

# Automatic Activation Device Information Guide



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# Introduction

This information guide is designed to create conversation about AADs, not to give answers but to motivate the search for questions. The information contained here within is concentrated on electromechanical AADs designed to activate the reserve parachute. Here in Australia many dropzones are using this type of AAD for student training while the number of skydivers using mechanical AADs is declining.

Understanding the equipment we use for skydiving is important for safety. AADs are part of that equipment and it is the users responsibility to know the limitations of their AAD. In certain situations not knowing about these limitations could jeopardise safety. Discussing scenarios where an AAD may influence a decision is not only a great way to learn but is also a great way to teach.

There are known knowns. These are things we know that we know. There are known unknowns. That is to say, there are things that we know we don't know. But there are also unknown unknowns. There are things we don't know we don't know.

**[Donald Rumsfeld](#)**

This information guide is in no way designed to replace the current user manuals provided by the manufactures, it is solely designed to highlight key issues that skydivers need to be aware of whilst using equipment fitted with an AAD.

# Makes And Models

Cypres and Vigil are used by many skydivers here in Australia from student training through to experienced skydiving. Although they are both electromechanical AADs designed to activate the opening sequence of the reserve parachute, there are some differences. The following is a brief description of the models available and their operating parameters.

## CYPRES

### Expert

Arming height:	1,500 ft	(450m)
Activation height:	750 ft	(225m)
Activation speed:	78mph	(35m/s)

### Student

Arming height:	1,500ft	(450m)
Activation height:	1,000ft	(300m)
Activation speed:	29mph	(13m/s)

### Tandem

Arming height:	3,000ft	(900m)
Activation height:	1,900ft	(580m)
Activation speed:	78mph	(35m/s)

### Speed

Arming height:	1,500ft	(450m)
Activation height:	750ft	(225m)
Activation speed:	96mph	(43m/s)

# VIGIL

## PRO

Arming height:	150ft	(46m)
Activation height:	840ft	(256m)
Activation speed:	78mph	(35m/s)

## Student

Arming height:	150ft	(46m)
Activation height:	1040ft	(317m)
Activation speed:	45mph	(20m/s)

## Tandem

Arming height:	150ft	(46m)
Activation height:	2040ft	(622m)
Activation speed:	78mph	(35m/s)

### **note:**

Exiting the aircraft before the arming height is reached will result in the AAD not working.

### **note:**

Both Cypres and Vigil AADs actual activation height can be influenced by other factors such as body position, see their user manuals for more info.

# Situation Response Planing

While AADs offer a tremendous amount of security, there are situations we can and do encounter in skydiving where a lack of knowledge or improper use may cause a negative impact on safety. The following are just some of the possible scenarios that skydivers should be discussing and formulating a response best suited to their equipment type and experience level.

## Scenario 1

A visiting novice skydiver who has recently converted from equipment fitted with an AAD set to activate the main parachute, is performing a solo skydive at your dropzone using equipment fitted with a student Cypres.

### *Question*

What particular traits does a student Cypres have that the instructor and novice need to be aware of?

## Scenario 2

As a tandem master on the ride to height an emergency exit is declared at 2,800ft, you exit at 2,500ft and deploy your reserve parachute

### *Questions*

Would a Cypres activate?

Would a Vigil activate?

## Scenario 3

On a wingsuit jump in freefall you notice your at 2,000ft and deploy your reserve.

### *Question*

Does a wingsuit change the activation height of an AAD?

## Scenario 4

Taking off from an airfield with the intention of landing at an area 600ft higher, the aircraft climbs to 1,800ft descend to 500ft then climbs to jump altitude.

*Question*

What effect will this have on your AAD?

## Scenario 5

Using a rig equipment fitted with a speed Cypres under canopy you cut away at 1,400ft and do nothing

*Question*

Will it activate?

How does this differ from other AADs?

***Situations must be thought out and planed for, creating a reflex action such as (emergency procedures). Once those procedures are (over-learned) we then set about learning how to avoid these situations altogether.***

# Summary

Any add on to basic equipment set up (such as AADs) can add complexity to this equipment. An increase in safety is only possible when this complexity is understood and procedures are formulated to suit the equipment set up. As skydiving progresses and the types of skydiving become more varied so will the amount of information, uses and scenarios concerning AADs. Staying on top of this is the responsibility of the entire skydiving community. By communicating with each other we learn from each other.

Flying is inherently dangerous. We like to gloss that over with clever rhetoric and comforting statistics, but these facts remain: gravity is constant and powerful, and speed kills. In combination, they are particularly destructive.

— Dan Manningham, 'Business and Commercial Aviation' magazine

Flying is so many parts skill, so many parts planning, so many parts maintenance, and so many parts luck. The trick is to reduce the luck by increasing the others.

— David L. Baker



# Disclaimers

## *From the Cypres users guide*

“The use of CYPRES does not automatically prevent injury or death. Risk can be reduced by assuring that each component has been installed in strict compliance with the manufactures instructions by obtaining proper instruction in the use of this system, and by operating each component of the system in strict compliance with this users guide. Automatic activation devices (AADs) sometimes fail to operate properly, and sometimes activate when they should not, even when properly installed and operated. Therefore the user risks serious injury or even death to themselves and others during each use.”

## *From the Vigil users manual*

“AAD NV/SA intensively tests all Vigil® to assure their reliability. Each Vigil® has passed various documented technical inspections, calibration tests, quality control inspections and a final functional test (6 jumps in test chamber) before shipment. These are all documented and available to customers. However, AAD NV/SA cannot totally exclude the risk of a malfunction on electronic equipment. AAD NV/SA can not be held responsible in the event a faulty part escapes detection during the final testing phases. The AAD NV/SA warranty is exclusively limited to the replacement or rework of defective parts free of charge within one year from the date of purchase.

For more info:

Cypres users guide  
[www.cypres-2.com](http://www.cypres-2.com)

Vigil users guide  
[Home | Vigil](#)