

**Fédération Aéronautique Internationale (FAI)
International Parachuting Commission (IPC)**

2006

IPC AAD SURVEY REPORT



IPC TECHNICAL AND SAFETY COMMITTEE

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1 SURVEY AIM & DISTRIBUTION

The aim of this survey, which was first undertaken in 1994, is to try to determine the degree to which AADs are being used by skydivers worldwide and to attempt to monitor any movement in the use of the devices.

The response for 2006 was 37 countries, from a possible 74. This is a response rate of 50%. See Table 2, Page 6 for other years.

The AAD Survey form was changed slightly for 2006. An additional category of student jumper was added – IAD/JAD Student. Instructor Aided Deployment or Jumpmaster Aided deployment is used at some centres or in some countries instead of Static Line. It was therefore felt that this category should be added.

This report is produced by the Technical & Safety Committee of the International Parachuting Commission of FAI.

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Sincere thanks to those who responded to the AAD Survey for 2006

2 TABLES OF RESPONSES

AAD Table 1, 2006

National Sport Parachuting Organisation									
COUNTRY	AAD Compulsory	Static Line	IAD/JAD Students	AFF Students	Freefall Students	Intermed. Jumpers	Expert Jumpers	Tandem	Display Jumpers
Argentina	Yes	Yes	Yes	Yes	Yes			Yes	
Australia	Yes	No	n/a	Yes	Yes	Yes	No	Yes	Yes *
Austria	Yes	Yes		Yes	Yes	No	No	Yes	No
Belgium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bulgaria	Yes	Yes	Yes	Yes	Yes	Yes	see note	Yes	Yes
Canada	Yes	Yes	Yes	Yes	Yes			Yes	
China, People's Republic	Yes						Yes		
Cyprus	Yes	Yes		Yes	Yes			Yes	
Czech Rep.	Yes	Yes	Yes	Yes	Yes	Yes *	No	Yes	No
Denmark	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Estonia	Yes	Yes	Yes	Yes	Yes			Yes	Yes
Finland	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No
France	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Germany	Yes	Yes		Yes	Yes	No	No	Yes	Yes
Greece	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No
Hong Kong, China	Yes	Yes	n/a	Yes	Yes	Yes	Yes	Yes	Yes
Hungary	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
India	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Italy	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No
Kazakhstan	No								
Kenya	Yes								
Latvia	Yes	Yes	Yes	Yes	Yes	Yes		Yes	
Netherlands	Yes	Yes	Yes	Yes	No	No	No	Yes	No
New Zealand	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Norway	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No
Poland	Yes	Yes		Yes	Yes			Yes	
Portugal	Yes	Yes	Yes	Yes	Yes	Yes		Yes	
Russia	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Saudi Arabia									
Serbia	No								
Slovakia	Yes	Yes		Yes	Yes	Yes	No	Yes	Yes
Slovenia	No								
South Africa	Yes	No	No	Yes	Yes	No	No	Yes	No
Spain	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sweden	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Switzerland	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No
United Kingdom	Yes *	Yes	n/a	Yes	Yes	Yes	No	Yes	Yes
TOTALS (37)	33	29	20	31	30	17	9	31	16

Notes -

- Australia** Display Jumpers - Not required for Expert Display Jumpers.
- Bulgaria** Expert Jumpers - On individual basis, and during the day only, may execute jumps without an AAD if the delay is 30 secs. or less.
- Cyprus** AAD is compulsory for students, but not for non-students, as per table above.
- Czech Rep.** Intermediate Jumpers – AAD required in this category until 200 jumps reached.
- Denmark** In Denmark use of AAD has been compulsory for all categories of skydivers from 1998.
- U.K.** AADs are not compulsory for parachutists jumping ‘round’ Static Line parachutes – less than 0.01%

n/a = Non applicable, indicating that this type of jumping is not carried out in that country.

Table 1A, 2006

Military Parachuting Organisation									
COUNTRY	AAD Compulsory	Static Line	IAD/JAD Students	AFF Students	Freefall Students	Intermed. Jumpers	Expert Jumpers	Tandem	Display Jumpers
Argentina	No								
Australia	Yes	No	n/a	Yes	Yes	Yes	Yes	Yes	Yes
Austria	Yes	Yes			Yes	Yes	Yes	Yes	Yes
Belgium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bulgaria	Yes	Yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Canada	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
China, People's Republic	Yes						Yes		
Cyprus	Yes	Yes		Yes	Yes	Yes	Yes	n/a	Yes
Czech Rep.	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
Denmark	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Estonia	No								
Finland	No								
France	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Germany	Yes	No		Yes	Yes	Yes	Yes	Yes	Yes
Greece	No								
Hong Kong, China	See Note								
Hungary	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
India	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Italy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Kazakhstan	No								
Kenya	No								
Latvia	Yes	Yes	Yes	Yes	Yes	Yes		Yes	
Netherlands	Yes	Yes	Yes	Yes	No	No	No	Yes	No
New Zealand	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Norway	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Poland	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Portugal									
Russia	Yes	No		No	Yes	Yes	Yes	Yes	Yes
Saudi Arabia	Yes				Yes		Yes		
Serbia	Yes	Yes	Yes	Yes	Yes	Yes			
Slovakia	Yes	Yes		Yes	Yes	No	No	Yes	No
Slovenia	No								
South Africa	No								
Spain	No								
Sweden	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Switzerland	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
United Kingdom	Yes	Yes	n/a	Yes	Yes	Yes	Yes	Yes	Yes
TOTALS (37)	26	21	15	21	23	21	18	21	18

Notes -

Hong Kong, China Military Parachuting is not available in Hong Kong.

Table 1B, 2006

National Aviation (Government) Authority									
COUNTRY	AAD Compulsory	Static Line	IAD/JAD Students	AFF Students	Freefall Students	Intermed. Jumpers	Expert Jumpers	Tandem	Display Jumpers
Argentina	Yes	Yes	Yes	Yes	Yes			Yes	
Australia	Yes	No	n/a	Yes	Yes	Yes	No	Yes	Yes *
Austria									
Belgium	No								
Bulgaria	No								
Canada									
China, People's Republic	Yes								
Cyprus	Yes	Yes		Yes	Yes			Yes	
Czech Rep.	No								
Denmark	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes
Estonia	No								
Finland	No								
France	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Germany	No								
Greece	No								
Hong Kong, China	<i>See Note</i>								
Hungary	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
India	no reg.								
Italy	No								
Kazakhstan	No								
Kenya	No								
Latvia	No								
Netherlands	No								
New Zealand	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No
Norway	No								
Poland	No								
Portugal									
Russia	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Saudi Arabia									
Serbia	Yes	Yes	Yes	Yes	Yes				
Slovakia									
Slovenia	Yes	Yes			Yes				
South Africa	No								
Spain	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sweden	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Switzerland	No								
United Kingdom	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes
TOTALS (37)	14	12	9	12	13	6	3	11	8

Notes -

Australia

Cyprus

Hong Kong, China

India

Display Jumpers - Not required for Expert Display Jumpers.

AAD is compulsory for students, but not for non-students, as per table above.

Our organisation is the representative of the National Aviation Authority.

The National Aviation Authority does not have any regulation on AAD use.

3 NOTES AND COMMENTS ON RESPONSES

Belgium	The number (5) are AAD fires and are not necessarily saves.
China, People's Rep.	Good
Cyprus	Even though AAD is not compulsory for 'non student' jumpers, virtually everybody uses AAD (mostly Cypres)
Czech Rep.	The use of AAD is more and more like a norm.
Germany	The use of VIGIL AAD is also approved in Germany. Number of non-AAD users is decreasing.
Hong Kong,China	AAD is a very good system. We have been compulsorily using it since 1995.
India	Should be must for all.
Netherlands	There were no saves, but 5 correct activations. New AAD models have their startup problems (like any new equipment)
Norway	Three AAD fires in total, and one of them was a complete save. This was a container lock in combination with twisted left part of harness, so that the reserve handle pointed in - and outwards with chest strap blocking the reserve handle.
Portugal	One AAD fire, simultaneous with main deployment.
South Africa	Cost is prohibitive but use is highly recommended for all jumpers.
Spain	5 AAD fires – 3 lives saved. 1 Freefall collision between Freely Instructor and Student – Student (+/- 200 jumps) died. The Instructor was unconscious. The AAD fired and saved his life. 2 Student spun until AAD fired. 3 Student spun until AAD fired.

4 ANALYSIS OF RESPONSES

Of the 37 countries that responded, AAD was mandatory as follows:-

National Sport Parachuting Organisation – 33 countries (89%) reported that AAD was mandatory for some class or classes of skydivers.

Military Parachuting Organisation - 26 countries (70%) reported that AAD was mandatory for some class or classes of military parachutists.

National Aviation (Government) Authority - 14 countries (38%) reported that AAD was mandatory for some class or classes of skydivers, by their government authority.

(see Table 2, Page 6)

AAD Table 2, 2006

	National	Military	National
	Sport Para	Parachuting	Government
Year	Association	Organisation	Authority
2006	89%	70%	38%
2005	96%	64%	46%
2004	86%	62%	38%
2003	83%	61%	39%
2002	84%	69%	28%
2001	83%	63%	33%
2000	89%	63%	19%
1999	83%	65%	17%
1998	87%	45%	19%
1997	87%	61%	32%
1996	89%	46%	24%
1995	76%	53%	18%

Fluctuation in figures may be accounted for by the mixture of responding countries from year to year.

Sport Parachuting Organisations

A breakdown of responses relating to National Sport Parachute Associations in the 37 responding countries shows that AAD was mandatory for the various categories of skydivers as follows:-

AAD Table 3, 2006

<i>Jumper Type</i>	<i>No. of Countries</i>	<i>Percentage of 37</i>
Static Line Students	29	78%
IAD/JAD Students	20	54%
AFF Students	31	84%
Freefall Students	30	81%
Intermediate Jumpers	17	46%
Expert Jumpers	9	24%
Tandem Jumpers	31	84%
Display Jumpers	16	43%

These figures relate only to the sport parachute associations in the countries reporting.

It is noted that the greatest requirement for mandatory AAD use is for the following categories of parachuting.

- 1 **AFF Students**
- 2 **Tandem**
- 3 **Freefall Students**

These are followed by

- 4 **Static Line Students**
- 5 **IAD-JAD Students**

And the least requirement for mandatory AAD use is with

- 6 **Intermediate Jumpers**
- 7 **Display Jumpers**
- 8 **Expert Jumpers**

Care is to be taken with these figures as some countries may not use some of the categories listed – e.g. IAD/JAD.

The mandatory use of AAD can vary from country to country. Visiting skydivers should ascertain the local requirements prior to bringing equipment to another country.

5 MANDATORY USE OF AAD BY MILITARY JUMPERS

Twenty-six countries (see Table 1A, Page 3 and Table 2, Page 6) reported that the military in their countries required the use of AAD for some categories of parachutists.

6 MANDATORY AAD USE BY GOVERNMENT/OFFICIAL AVIATION AUTHORITY

Fourteen countries (see Table 1B, Page 4 and Table 2, Page 6) reported that their government or official aviation authority required the use of AAD, for some categories of parachutists. In most of these cases the aviation authority followed the requirement/s of their country's sport parachute organisation.

7 AAD SAVES IN 2006

The following is a list of the responses to the question – *How many confirmed saves by AAD in your country in 2006?*

AAD Table 4, 2006

Country	AAD saves - 2006
Argentina	5
Australia	2
Austria	0
Belgium	5
Bulgaria	3
Canada	4
China, People's Republic	0
Cyprus	0
Czech Republic	5
Denmark	1
Estonia	0
Finland	1
France	2
Germany	2
Greece	0
Hong Kong	n/a
Hungary	3
India	1
Italy	4
Kazakhstan	0
Kenya	0
Latvia	4
Netherlands	0
New Zealand	2
Norway	1
Poland	2
Portugal	0
Russia	17
Saudi Arabia	4
Serbia	0
Slovakia	0
Slovenia	0
South Africa	0
Spain	3
Sweden	0
Switzerland	1
United Kingdom	0
TOTAL	67

Notes in relation to saves in 2006

Belgium – The number are AAD fires and are not necessarily saves.

Finland – The save was probable.

Netherlands – No saves, (+5 correct activations)

A MINIMUM OF 67 SKYDIVERS MAY HAVE BEEN SAVED BY AAD IN 2006.

The actual figure may be higher, bearing in mind that AADs may be reset in the field.

8 AAD SAVES 1994 - 2006**Saves, year by year and total for 13 years 1994 to 2006 inclusive*****AAD Table 5, 2006***

Year	Number of Saves	
2006	67	
2005	53	
2004	39	
2003	62	
2002	93	
2001	50	
2000	59	
1999	45	
1998	63	
1997	83	perhaps 85
1996	46	
1995	43	
1994	72	
TOTAL SAVES - 13 YEARS	721	perhaps 723

In the thirteen years, 1994 to 2006 inclusive, a minimum of 721 lives may have been saved through the use of AAD. The uncertainty in 1997 (between 83 and 85) resulted from ambiguity regarding two occurrences, as to whether the AAD saved a life or whether the skydiver would have carried out the correct procedure/s in time.

While comparison between years may be unreliable due to the differing rates of response and the mix of responding countries, nevertheless, the large numbers of saves in each year, and the cumulative total in the eleven years 1994 to 2006 inclusive, emphasise the importance of the AAD in saving lives.

The actual numbers of AAD saves may in fact be higher as all incidents of saves may not be reported.

9 TABLE OF RESPONDING COUNTRIES 1994 - 2006

AAD Table 6, 2006

Country	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Argentina	1		1	1									1
Australia	1	1	1	1	1	1	1	1	1	1	1	1	1
Austria	1	1	1				1	1	1	1	1	1	1
Belarus			1	1	1								
Belgium	1	1	1	1				1	1	1	1		1
Brazil			1							1			
Bulgaria									1	1	1	1	1
Canada	1	1	1	1	1	1	1	1	1	1	1	1	1
Chile													
China, P.Rep.	1	1		1	1	1	1			1			1
Croatia					1					1			
Cyprus								1	1	1	1	1	1
Czech Rep.	1	1	1	1	1	1	1	1	1	1	1	1	1
Denmark	1	1	1	1	1	1	1		1	1	1	1	1
Estonia									1	1	1	1	1
Finland	1	1		1	1	1	1	1	1	1	1	1	1
France	1	1	1	1	1	1	1	1	1	1	1	1	1
Germany	1	1	1	1	1	1	1	1	1	1	1	1	1
Greece	1	1	1	1	1				1	1	1	1	1
Hong Kong	1	1									1	1	1
Hungary	1	1	1		1	1	1	1	1	1	1	1	1
Iceland	1	1	1	1	1								
India	1	1	1			1			1	1	1		1
Indonesia	1	1	1	1	1								
Ireland	1	1	1	1	1	1	1	1	1	1			
Israel	1	1	1	1									
Italy	1	1	1	1							1		1
Japan	1		1				1	1					
Kazakhstan			1							1	1		1
Kenya	1	1	1	1	1	1	1	1		1	1	1	1
Latvia													1
Lithuania	1	1	1					1	1		1		
Luxembourg	1	1	1								1		
Macedonia	1	1	1	1	1								
Mozambique		1			1	1							
Namibia										1			
Netherlands	1		1	1	1	1	1	1	1	1	1	1	1
New Zealand								1	1	1	1	1	1
Norway	1	1	1	1	1	1	1	1	1	1	1		1
Poland		1	1	1	1	1	1	1	1	1	1	1	1
Portugal	1	1	1	1	1	1	1	1	1	1	1	1	1
Romania		1									1		
Russia - USSR	1							1		1		1	1
Saudi Arabia										1	1		1
Serbia/Montenegro									1	1	1		
Serbia												1	1
Slovak Republic	1	1	1	1	1	1	1	1	1	1	1	1	1
Slovenia	1								1	1	1		1
South Africa				1			1			1	1	1	1
Spain	1	1	1				1	1	1	1	1	1	1
Sweden	1	1	1	1	1	1	1	1	1	1	1	1	1
Switzerland	1	1	1		1	1	1	1	1	1	1	1	1
Thailand	1												
Turkey	1	1	1	1	1	1	1	1	1	1	1	1	
UAE	1	1			1								
United Kingdom		1	1	1	1	1	1	1	1	1	1	1	1
Uruguay		1			1					1			
USA	1	1	1	1	1		1	1	1	1	1	1	
Venezuela	1	1	1	1	1		1	1	1				
Yugoslavia						1	1	1					
Zimbabwe								1		1			
TOTALS	38	38	36	29	31	23	27	30	32	41	37	28	37