

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



2009

IPC AAD SURVEY REPORT

IPC TECHNICAL AND SAFETY COMMITTEE

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1 SURVEY AIM & DISTRIBUTION

The aim of the AAD survey, 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 2009 was 35 countries. See Table 6, Page 10 for other years.

The 2009 AAD Survey form was the same as in previous years, to allow for comparisons to be made, if needed.

Tables 1, 1A and 1B are colour-coded to allow easy visual indication of what categories of skydiver are required to use AAD. Blue indicates mandatory use for that category and a purple bar indicates that AAD is mandatory for all skydivers in that country. It should be remembered that some countries use Static Line, some use IAD/JAD, some use AFF. Some use two of these three methods of Student training, but few, if any, use all three.

Section 5, page 7, is a new section, showing those countries which make the use of AAD mandatory for all skydivers, and those countries which plan to do so.

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

**Any questions regarding the report should be addressed to,
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**Any comments or suggestions on the AAD issue, or any aspect
of Technical and Safety work would be most welcome.**

Sincere thanks to those who responded to the AAD Survey for 2009

2 TABLES OF RESPONSES

AAD Table 1, 2009

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	No	No	Yes	No
Australia	Yes	No	n/a	Yes	Yes	Yes	No	Yes	Yes * ¹
Belgium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Brazil	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Canada	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No
China, People's Republic	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cyprus	Yes	Yes	Yes	Yes	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
Finland	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No
Germany	Yes	Yes	n/a	Yes	Yes	Yes	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
Hungary	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Iceland	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
India	No								
Italy	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No
Kazakhstan	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Kenya	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Montenegro	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No
Norway	Yes	Yes	Yes	Yes	Yes			Yes	
Poland	Yes	No	Yes	Yes	No	No	No	Yes	Yes
Portugal	Yes	Yes	Yes	Yes	Yes	Yes		Yes	
Russia	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Saudi Arabia	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Serbia	No	No	No	No	No	No	No	No	No
Slovakia	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Slovenia	No								
South Africa	Yes	No	n/a	Yes	Yes	No	No	Yes	No
Spain	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sweden	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
Switzerland	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No
United Kingdom	Yes	Yes	n/a	Yes	Yes	Yes	No	Yes	Yes
Unites States of America	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No
Uruguay	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No
TOTALS (35)	32	28	26	31	31	20	11	32	18

Purple indicates counties where AAD is mandatory for all categories of skydiving engaged in, in that country.

Notes: –

¹ Australia Display Jumpers - Not required for Expert Display Jumpers.

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

Table 1A, 2009

Military 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	No	No	Yes	No
Australia	Yes	No	n/a	Yes	Yes	Yes	Yes	Yes	Yes
Belgium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Brazil	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes
Canada	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
China, People's Republic	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cyprus	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Czech Rep.	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
Denmark	???								
Finland	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Germany	Yes	No	n/a	Yes	Yes	Yes	Yes	Yes	Yes
Greece	No								
Hong Kong, China	Note * ⁶								
Hungary	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Iceland	Note * ⁷								
India	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
Italy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Kazakhstan	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Kenya	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Montenegro									
Norway	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Poland	Yes	No	Yes	Yes	No	No	No	Yes	Yes
Portugal	No								
Russia	Yes	No		Yes	Yes	Yes	Yes	Yes	Yes
Saudi Arabia	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Serbia	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Slovakia	Yes	No	Yes	Yes	Yes	No	No	Yes	No
Slovenia	Yes	Yes			Yes				
South Africa	N/A								
Spain	No								
Sweden	Yes	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
United States of America	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Uruguay	No	No	No	No	No	No	No	No	No
TOTALS (35)	26	19	17	25	25	21	18	25	21

Notes: –

*⁶ Hong Kong, China Military Parachuting is not available in Hong Kong.

*⁷ Iceland No military parachuting in Iceland

Table 1B, 2009

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	No	No	Yes	No
Australia	Yes	No	n/a	Yes	Yes	Yes	No	Yes	Yes ^{*8}
Belgium	No								
Brazil	No								
Canada	No								
China, People's Republic									
Cyprus	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Czech Rep.									
Denmark	Yes	Yes	Yes	Yes	Yes			Yes	Yes
Finland	No								
Germany	No								
Greece	No								
Hong Kong, China	No								
Hungary	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Iceland	No								
India	No								
Italy	No								
Kazakhstan	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Kenya	No								
Montenegro	No								
Norway	No								
Poland	No								
Portugal	No								
Russia	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Saudi Arabia									
Serbia	Yes	Yes	Yes	Yes	Yes	No	No	No	No
Slovakia									
Slovenia	Yes	Yes	Yes	Yes	Yes				
South Africa	N/A								
Spain	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sweden	No								
Switzerland	No								
United Kingdom	Yes	Yes	n/a	Yes	Yes	Yes	No	Yes	Yes
United States of America	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Uruguay	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No
TOTALS (35)	13	12	10	13	13	8	5	11	9

Note: –

^{*8} Australia Display Jumpers - Not required for Expert Display Jumpers.

3 NOTES AND COMMENTS ON RESPONSES

Argentina	We strongly recommend its use. It will be compulsory in Argentina in 2011.
Australia	APF Operational Regulation AAD Requirements Excerpts:- <i>All Freefall Descents made by Parachutists who hold less than an APF Certificate 'D' (approx. 200 jumps) must be made with equipment fitted with an operational AAD.</i> <i>All Freefall Descents made by Parachutists who hold a Certificate 'D' must be made with equipment fitted with either:-</i> <i>(i) A functional RSL; or</i> <i>(ii) An operational AAD</i> <i>A Tandem Descent must not be made unless the equipment is fitted with an operational AAD approved by the manufacturer of the equipment.</i> All Military Freefall jumps must be made with an AAD.
Brazil	In 2013 AAD will be mandatory in Brazil for all categories of parachutist.
Canada	Military only use AAD for Freefall (SAR) and display units – not on airborne troops. Some dropzones make AAD mandatory for all skydivers.
China	AAD is good for safety.
Denmark	We had some incidents where the AAD (FXC) was activated because of too late pull of main chute.
Germany	8 reported AAD activations. 4 real 'saves'; 2 activation too late, because too low; 2 cutter activated but reserve manually pulled by jumper.
Iceland	AAD is mandatory in IPA (Icelandic Parachute Association) for sport skydiving. There is no military in Iceland but the rescue jumpers (jumping Titan rigs) are excluded from that regulation.
India	Should be used by all irrespective of experience.
Norway	The Norwegian S&T Committee has made AAD mandatory for all skydivers from 1 st April 2010. The Head Instructors may grant exemption concerning certain types on jumps, e.g. pre-planned water landings, Canopy Formation jumps, Canopy Piloting jumps.
South Africa	2 AAD activations – 1 - Student lost altitude awareness. 2 - AAD fired when jumper travelled to another dropzone, but did not reset the unit on arrival at the new dropzone.
Spain	There were 4 AAD fires (low main pulls with resulting double canopy deployments), but only one save in a 'loss of altitude awareness' situation.
Sweden	There was one reported AAD activation after reserve was deployed, high-speed malfunction, no actual 'save'.

4 ANALYSIS OF RESPONSES

Of the 35 countries that responded, AAD was mandatory as follows:-

National Sport Parachuting Organisation – 32 countries (91%) reported that AAD was mandatory for some class or classes of skydivers. 12 countries reported that the use of AAD was mandatory, for all categories of skydiving in those 12 countries.

Military Parachuting Organisation - 26 countries (74%) reported that AAD was mandatory for some class or classes of military parachutists.

National Aviation (Government) Authority - 13 countries (37%) reported that AAD was mandatory for some class or classes of skydivers.

AAD Table 2, 2009

	National	Military	National
Year	Sport Para Association	Parachuting Organisation	Government Authority
2009	91%	74%	37%
2008	93%	69%	40%
2007	90%	50%	35%
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 35 responding countries shows that AAD was mandatory for the various categories of skydivers as follows:-

AAD Table 3, 2009

<i>Jumper Type</i>	<i>No. of Countries</i>	<i>Percent of 35</i>
Static Line Students	28	80%
IAD/JAD Students	26	74%
AFF Students	31	89%
Freefall Students	31	89%
Intermediate Jumpers	20	57%
Expert Jumpers	11	31%
Tandem Jumpers	32	91%
Display Jumpers	18	51%

These figures relate only to the sport parachute associations in the countries reporting. It should also be noted that some of the responding countries may not use either the Static Line Method or the IAD/JAD method of student training. Also, some countries may not practice Tandem jumping.

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

- 1 Tandem
- 2 AFF and Freefall Students
- 3 Static Line Students

These are followed by

- 4 IAD/JAD Students
- 5 Intermediate Jumpers

And the least requirement for mandatory AAD use is with

- 6 Display Jumpers
- 7 Expert Jumpers

Care is to be taken with these figures as some countries may not use some of the categories listed. There are also other factors, e.g. Display Jumpers may not always be Expert Jumpers.

5 COUNTRIES WHERE AAD USE IS MANDATORY FOR ALL SKYDIVING ACTIVITY

The mandatory use of AAD varies from country to country. Visiting skydivers should ascertain the local requirements prior to bringing equipment to another country. In some countries where the use of AAD is not mandatory for all skydivers, individual dropzones and centres make AAD use mandatory.

The following countries make the use of AAD mandatory for all categories of skydiver:-

Belgium,	China (People's Rep.)	Cyprus	Denmark
Hong Kong, China	Iceland	Kazakhstan	Kenya
Norway	Russia	Saudi Arabia	Spain

and from previous years the following also indicated mandatory use for all skydivers:-

Belarus	France	Luxembourg	New Zealand
Venezuela			

The following countries intend to make the use of AAD mandatory for all skydivers

Argentina in 2011	Brazil in 2013
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6 MANDATORY USE OF AAD BY MILITARY JUMPERS

26 countries, 74% of 35, (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.

7 MANDATORY AAD USE BY GOVERNMENT/OFFICIAL AVIATION AUTHORITY

13 countries, 37% of 35, (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.

8 AAD SAVES IN 2009

The following is a list of the responses to the question – *How many saves by AAD in your country in 2009?*

AAD Table 4, 2009

Country	AAD saves - 2009	Comments
Argentina		No data
Australia	2	
Belgium	2	
Brazil	1	
Canada	4	
China, People's Republic	0	
Cyprus	0	
Czech Republic	2	minimum of 2
Denmark	0	
Finland	1	
Germany	4	details on page 5
Greece	0	
Hong Kong	n/a	
Hungary	4	
Iceland	0	
India	3	
Italy	1	
Kazakhstan	0	
Kenya	0	
Montenegro	0	
Norway	0	
Poland	2	
Portugal	0	
Russia	10	
Saudi Arabia	4	
Serbia	0	
Slovakia		
Slovenia	0	
South Africa	1	
Spain	1	details on page 5
Sweden	0	
Switzerland	0	
United Kingdom	1	
United States of America		unknown
Uruguay	0	
TOTAL (35 countries)	43	

A MINIMUM OF 43 SKYDIVERS MAY HAVE BEEN SAVED BY AAD IN 2009.

The real figure may be higher, bearing in mind that AADs may be reset without returning the unit to the manufacturer

9 AAD SAVES 1994 - 2009

Reported saves, year by year, and total for 16 years 1994 to 2009 inclusive

AAD Table 5, 2009

Year	Number of Saves	
2009	43	
2008	54	
2007	42	
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 - 16 YEARS	914	perhaps 916

In the sixteen years, 1994 to 2009 inclusive, a minimum of 914 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 sixteen years 1994 to 2009 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, and also where AADs are serviced/reset in the field.

An AAD is a very valuable safety aid. It is NOT a catchall substitute for less than thorough training and constant reinforcement of that training as the skydiver progresses and gains experience.

10 TABLE OF RESPONDING COUNTRIES 1994 - 2009

AAD Table 6, 2009

Country	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Argentina	1		1	1									1	1	1	1
Australia	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Austria	1	1	1				1	1	1	1	1	1	1	1		
Belarus			1	1	1										1	
Belgium	1	1	1	1				1	1	1	1		1	1		1
Brazil			1							1				1	1	1
Bulgaria									1	1	1	1	1	1	1	
Canada	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
China, P.Rep.	1	1		1	1	1	1			1			1	1	1	1
Croatia					1					1						
Cyprus								1	1	1	1	1	1	1	1	1
Czech Rep.	1	1	1	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	1	1
Estonia									1	1	1	1	1	1	1	
Finland	1	1		1	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	1	1	1
Germany	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Greece	1	1	1	1	1				1	1	1	1	1	1	1	1
Hong Kong	1	1									1	1	1	1	1	1
Hungary	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1
Iceland	1	1	1	1	1											1
India	1	1	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	1	1	1
Japan	1		1				1	1								
Kazakhstan			1							1	1		1	1	1	1
Kenya	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1
Latvia													1			
Lithuania	1	1	1					1	1		1			1	1	
Luxembourg	1	1	1								1				1	
Macedonia	1	1	1	1	1										1	
Montenegro														1		1
Mozambique		1			1	1										
Namibia										1						
Netherlands	1		1	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	1	1	1	1
Poland		1	1	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	1	1	1
Romania		1									1					
Russia	1							1		1		1	1	1		1
Saudi Arabia										1	1		1	1	1	1
Serbia/Montenegro									1	1	1					
Serbia												1	1	1	1	1
Singapore															1	
Slovak Republic	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Slovenia	1								1	1	1		1	1	1	1
South Africa				1			1			1	1	1	1	1	1	1
Spain	1	1	1				1	1	1	1	1	1	1	1	1	1
Sweden	1	1	1	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	1	1	1
Thailand	1															
Turkey	1	1	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	1	1	1
Uruguay		1			1					1						1
USA	1	1	1	1	1		1	1	1	1	1	1		1	1	1
Venezuela	1	1	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	40	42	35