalies should be thoroughly documented and reported to the equipment manufacturers and PIA's Technical Committee (email: [technicalchair@pia.com](mailto:technicalchair@pia.com)).

The United States Parachute Association is a voluntary, not-for-profit association dedicated to the safe enjoyment of skydiving.  
[www.uspa.org](http://www.uspa.org)

The Parachute Industry Association works to advance and promote the growth, development, training and safety of parachuting activities.  
[www.pia.com](http://www.pia.com)

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