

EUROPEAN ORGANISATION
FOR THE SAFETY OF AIR NAVIGATION



EUROCONTROL EXPERIMENTAL CENTRE

**COVERAGE OF 1998 EUROPEAN AIR TRAFFIC
FOR THE BASE OF AIRCRAFT DATA (BADA)
REVISION 3.1**

EEC Note No. 17/99

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Abstract: The air traffic statistics provided by the CFMU for the ECAC European air space area for 1998 are used to determine the coverage of European air traffic by the Base of Aircraft Data (BADA) Revision 3.1. BADA consists of a set of aircraft models used at the EEC and other European research institutes for aircraft trajectory simulation. The results show that the 66 aircraft types (civil only) within BADA 3.1 cover 89.58% of the European air traffic. The addition of 1 more aircraft type would bring the coverage to the target of 90%.						

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**Coverage of 1998 European Air Traffic
by the
Base of Aircraft Data (BADA) Revision 3.1**

EUROCONTROL Experimental Centre

Summary

The air traffic statistics provided by the CFMU in the ECAC airspace for 1998 are used to determine the coverage of European air traffic by the Base of Aircraft Data (BADA) Revision 3.1. BADA consists of a set of aircraft models used at the EEC and other European research institutes for aircraft trajectory simulation. The results show that 66 aircraft types within BADA 3.1 cover 89.58% of the European air traffic. The addition of 1 more aircraft type would bring the coverage to the target of 90%.

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1. INTRODUCTION

1.1 Identification and Scope

This document reviews the air traffic statistics for 1998 from the EUROCONTROL Central Flow Management Unit (CFMU) in order to determine the coverage of European air traffic provided by BADA (Base of Aircraft Data) Revision 3.1[RD1].

BADA 3.1 is a collection of ASCII files which specifies operation performance parameters and operating procedure parameters for 67 different aircraft types. This information is designed for use in trajectory simulation and prediction algorithms within the domain of Air Traffic Management (ATM). All files are maintained within a configuration management system at the Eurocontrol Experimental Centre (EEC) at Brétigny-sur-Orge, France.

Note: for the remainder of this note only 66 aircraft types will be referred to. It was decided not to describe one model the FGTR (generic fighter model) since this model could not be compared against any aircraft among the CFMU traffic data and nor does it hold an official ICAO code.

This document is presented in three sections, including Section 1, the Introduction. A discussion of the coverage statistics is presented in Section 2 with conclusions summarised in Section 3.

1.2 Referenced Documents

- RD1** User Manual for the Base of Aircraft Data (BADA) Revision 3.0; EEC Note 8/98; March 1998
- RD2** Aircraft Type Designators; ICAO Document No. 8643, 25th Edition; March 1997
- RD3** Aircraft Type Designators; ICAO Document No. 8643, 26th Edition; November 1998

1.3 Glossary of Acronyms

A/C	Aircraft
APO	Centre for Aircraft Performance and Operations
ASCII	American Standard Code for the Interchange of Information
BADA	Base of Aircraft Data
CFMU	Central Flow Management Unit
EEC	Eurocontrol Experimental Centre
ICAO	International Civil Aviation Organisation
IFR	Instrument Flight Rules

2. AIR TRAFFIC STATISTICS

2.1 CFMU Statistics

European air traffic statistics for 1998, as provided by the EUROCONTROL Central Flow Management Unit (CFMU), are included in this Note as Appendix A.

The statistics list all aircraft types that flew Instrument Flight Rules (IFR) flights registered with the CFMU in 1998. The aircraft types are listed in descending order based on the number of total flights for each aircraft type. For each aircraft type the following information is provided:

- aircraft type identifier,
- total number of flights,
- percentage of flights, and,
- cumulative percentage of flights.

The following summary information can be immediately extracted from the 1998 statistics.

Year	1998
Total Number of Flights:	7,647,560
Total Number of A/C Types:	617
Number of A/C types for 90% coverage:	58
Number of A/C types for 99% coverage:	160
Number of A/C types for 99.9% coverage:	360

An in-depth comparison with other periods was not made for the following reasons:

1. This is the first time that data has been provided over a 12 month period by the CFMU. The previous EEC Note No. 8/98 on the coverage of European Air Traffic Note for the BADA 3.0 [RD1] interpreted data for a 2 month period.
2. EEC Note No. 8/98 evaluated a total of 352 aircraft types compared to a total of 617 listed in this note.

2.2 CFMU Aircraft Identifiers

The aircraft type identifiers contained in the traffic data used both old and recent ICAO identifier codes. The original traffic listed 663 aircraft types which was manually revised to a more condensed list of 617 aircraft types. In order to reclassify ambiguous aircraft types, reference was made to the official ICAO aircraft identifier documentation 25th [RD2] and 26th [RD2] editions for simultaneous use of old/new codes. Several assumptions had to be made due to the lack of continuity between old ICAO codes and the new. See table below for the assumptions that were made with regard to ICAO identifiers and the BADA 3.1 equivalent.

2.3 Table: Assumptions made in relation to ICAO identifiers

<u>Traffic ID</u>	<u>Assumed BADA 3.1 Equivalent (Old ICAO Code)</u>	<u>Aircraft Type in Full</u>
A300 A306 A30B	A300	Airbus A300
A319 A320 A321	A320	Airbus A320
ATR AT43 AT44 AT45 AT72	ATR	ATR42 & ATR72
B701 B703 B707	B707	Boeing 707, all series
B721 B722 B727	B727	Boeing 727, all series
B731 B732 B73A	B73A	Boeing 737-100/200 series
B733 B734 B735 B73B	B73B	Boeing 737-300/400/500 series
B736 B737 B738 B73C	B73C	Boeing 737-600/700/800 series
B741 B742 B743 B74A	B74A	Boeing 747-100/200/300 series
B744 B74B	B74B	Boeing 747-400
B752 B753 B757	B757	Boeing 757 all series
B762 B763 B767	B767	Boeing 767 all series
B772 B773 B777	B777	Boeing 777, all series

Table: Assumptions made in relation to ICAO identifiers (continued)

DC8	DC8	Mc Donnell-Douglas DC8, all series
DC85	DC8	
DC86	DC8	
DC87	DC8	
DHC8	DHC8	De Havilland DHC8 Dash 8, all series
DH8A	DHC8	
DH8B	DHC8	
DH8C	DHC8	
DHC3	DHC8	
H25A	H25B	Hawker Siddeley HS125
H25B	H25B	
JS31	JSTA	BAe Jetstream 3100
JSTA	JSTA	
JS41	JSTB	BAe Jetstream 4100
JSTB	JSTB	
P31T	JSTB	Piper PA31T/PAY2 Cheyenne 2
PAY2	JSTB	
PA28	PA28	Piper PA28 Cherokee Archer/Dakota/Warrior
P28A	PA28	
P28B	PA28	
P28R	PA28	
P28T	PA28	
PA42	PA42	Piper PA42 Cheyenne 3/400
PAY3	PA42	
ZZZZ		Aircraft Types Not (Yet) Assigned A Designator

2.4 Comparison with BADA

Appendix B provides a list of 66 of the 67 aircraft types modelled by BADA 3.1[RD1]. In this list the aircraft types are ordered alphabetically by the ICAO code. For each of the 66 aircraft types, the percentage of air traffic and ranking as specified by the CFMU statistics, are given.

(1)The 66 aircraft types modelled by BADA 3.1 are not the most important types in the CFMU traffic sample. That is according to the CFMU statistics, the top 66 aircraft types provide 91.82% coverage. The BADA 3.1 types provide only 89.58% coverage.

(2) There are several aircraft types with a significant proportion of the CFMU air traffic, which are not modelled by BADA 3.1. Listed below are aircraft which hold a higher percentage share than those modelled by BADA 3.1. Although a quantitative comparison cannot be made with the findings in the previous EEC Note 8/98 [RD1], for BADA Revision 3.0, due to the significantly smaller traffic sample, one common point observed is that 3 of the below mentioned aircraft also figured as aircraft not modelled by BADA and also occupied a high proportion of the CFMU traffic.

B190	Beech 1900	0.78%
E145	Embraer EMD-145	0.46%
SW4	Swearingen SA226TC	0.41%
C500	Cessna 500 Citation 1	0.28%
A748	Avro Hawker Siddeley HS748	0.27%

3. CONCLUSIONS

- (1) BADA 3.1 currently covers 89.58% of the European air traffic as specified by the Eurocontrol CFMU.
- (2) The addition of 1 A/C type is required to bring the BADA coverage up to the target of 90%. The A/C type not modelled by BADA 3.1 which had the highest share of the European air traffic is:

B190 Beech 1900 (.78% - ranked 26th)

- (3) The dual use of old and new ICAO designators in some of the CFMU traffic statistics made it hard to classify aircraft by making assumptions. For future reviews, the statistics should be obtained so that all aircraft types are identified by a unique ICAO code.

APPENDIX A

CFMU Traffic Statistics for 1998

Note: Aircraft listed by order of % importance. All BADA 3.1 aircraft appear in bold.

<u>No.</u>	<u>A/C Type</u>	<u>No. Flights</u>	<u>A/C Type Full Name</u>	<u>Percentage</u>	<u>Accuml. Percent.</u>
1	B73B	1112597	B737-300/400/500	14.55%	14.55%
2	A320	641602	Airbus A320	8.39%	22.94%
3	MD80	623260	McDonnell Douglas MD81/82/83/87/88	8.15%	31.09%
4	ATR	427857	ATR42/72	5.59%	36.68%
5	BA46	345107	British Aerospace BAe 146	4.51%	41.20%
6	B757	254587	Boeing 757 all series	3.33%	44.53%
7	B73A	245946	B737-100/200	3.22%	47.74%
8	F50	239183	Fokker 50 Maritime Enforcer	3.13%	50.87%
9	DHC8	212079	De Havilland Canada DHC8 Dash 8	2.77%	53.64%
10	B767	201462	Boeing 767 all series	2.63%	56.28%
11	CARJ	155774	Canadair RJ Regional Jet	2.04%	58.31%
12	DC9	154545	Douglas DC9	2.02%	60.33%
13	B727	129094	Boeing 727, all series	1.69%	62.02%
14	SF34	128845	Saab Fairchild SF340	1.68%	63.71%
15	F100	118151	Fokker 100	1.54%	65.25%
16	B747A	111589	Boeing 747-100/200/300	1.46%	66.71%
17	SB20	103320	Saab 2000	1.35%	68.06%
18	A310	91719	Airbus 310	1.20%	69.26%
19	B74B	87838	Boeing 747-400	1.15%	70.41%
20	BE20	76993	Beech 200, 1300 Super King Air	1.01%	71.42%
21	A300	75486	Airbus 300	0.99%	72.40%
22	F70	70507	Fokker 70	0.92%	73.33%
23	SH36	67809	Short 360	0.89%	74.21%
24	ATP	63076	British Aerospace Jetstream 61	0.82%	75.04%
25	JSTA	61509	BAe Jetstream 3100	0.80%	75.84%
26	B190	59272	Beech 1900	0.78%	76.62%
27	DC10	53060	Mc Donnell Douglas DC10	0.69%	77.31%
28	T154	50285	Tupolev TU154	0.66%	77.97%
29	MD11	50045	McDonnell Douglas MD11	0.65%	78.62%
30	F27	47934	Fokker 27 Friendship	0.63%	79.25%
31	D328	47242	Dornier 328	0.62%	79.87%
32	A340	44384	Airbus 340	0.58%	80.45%
33	F28	42308	Fokker 28 Fellowship	0.55%	81.00%
34	PA34	39429	Piper PA34 Seneca	0.52%	81.52%
35	C130	38128	Lockheed C130	0.50%	82.01%
36	E120	35728	Embraer EMB120 Brasilia	0.47%	82.48%
37	E145	35531	Embraer EMB145	0.46%	82.95%
38	C550	34627	Cessna 550 Citation	0.45%	83.40%
39	B73C	33780	Boeing 737-600/700/800	0.44%	83.84%
40	PA28	33581	Piper PA28 Cherokee Archer/Dakota/Warrior	0.44%	84.28%
41	D228	32473	Dornier 228	0.42%	84.70%
42	SW4	31245	Swearingen SA226TC	0.41%	85.11%
43	B777	30113	Boeing 777, all series	0.39%	85.51%
44	JSTB	29664	BAe Jetstream 4100	0.39%	85.90%
45	BE9L	27933	Beech 90 King Air	0.37%	86.26%
46	LJ35	26992	Gates Learjet 35, 36,	0.35%	86.61%

47	H25B	25036	Hawker Siddeley HS125	0.33%	86.94%
48	PA31	22906	Piper PA31P Navajo	0.30%	87.24%
49	T134	22718	Tupolev TU134	0.30%	87.54%
50	SW3	22548	Swearingen SA226T/TB Merlin 3	0.29%	87.83%
51	FA50	22069	Dassault Breguet Falcon 50	0.29%	88.12%
52	BA11	21978	British Aerospace Bac 111 One-eleven	0.29%	88.41%
53	L101	21534	Lockheed L1011	0.28%	88.69%
54	C500	21139	Cessna 500 Citation 1	0.28%	88.97%
55	A748	20932	Avro Hawker Siddeley HS748	0.27%	89.24%
56	L410	20754	Let L410/420 Turbolet	0.27%	89.51%
57	GULF	20557	Grumman G1159, G1159 Gulfstream 2	0.27%	89.78%
58	MD90	18483	Mc Donnell Douglas MD90	0.24%	90.02%
59	FA20	18082	Dassault Breguet Falcon 20	0.24%	90.26%
60	TRIN	18065	Socata TB20/21 Trinidad	0.24%	90.49%
61	C160	17775	Transall C160	0.23%	90.73%
62	E110	17479	Embraer EMB110/111Bandeirante	0.23%	90.96%
63	CL60	17037	Canadair CL600/601/604 Challenger	0.22%	91.18%
64	A330	16877	Airbus 330	0.22%	91.40%
65	C560	16552	Cessna 560 Citation 5/5 Ultra	0.22%	91.62%
66	C525	15342	Cessna 525 CitationJet	0.20%	91.82%
67	FA10	14490	Dassault Breguet Falcon 10	0.19%	92.01%
68	BE58	14438	Beech 58 Baron	0.19%	92.19%
69	F900	14416	Dassault Breguet Falcon 900	0.19%	92.38%
70	C650	13141	Cessna 650 Citation 3/6/7	0.17%	92.55%
71	CN35	13010	Airtech CN235 Persuader	0.17%	92.72%
72	AN24	12508	Antonov AN24	0.16%	92.89%
73	DC8	12437	Douglas DC8, all series	0.16%	93.05%
74	C421	12235	Cessna 421 Golden Eagle	0.16%	93.21%
75	C172	11195	Cessna 172, Skyhawk	0.15%	93.36%
76	C208	10996	Cessna 208 Caravan 1	0.14%	93.50%
77	YK40	10667	Yakovlev Yak40	0.14%	93.64%
78	L188	10111	Lockheed L188 Electra	0.13%	93.77%
79	S76	9959	Sikorsky S76	0.13%	93.90%
80	ZZZZ	9659	AIRCRAFT NOT YET ASSIGNED A DESIGNATOR	0.13%	94.03%
81	E121	9392	Embraer EMB121 Xingu	0.12%	94.15%
82	P31T	9310	Piper PA31T/PAY2 Cheyenne 2	0.12%	94.27%
83	IL86	9273	Ilyushin Il86/87	0.12%	94.39%
84	TBM7	8720	TBM TBM 700	0.11%	94.51%
85	B707	8559	Boeing 707, all series	0.11%	94.62%
86	F406	8466	Reims F406 Caravan2	0.11%	94.73%
87	C210	8210	Cessna 210 Turbo Centurion	0.11%	94.84%
88	M20	8092	Mooney M20	0.11%	94.94%
89	C310	7891	Cessna 310 T310	0.10%	95.05%
90	PA42	7650	Piper PA42 Cheyenne 3/400	0.10%	95.15%
91	YK42	7584	Yakovlev Yak42	0.10%	95.25%
92	AN26	7568	Antonov AN26	0.10%	95.35%
93	LJ55	7394	Gates Learjet 55	0.10%	95.44%
94	BE30	7353	Beech 300 Super King Air	0.10%	95.54%
95	N262	7206	Nord 262, Fregate, Mohawk	0.09%	95.63%
96	C212	7172	Casa 210 Aviocar	0.09%	95.73%

97	CVLT	7045	Convair CV540/580/600/640	0.09%	95.82%
98	TRIS	6947	Britten Norman DN2A Mk3 Trislander	0.09%	95.91%
99	PA46	6637	Piper PA46 Malibu Mirage	0.09%	96.00%
100	B350	6633	Beech B300 Super King Air 350	0.09%	96.08%
101	DHC6	6610	De Havilland Canada DHC6 Twin Otter	0.09%	96.17%
102	C340	6607	Cessna 340	0.09%	96.26%
103	BE10	6557	Beech 100 King Air	0.09%	96.34%
104	IL76	6503	Ilyushin Il76/78/82 Gajaraj	0.09%	96.43%
105	AN12	6395	Antonov AN12	0.08%	96.51%
106	C182	6287	Cessna 182, Skylane	0.08%	96.59%
107	MU30	6275	Mitsubishi Mu300 Diamond	0.08%	96.67%
108	F2TH	6080	Dassault Falcon 2000	0.08%	96.75%
109	C135	5906	Boeing C135B/C/E/K Stratolifter	0.08%	96.83%
110	PA44	5766	Piper PA44 Seminole	0.08%	96.91%
111	BN2P	5632	Britten Normand BN2 Islander	0.07%	96.98%
112	BE36	5431	Beech 36 Bonanza	0.07%	97.05%
113	BE55	5258	Beech 55 Baron	0.07%	97.12%
114	SH33	5112	Short 330 Sherpa C23	0.07%	97.19%
115	PA27	5063	Piper PA23 235/250 Aztec	0.07%	97.25%
116	AS65	5034	Aerospatiale AS365 Dolphin	0.07%	97.32%
117	LJ31	4992	Gates Learjet 31	0.07%	97.38%
118	C414	4686	Cessna 414 Chancellor	0.06%	97.45%
119	P180	4530	Piaggio P180 Avanti	0.06%	97.51%
120	S601	4477	Aerospatiale SN601 Corvette	0.06%	97.56%
121	BE76	4471	Beech 76 Duchess	0.06%	97.62%
122	BE33	3946	Beech 33 Debonair, Bonanza	0.05%	97.67%
123	PA32	3946	Piper PA32 Cherokee Six	0.05%	97.73%
124	B74S	3900	Boeing 747SP	0.05%	97.78%
125	MU2	3807	Mitsubishi Mu2	0.05%	97.83%
126	C141	3805	Cessna 150	0.05%	97.88%
127	P3	3716	Lockheed P3, AP3, EP3 NP3 RP3 TP3 UP3	0.05%	97.92%
128	PUMA	3590	Sud SA330 Puma	0.05%	97.97%
129	C404	3547	Cessna 404 Titan	0.05%	98.02%
130	C5	3481	Lockheed C5	0.05%	98.06%
131	C425	3350	Cessna 425 Corsair, conquest 1	0.04%	98.11%
132	JS32	3330	British Aerospace BAe3200 Jetstream32	0.04%	98.15%
133	C402	3094	Cessna 402	0.04%	98.19%
134	AS32	3062	Aerospatiale AS332/532 Super Puma	0.04%	98.23%
135	G222	2979	Fiat G222	0.04%	98.27%
136	P68	2932	Partenavia P68	0.04%	98.31%
137	S61	2816	Sikorsky S61A/B/C/D/L/N	0.04%	98.35%
138	PA30	2770	Piper PA30/39 Twin Comanche	0.04%	98.38%
139	LJ60	2766	Learjet 60	0.04%	98.42%
140	TOR	2594	Panavia Tornado	0.03%	98.45%
141	C303	2568	Cessna T303 Crusader	0.03%	98.49%
142	AC6T	2552	Aero Commander 680T	0.03%	98.52%
143	CONC	2527	Sub-Bac Concorde	0.03%	98.55%
144	PA23	2512	Piper PA23 150/160 Apache	0.03%	98.58%
145	GA7	2466	Grumman American GA7 Cougar	0.03%	98.62%
146	TOBA	2445	Socata TB10/200 Tobago	0.03%	98.65%

147	B12	2187	Bell 212	0.03%	98.68%
148	IL62	2162	Ilyushin Il62	0.03%	98.71%
149	ATLA	2107	Breguet 1150 Atlantic	0.03%	98.73%
150	C441	2093	Cessna 441 Conquest, conquest 2	0.03%	98.76%
151	CM11	2083	North American Rockwell112 commander	0.03%	98.79%
152	DHC7	2028	De Havilland Canada DHC7 Dash 7	0.03%	98.81%
153	M339	1946	Aermacchi	0.03%	98.84%
154	AS55	1931	Aerospatiale AS355 Ecureuil	0.03%	98.86%
155	GLF4	1860	Gulfstream Aerospace G1159C Gulfstream	0.02%	98.89%
156	C17	1763	McDonnell Douglas C17 Globemaster 3	0.02%	98.91%
157	BE99	1752	Beech 99 Airliner	0.02%	98.94%
158	E3	1667	Boeing E3 JE3 Sentry	0.02%	98.96%
159	A3ST	1664	A300 Beluga	0.02%	98.98%
160	H60	1646	Sikorsky S70	0.02%	99.00%
161	VC10	1596	Vickers VC10	0.02%	99.02%
162	F16	1540	General Dynamics F16/A/B/C/D/N	0.02%	99.04%
163	BE35	1524	Beech 35 Bonanza	0.02%	99.06%
164	AN72	1510	Antonov AN72/74	0.02%	99.08%
165	G159	1509	Grumman G159 Gulfstream	0.02%	99.10%
166	LJ25	1467	Lear Jet 25	0.02%	99.12%
167	AN28	1408	Antonov AN28	0.02%	99.14%
168	AA5	1361	Grumman American AA5	0.02%	99.16%
169	PC12	1354	Pilatus PC12	0.02%	99.17%
170	H25C	1344	British Aerospace BAe 125 700/800	0.02%	99.19%
171	SC7	1281	Short SC7 Skyvan	0.02%	99.21%
172	BE95	1254	Beech 95 Travel Air	0.02%	99.22%
173	HPR7	1239	Handley Page HPR7 Herald	0.02%	99.24%
174	BE9T	1167	Beech F90 King Air	0.02%	99.26%
175	C551	1164	Cessna 550 Citation 2SP	0.02%	99.27%
176	PC7	1118	Denel PC7 Astra	0.01%	99.29%
177	P66T	1110	Piaggio P166DL3	0.01%	99.30%
178	AEST	1070	Ted Smith Aerostar	0.01%	99.31%
179	BE60	1063	Beech 60 Duke	0.01%	99.33%
180	C101	1061	Casa C101 Aviojet	0.01%	99.34%
181	TUCA	1039	Embraer EMB312 Tucano, Super Tucano	0.01%	99.36%
182	IL18	1025	Ilyushin Il18/20/22/24	0.01%	99.37%
183	MS76	1021	Morane Saulnier MS760 Paris	0.01%	99.38%
184	C177	996	Cessna 177, Cardinal	0.01%	99.40%
185	BN2T	991	Pilatus Britten NormanBN2T Turbine Islander	0.01%	99.41%
186	AJET	978	Dassault Breguet Dornier Alpha Jet	0.01%	99.42%
187	ASTR	933	IAI 1125 Astra	0.01%	99.43%
188	L200	928	Let L200 Morava	0.01%	99.45%
189	S65C	926	Aerospatiale SA356 Dauphin 2	0.01%	99.46%
190	A124	911	Antonov AN124	0.01%	99.47%
191	F60	910	Fokker 60	0.01%	99.48%
192	WW24	892	IAI 1124 Westwind	0.01%	99.49%
193	C501	881	Cessna 501 Citation 1SP	0.01%	99.50%
194	SW2	874	Swearingen SA26 Merlin 2	0.01%	99.52%
195	GLF3	856	Gulfstream American G1159A Gulfstream	0.01%	99.53%
196	F260	855	SIAI-Marchetti SF260/A/B/C/D/E/F/M/W	0.01%	99.54%

197	PC6T	827	Pilatus PC6 A/B/C/ Turbo Porter	0.01%	99.55%
198	P210	789	Cessna P210 Pressurised Centurion	0.01%	99.56%
199	C337	760	Cessna 337 Turbo Super Skymaster	0.01%	99.57%
200	BELF	752	Short SC-5 Belfast	0.01%	99.58%
201	DC3	742	Douglas DC3	0.01%	99.59%
202	L29B	723	Lockheed L1329 Jetstar 2/731	0.01%	99.60%
203	F18	717	Mc Donnell Douglas FA18	0.01%	99.61%
204	PA24	671	Piper PA24 Comanche	0.01%	99.62%
205	DC6	658	Douglas DC6	0.01%	99.63%
206	VF14	636	VFW Fokker VFW614	0.01%	99.63%
207	NIM	620	Hawker Siddeley Nimrod	0.01%	99.64%
208	DR40	611	Robin DR400 Cadet	0.01%	99.65%
209	L29A	601	Lockheed L1329 Jetstar 6/8	0.01%	99.66%
210	F5	591	Northrop F5 Freedom Fighter	0.01%	99.67%
211	P808	572	Piaggio Douglas PD808	0.01%	99.67%
212	IL96	571	Ilyushin IL96	0.01%	99.68%
213	M20P	561	Mooney M20 A/B/C/D/E/F/G/L/R	0.01%	99.69%
214	TB30	531	Aerospatiale TB30 Epsilon	0.01%	99.69%
215	F4	526	McDonnell F4	0.01%	99.70%
216	ALO3	515	Aerospatiale Alouette 3	0.01%	99.71%
217	G4	495	Soko G4 Super Galeb	0.01%	99.71%
218	MF17	489	Saab MF15/17	0.01%	99.72%
219	HAR	469	Hawker Siddeley Harrier	0.01%	99.73%
220	CL2T	462	Canadair 215 Turbine	0.01%	99.73%
221	JAGR	461	Sepecat Jaguar	0.01%	99.74%
222	F104	450	Lockheed F104 Starfighter	0.01%	99.74%
223	P32R	435	Piper PA32R	0.01%	99.75%
224	PAY1	434	Piper PA31T1 500 Cheyenne 1	0.01%	99.76%
225	AMX	433	Amx A1	0.01%	99.76%
226	A109	427	Augusta A 109 Power	0.01%	99.77%
227	LJ24	427	Lear Jet 24	0.01%	99.77%
228	UH1	423	Bell 204, 205, 214A/B BigLifter/C	0.01%	99.78%
229	C77R	418	Cessna 177 RG Cardinal RG	0.01%	99.78%
230	H47	402	Boeing Vertol CH47	0.01%	99.79%
231	FA30	379	Fuji FA300	0.00%	99.79%
232	BE24	369	Beech 24 Musketeer Super	0.00%	99.80%
233	B105	360	Bolkow BO105	0.00%	99.80%
234	SBR1	352	North American NA265 Sabreliner	0.00%	99.81%
235	BE40	335	Beech 400 Beechjet	0.00%	99.81%
236	C206	335	Cessna 206	0.00%	99.82%
237	C750	327	Cessna 750 Citation 10	0.00%	99.82%
238	F15	325	McDonnell Douglas F15 Eagle	0.00%	99.83%
239	GLF2	318	Grumman G1159, G1159 Gulfstream	0.00%	99.83%
240	K35A	309	Boeing KC135A Stratotanker	0.00%	99.83%
241	LYNX	289	Westland Lynx, Super Lynx	0.00%	99.84%
242	AN32	273	Antonov AN32	0.00%	99.84%
243	HAWK	269	Hawker Siddeley Hawk	0.00%	99.84%
244	M20T	255	Mooney M20 K/M (Turbocharged)	0.00%	99.85%
245	C2	251	Grumman C2 Greyhound	0.00%	99.85%
246	MIR2	243	Dassault Breguet Mirage 2000	0.00%	99.85%

247	R300	240	Robin R300/3000/3100/3120/3140	0.00%	99.86%
248	ALIZ	231	Breguet 1050 Alize	0.00%	99.86%
249	PAT4	213	Piper PA31T1 500T 1040	0.00%	99.86%
250	C82R	208	Cessna R182, Turbo Skylane	0.00%	99.87%
251	AC11	207	North American Rockwell Commander 112	0.00%	99.87%
252	AN30	207	Antonov AN30	0.00%	99.87%
253	HR10	207	Robin HR100	0.00%	99.87%
254	GLF5	186	Gulfstream Aerospace G1159D Gulfstream	0.00%	99.88%
255	SH5	182	Harbin SH5 PS5	0.00%	99.88%
256	AC90	174	North American Rockwell 690 Turbo Commander	0.00%	99.88%
257	F1	167	Mitsubishi F1	0.00%	99.88%
258	SB05	167	Saab 105	0.00%	99.89%
259	C72R	166	Cessna 172RG Cutlass	0.00%	99.89%
260	H53	165	Sikorsky S65	0.00%	99.89%
261	S330	151	Schweizer 330	0.00%	99.89%
262	P68T	150	Partenavia AP68TP	0.00%	99.89%
263	K35R	148	Boeing KC135R/T	0.00%	99.90%
264	TAMP	147	Socata TB9 Tampico	0.00%	99.90%
265	C152	146	Cessna 152	0.00%	99.90%
266	CE43	140	Cerva CE43 Guepard	0.00%	99.90%
267	AS50	136	Aerospatiale AS350 Ecureuil	0.00%	99.90%
268	OSCR	136	Partenavia P64/66 Oscar Charlie	0.00%	99.91%
269	A10	134	Fairchild Thunderbolt 2	0.00%	99.91%
270	R90R	133	Ruschmeyer R90 230 RG	0.00%	99.91%
271	RALL	130	Morane Saulnier MS880- to 893 Rallye	0.00%	99.91%
272	BE19	129	Beech 19	0.00%	99.91%
273	Z42	128	Zlin Z42/142/242	0.00%	99.91%
274	PAY4	127	Piper PA 42 1000 Cheyenne 400	0.00%	99.92%
275	S05R	126	Siai Marchetti S205 18F/20F	0.00%	99.92%
276	GAZL	123	Sud SA 341//342 Gazelle	0.00%	99.92%
277	B06	118	Bell 206A/B/L	0.00%	99.92%
278	LJ45	117	Learjet 45	0.00%	99.92%
279	HF20	114	HFB 320 Hansa	0.00%	99.92%
280	P32T	113	Piper PA32T	0.00%	99.92%
281	E3TF	111	Boeing E3A JE3 Sentry	0.00%	99.93%
282	PC9	110	Pilatus PC9	0.00%	99.93%
283	CNBR	109	English Electric Canberra	0.00%	99.93%
284	BK17	107	MBB Kawaskai BK117	0.00%	99.93%
285	GA20	105	Gippsland GA8 Airvan	0.00%	99.93%
286	E3CF	104	Boeing E3 A, E3D/F Sentry	0.00%	99.93%
287	FREL	104	Sud Sa321 Super Frelon	0.00%	99.93%
288	AC50	103	Aero Commander 500	0.00%	99.94%
289	CL4G	101	Canadair CL44 Guppy	0.00%	99.94%
290	C335	100	Cessna 335	0.00%	99.94%
291	WA42	99	Wassmer WA421 Prestige	0.00%	99.94%
292	SBR2	98	North American Rockwell NA265 Sabre 75	0.00%	99.94%
293	JS1	97	Handely Page HP137 Jetstream 1	0.00%	99.94%
294	STAR	96	Beech 2000 Starship	0.00%	99.94%
295	JS20	93	Handely Page HP137 Jetstream 200	0.00%	99.94%
296	C411	92	Cessna 411	0.00%	99.95%

297	C207	91	Cessna 207 Turbo Skywagon	0.00%	99.95%
298	Mi8	90	Mil Mi8/9/17/19/171/172	0.00%	99.95%
299	G2	87	Soko G2 Galeb	0.00%	99.95%
300	AN22	84	Antonov AN22	0.00%	99.95%
301	B720	82	Boeing 720	0.00%	99.95%
302	MRF1	81	Dassault Mirage F1	0.00%	99.95%
303	C150	80	Cessna 150	0.00%	99.95%
304	SB37	79	Saab 37 Viggen	0.00%	99.95%
305	GLAS	74	Stoddard Hamilton Glasair	0.00%	99.96%
306	B222	72	Bell 222	0.00%	99.96%
307	MG29	72	Mikoyan MiG29/33 Baaz	0.00%	99.96%
308	T204	70	Turpovlev TU204/214/224/234	0.00%	99.96%
309	S360	67	Aerospatiale SA360/ 361 Dauphin	0.00%	99.96%
310	DO28	63	Dornier Do28	0.00%	99.96%
311	S208	63	Siai Marchetti S208	0.00%	99.96%
312	DHC5	62	De Havilland Canada DHC5 Buffalo	0.00%	99.96%
313	Z43	61	Zlin Z43/143	0.00%	99.96%
314	CVLP	58	Convair CV240/340/440	0.00%	99.96%
315	LGEZ	56	Rutan 61 Long EZ	0.00%	99.96%
316	BE80	55	Beech 80 Queen Air Zamir	0.00%	99.97%
317	AA1	52	Grumman American AA1	0.00%	99.97%
318	RF6	49	Fournier RF6	0.00%	99.97%
319	AC80	47	Aero Commander 680T	0.00%	99.97%
320	HERN	47	De Havilland DH114 Heron	0.00%	99.97%
321	U2	47	Lockheed U2, ER2	0.00%	99.97%
322	H500	45	Hughes 369	0.00%	99.97%
323	C56X	44	Cessna 560XL Citation Excel	0.00%	99.97%
324	JS3	44	Century 1 Jetstream 3	0.00%	99.97%
325	SB35	44	Saab 35 Draken	0.00%	99.97%
326	PA38	43	Piper PA38 Tomahawk	0.00%	99.97%
327	L39	42	Aero L39/139 Albatros	0.00%	99.97%
328	CL2P	41	Canadair 215 Piston Engine	0.00%	99.97%
329	BE23	40	Beech 23 Musketeer	0.00%	99.97%
330	DC4	39	Douglas DC4	0.00%	99.97%
331	M22	39	Mooney M22 Mustang	0.00%	99.97%
332	A6	37	Grumman A6	0.00%	99.97%
333	B52	37	Boeing B52 Stratofortress	0.00%	99.97%
334	B74R	37	B747SR	0.00%	99.98%
335	K35E	37	Boeing KC135D/E Stratotanker	0.00%	99.98%
336	C185	36	Cessna 185 Skywagon	0.00%	99.98%
337	S210	35	Sud Est SE 210 Caravelle	0.00%	99.98%
338	AC95	34	North American Rockwell 690 Jetprop Commander	0.00%	99.98%
339	BE18	32	Beech 18	0.00%	99.98%
340	S3	32	Lockheed 3, ES3	0.00%	99.98%
341	L610	31	Let L610	0.00%	99.98%
342	N260	31	Max Holste MH260 Super Broussard	0.00%	99.98%
343	ST10	31	Socata ST10 Diplomate	0.00%	99.98%
344	AC68	30	Aero Commander 680	0.00%	99.98%
345	AN2	30	Antonov AN2	0.00%	99.98%
346	B1	30	Rockwell B1 Lancer	0.00%	99.98%

347	D28T	30	Dornier Do28D-6 Turbo Skyservant	0.00%	99.98%
348	MIR4	30	Dassault Mirage 4	0.00%	99.98%
349	D140	29	Jodel D140	0.00%	99.98%
350	PL12	28	Transavia PL12 Airtruk	0.00%	99.98%
351	VISC	28	Vickers Viscount	0.00%	99.98%
352	LA25	27	Lake LA250/270 Turbo Renegade	0.00%	99.98%
353	SU27	27	Sukhoi SU27 /30/32/33/34/35/37	0.00%	99.98%
354	PC6P	25	Pilatus PC6 Porter	0.00%	99.98%
355	SB39	25	Saab 39 Gripen	0.00%	99.98%
356	PA18	24	Piper PA18 Super Cub	0.00%	99.98%
357	BDOG	23	Beagle B125 Bulldog	0.00%	99.98%
358	C180	23	Cessna 180, Skywagon	0.00%	99.98%
359	CONI	23	Lockheed L049/749/1049/1649 constellation super	0.00%	99.98%
360	GY80	23	Gardan GY80 Horizon	0.00%	99.99%
361	B60	21	Boisavia B60	0.00%	99.99%
362	JU52	21	Junkers Ju 52 3M	0.00%	99.99%
363	SC01	21	Gyroflug SC01 Speed Canard	0.00%	99.99%
364	C320	20	Cessna 320 Skyknight	0.00%	99.99%
365	F14	19	Grumman F14 Tomcat	0.00%	99.99%
366	PA25	19	Piper PA25 Pawnee	0.00%	99.99%
367	W3	19	PZL Swidnik W3, S1	0.00%	99.99%
368	CL44	18	Canadair CL44 Forty Four	0.00%	99.99%
369	EC35	18	Eurocopter EC135	0.00%	99.99%
370	L90	18	Valmet L90TP Redigo	0.00%	99.99%
371	MG21	18	Mikoyan MiG21	0.00%	99.99%
372	PA36	18	Piper PA36 Pawnee Brave	0.00%	99.99%
373	A7	17	TA7 Corsair	0.00%	99.99%
374	BSTP	17	Bell 214 ST Super Transport	0.00%	99.99%
375	DR10	17	Centre Est Dr100/105/1050/1051	0.00%	99.99%
376	L29	17	Aero L29 Delfin	0.00%	99.99%
377	BL17	16	Bellanca 17 Viking	0.00%	99.99%
378	DR30	15	Centre Est Dr315/340/360/380	0.00%	99.99%
379	ETAR	15	Dassault Etendard 4	0.00%	99.99%
380	EXPL	15	McDonnell Douglas MD900/901/902 Explorer	0.00%	99.99%
381	T38	15	Northrop T38 Talon	0.00%	99.99%
382	TBEE	15	United Consultant UC1 Twin Bee	0.00%	99.99%
383	UH12	15	Hiller UK12B/C/E/E3/E4/E5/L3/L4/SL3/SL4	0.00%	99.99%
384	E6	14	Boeing E6 Mercury	0.00%	99.99%
385	F117	14	Lockheed F117 Nighthawk	0.00%	99.99%
386	JUNR	14	Andreasson BA7	0.00%	99.99%
387	M7	14	Maule M7	0.00%	99.99%
388	PA20	14	Piper PA20 Pacer	0.00%	99.99%
389	S2T	13	Grumman S2, Turbo Tracker	0.00%	99.99%
390	S61R	12	Sikorsky S61R	0.00%	99.99%
391	DH2T	11	De Havilland Canada Canada DHC2 Turbo Beaver	0.00%	99.99%
392	MI26	11	Mil Mi26	0.00%	99.99%
393	MIRA	11	Dassault Mirage 3/5/50	0.00%	99.99%
394	R100	11	Robin R1180 Aiglon	0.00%	99.99%
395	S211	11	Siai Marchetti S211	0.00%	99.99%
396	YS11	11	Namc YS11	0.00%	99.99%

397	CL41	10	Canadair CL41 Tutor	0.00%	99.99%
398	D28D	10	Dornier Do28D Skyservant	0.00%	99.99%
399	DOVE	10	De Havilland DH104 Dove	0.00%	99.99%
400	M7T	10	Maule M7-420	0.00%	99.99%
401	P149	10	Piaggio P136	0.00%	99.99%
402	T250	10	Anderson Greenwood T250 Aries	0.00%	99.99%
403	WA40	10	Wassmer WA40 Super 4	0.00%	99.99%
404	B25	9	North American B25	0.00%	99.99%
405	BE50	9	Beech 50 Twin Bonanza	0.00%	99.99%
406	BE65	9	Beech 65 Queen Air U8F Seminole	0.00%	99.99%
407	DH60	9	De Havilland DH60 Moth	0.00%	99.99%
408	G4SG	9	Soko G4 Super Galeb	0.00%	99.99%
409	MICO	9	Microturbo Microjet 200	0.00%	99.99%
410	PICO	9	Procaer F15 Picchio	0.00%	99.99%
411	R200	9	Robin R200 /2112/2160 Alpha, Alpha Sport ,	0.00%	99.99%
412	RANG	9	Navion Rangemaster	0.00%	99.99%
413	B26	8	Douglas A26	0.00%	99.99%
414	BE56	8	Beech 56 Turbo Baron	0.00%	99.99%
415	G2GL	8	Soko G2 Galeb	0.00%	99.99%
416	H46	8	Vertol 107	0.00%	99.99%
417	LA4	8	Lake LA4/200	0.00%	99.99%
418	PINO	8	General Avia F22 Pinguino	0.00%	100.00%
419	RF3	8	Fournier RF3	0.00%	100.00%
420	S05F	8	Siai Marchetti S205 18F/20F	0.00%	100.00%
421	SSAB	8	North American F100 Super Sabre	0.00%	100.00%
422	SU17	8	Sukhoi SU17/20/22	0.00%	100.00%
423	DHC4	7	De Havilland Canada DHC4 Caribou	0.00%	100.00%
424	E2	7	Grumman E2 Hawkeye	0.00%	100.00%
425	E400	7	Extra 400	0.00%	100.00%
426	HUSK	7	Christen A1 Husky	0.00%	100.00%
427	M55	7	Myasishchev M55 Geophysica	0.00%	100.00%
428	NAVI	7	North American NA145/154 Navion	0.00%	100.00%
429	S10	7	Stinson 10	0.00%	100.00%
430	S2P	7	Grumman S2 , S2F, P16 Tracker	0.00%	100.00%
431	ARVA	6	Arva 101 102 201 202	0.00%	100.00%
432	C120	6	Cessna 120	0.00%	100.00%
433	C15	6	McDonnell Douglas YC15	0.00%	100.00%
434	D250	6	Centre Est DR200/250 Capitaine	0.00%	100.00%
435	DH3T	6	Vardax Vazar Dash	0.00%	100.00%
436	DHC2	6	De Havilland Canada DHC2 Beaver	0.00%	100.00%
437	EGRT	6	Grob G520	0.00%	100.00%
438	G115	6	Grob G115A/B/C/D Bavarian	0.00%	100.00%
439	HR20	6	Robin HR200	0.00%	100.00%
440	M21	6	PZL Mielec M21 Dromader Mini	0.00%	100.00%
441	MS23	6	Morane Saulnier MS230	0.00%	100.00%
442	P46T	6	Piper PA46T Malibu Meridian	0.00%	100.00%
443	PZ04	6	PZL Okecie PZL104 Wilga 35/80	0.00%	100.00%
444	SUBA	6	Fuji FA200 Aero Subaru	0.00%	100.00%
445	AC6L	5	Aero Commander 680L	0.00%	100.00%
446	ALO2	5	Aerospatiale Alouette 2	0.00%	100.00%

447	C140	5	Cessna 140	0.00%	100.00%
448	DH80	5	De Havilland DH80 Puss Moth	0.00%	100.00%
449	F111	5	General Dynamics F111	0.00%	100.00%
450	G21	5	Grumman G21 Goose	0.00%	100.00%
451	LNC2	5	Neico Lancair 200	0.00%	100.00%
452	M200	5	Meyers 200	0.00%	100.00%
453	M5	5	Maule M5	0.00%	100.00%
454	M6	5	Maule M6	0.00%	100.00%
455	P66P	5	Piaggio P166	0.00%	100.00%
456	R44	5	Robinson R44 Astro	0.00%	100.00%
457	B36T	4	Allison 36 Turbine Bonanza	0.00%	100.00%
458	BASS	4	Beagle Auster B206	0.00%	100.00%
459	C170	4	Cessna 170	0.00%	100.00%
460	J2	4	Taylor J2 Cub	0.00%	100.00%
461	KA27	4	Kamov Ka27/28/29/31/32	0.00%	100.00%
462	PA22	4	Piper PA22 Tri-Pacer	0.00%	100.00%
463	PEMB	4	Percival P66 Pembroke	0.00%	100.00%
464	TBM	4	Grumman TBF Avenger	0.00%	100.00%
465	TU22	4	TurpoleyTU22	0.00%	100.00%
466	VAMP	4	De Havilland DH100/115 Vampire	0.00%	100.00%
467	A1	3	Douglas Skyraider	0.00%	100.00%
468	AN38	3	Antonov AN38	0.00%	100.00%
469	AN70	3	Antonov AN70	0.00%	100.00%
470	AT8T	3	Air Tractor AT802	0.00%	100.00%
471	B209	3	Bolkow BO209	0.00%	100.00%
472	CAT	3	Consolidated PBY OA10 Catalina	0.00%	100.00%
473	DHC3	3	De Havilland Canada DHC3 Otter	0.00%	100.00%
474	F8	3	Chance Vought F8	0.00%	100.00%
475	F8L	3	Aviamilano F8L Falco	0.00%	100.00%
476	FOUG	3	Fouga CM170R Magister	0.00%	100.00%
477	GALX	3	IAI1126 Galaxy	0.00%	100.00%
478	H64	3	Hughes AH64	0.00%	100.00%
479	JPRO	3	Hunting Percival P84 Jet Provost	0.00%	100.00%
480	L70	3	Valmet L70 Miltrainer	0.00%	100.00%
481	LNCE	3	Lancair ES	0.00%	100.00%
482	NOMA	3	GAF N2/22/24 Nomad	0.00%	100.00%
483	P337	3	Cessna T337G, P337 Pressurised Skymaster	0.00%	100.00%
484	P51	3	North American P51 Mustang	0.00%	100.00%
485	PA12	3	Piper PA12 Super Cruiser	0.00%	100.00%
486	RFAL	3	Dassault Rafale	0.00%	100.00%
487	SF36	3	Scheibe SF36	0.00%	100.00%
488	SU25	3	Sukhoi SU25/28/39	0.00%	100.00%
489	TR1	3	Trident TR1 Trigull	0.00%	100.00%
490	TRID	3	De Havilland DH121 Trident	0.00%	100.00%
491	AE45	2	Aeo 45 Let	0.00%	100.00%
492	B712	2	Boeing 717/200	0.00%	100.00%
493	BE12	2	Beriev BE12/14	0.00%	100.00%
494	BE17	2	Beech 17 Staggerwing	0.00%	100.00%
495	BE88	2	Beech 88 Queen Air	0.00%	100.00%
496	BL8	2	Bellanca 8 Decathalon	0.00%	100.00%

497	BS60	2	Beech Sferma 60 Marquis	0.00%	100.00%
498	C175	2	Cessna Skylark	0.00%	100.00%
499	C205	2	Cessna 205	0.00%	100.00%
500	CN11	2	Circa Nieuport 11	0.00%	100.00%
501	DH82	2	De Havilland DH82 Tiger Moth	0.00%	100.00%
502	DH83	2	De Havilland DH83 Fox Moth	0.00%	100.00%
503	DV20	2	HOAC DV 20 Katana	0.00%	100.00%
504	F156	2	Morane-Saulnier MD500	0.00%	100.00%
505	HU1	2	Shenyang Sailplane HU1 Seagull	0.00%	100.00%
506	HUCO	2	Bell AH1E/F/P/S	0.00%	100.00%
507	J3	2	Piper J3 Cub	0.00%	100.00%
508	JCOM	2	Aero Commander 1121 Jet Commander	0.00%	100.00%
509	MG17	2	Mikoyan MiG17	0.00%	100.00%
510	MG23	2	Mikoyan MiG23/27 Bahadur	0.00%	100.00%
511	MI24	2	Mil Mi4	0.00%	100.00%
512	P230	2	Pottier P220 Koala	0.00%	100.00%
513	PA14	2	Piper PA14 Family Cruiser	0.00%	100.00%
514	R135	2	Boeing RC135	0.00%	100.00%
515	R90F	2	Ruschmeyer R90 230 FG	0.00%	100.00%
516	RF4	2	Fournier RF4	0.00%	100.00%
517	S55T	2	Sikorsky S55T	0.00%	100.00%
518	SB32	2	Saab 32 Lansen	0.00%	100.00%
519	SB91	2	Saab 91 Safir	0.00%	100.00%
520	SV4	2	StampeSV4	0.00%	100.00%
521	T33	2	Lockheed T33	0.00%	100.00%
522	T34P	2	Beech T34A/B/ Mentor	0.00%	100.00%
523	U16	2	Grumman HU16, SA16 Albatross	0.00%	100.00%
524	A20	1	Douglas A20 Havoc	0.00%	100.00%
525	A3	1	Douglas A3 Skywarrior	0.00%	100.00%
526	AB95	1	Aero Boero AB95	0.00%	100.00%
527	AC56	1	Aero Commander 560	0.00%	100.00%
528	AS20	1	Schleicher ASW20TOP	0.00%	100.00%
529	AS25	1	Schleicher ASH25E/M	0.00%	100.00%
530	AS26	1	Schleicher ASH26E	0.00%	100.00%
531	AT3	1	AIDC AT3 Tzu Chung	0.00%	100.00%
532	AT3P	1	Air Tractor AT300/301/401	0.00%	100.00%
533	ATL	1	Robin ATL	0.00%	100.00%
534	B170	1	Bristol 170 Freighter	0.00%	100.00%
535	B407	1	Bell 407	0.00%	100.00%
536	BE70	1	Beech 70 Quenn Air	0.00%	100.00%
537	BU33	1	Bucker Bü133 Jungmeister	0.00%	100.00%
538	BULT	1	Brokaw BJ520 Bullet	0.00%	100.00%
539	C188	1	Cessna 188	0.00%	100.00%
540	C190	1	Cessna 190	0.00%	100.00%
541	C21T	1	Riley Turbine Rocket 421	0.00%	100.00%
542	C270	1	Caudron C270	0.00%	100.00%
543	C336	1	Cessna 336	0.00%	100.00%
544	C526	1	Cessna 526 CitationJet	0.00%	100.00%
545	C97	1	Boeing C97 Stratofreighter	0.00%	100.00%
546	CH25	1	Zenair CH250 Zenith	0.00%	100.00%

547	CH30	1	Zenair CH300 Tri-Zenith	0.00%	100.00%
548	CH40	1	Champion 402 Lancer	0.00%	100.00%
549	CN12	1	Circa Nieuport 12	0.00%	100.00%
550	CP10	1	CAARP cap10	0.00%	100.00%
551	CRES	1	New Zealand Cresco	0.00%	100.00%
552	D11	1	Jodel D11	0.00%	100.00%
553	D253	1	Centre Est DR253 Regent	0.00%	100.00%
554	D31	1	Stark D31	0.00%	100.00%
555	DO27	1	Dornier Do27	0.00%	100.00%
556	E200	1	Extra 200	0.00%	100.00%
557	E767	1	Boeing E767	0.00%	100.00%
558	EAGL	1	Christen Eagle	0.00%	100.00%
559	ERCO	1	Erco 415 Ercoupe	0.00%	100.00%
560	EUFI	1	Eurofighter 2000	0.00%	100.00%
561	F3F	1	Grumann F3F Replica	0.00%	100.00%
562	F600	1	General Avia F600	0.00%	100.00%
563	FN33	1	Nardi FN333 Riviera	0.00%	100.00%
564	FOX	1	Denney Kitfox	0.00%	100.00%
565	FP40	1	Fisher FP202 Super Koala	0.00%	100.00%
566	GF20	1	Grob GF200	0.00%	100.00%
567	H53S	1	Sikorsky S80	0.00%	100.00%
568	HB23	1	Brditschka HB3	0.00%	100.00%
569	HU2	1	Shenyang Sailplane HU2 Petrel	0.00%	100.00%
570	IS28	1	ICA IS 28MA	0.00%	100.00%
571	J328	1	Fairchild Dornier 328 Jet	0.00%	100.00%
572	JAST	1	Soko J1	0.00%	100.00%
573	KE3	1	Boeing KE3	0.00%	100.00%
574	L12	1	Lockheed L12	0.00%	100.00%
575	L14	1	Lockheed L14	0.00%	100.00%
576	L40	1	Orlican L40 Meta Sokol	0.00%	100.00%
577	LNC4	1	Neico Lancair 4	0.00%	100.00%
578	M18	1	PZL Mielec M18 Dromader	0.00%	100.00%
579	M326	1	Macchi MB326	0.00%	100.00%
580	MC10	1	Mooney M10 Cadet	0.00%	100.00%
581	MD52	1	McDonnell Douglas MD520N/530N	0.00%	100.00%
582	MI2	1	Mil Mi2	0.00%	100.00%
583	MS31	1	Morane Saulnier MS315/317	0.00%	100.00%
584	MU23	1	Akaflieg Munchen Mü23	0.00%	100.00%
585	NH90	1	NHI NH90	0.00%	100.00%
586	P39	1	Bell P39 Airacobra	0.00%	100.00%
587	PA11	1	Piper PA11 Cub Special	0.00%	100.00%
588	PA16	1	Piper PA16 Clipper	0.00%	100.00%
589	PANT	1	Rotec Panther Plus	0.00%	100.00%
590	PL4	1	Pazmany PL4	0.00%	100.00%
591	PSW4	1	PZL Swidnik SW4	0.00%	100.00%
592	PZ30	1	PZL Okecie PZL130 Orlik	0.00%	100.00%
593	PZ3T	1	PZL Okecie PZL130 Orlik	0.00%	100.00%
594	R22	1	Robinson R22	0.00%	100.00%
595	RV3	1	Van's RV3	0.00%	100.00%
596	S55P	1	Sikorsky S55	0.00%	100.00%

597	SA03	1	K & SA 103 Cavalier	0.00%	100.00%
598	SA3	1	Stits SA3 Playboy	0.00%	100.00%
599	SA50	1	Stolp SA 500 Starlet	0.00%	100.00%
600	SATA	1	Hispano SA200/220 Saeta	0.00%	100.00%
601	SF27	1	Scheibe SF27M	0.00%	100.00%
602	SF31	1	Sportavia Putzer SFS31 Milan	0.00%	100.00%
603	SF40	1	Scheibe SF40	0.00%	100.00%
604	SU26	1	Sukhoi SU26	0.00%	100.00%
605	T28	1	North American T28 AT28 Trojan	0.00%	100.00%
606	T34T	1	Beech T34C Turbo Mentor	0.00%	100.00%
607	T37	1	Cessna T37	0.00%	100.00%
608	T6	1	North American T6	0.00%	100.00%
609	TS11	1	PZL Mielec TS11 Iskra	0.00%	100.00%
610	V10	1	North American OV10 Bronco	0.00%	100.00%
611	VEZE	1	Rutan 33 VariEze	0.00%	100.00%
612	WA41	1	Wassmer WA41Baladou	0.00%	100.00%
613	WA50	1	Wassmer WA51/52/54 Pacific, Europa, Atlantic	0.00%	100.00%
614	WACO	1	Waco O, E, GXE, CTO	0.00%	100.00%
615	WESX	1	Westland WS58 Wessex	0.00%	100.00%
616	WW23	1	IAI 11223 Westwind	0.00%	100.00%
617	YK18	1	Yakovlev Yak18	0.00%	100.00%
		<u>7647560</u>			
		TOTAL			

APPENDIX B

BADA 3.1 Coverage Statistics

BADA 3.1 aircraft types listed alphabetically showing percentage and rank positions within the total 1998 CFMU traffic data

No.	A/C Type	A/C Type Full Name	Percentage	Rank
1	A300	Airbus A300	0.99%	21
2	A310	Airbus A310	1.20%	18
3	A320	Airbus A320	8.39%	2
4	A330	Airbus A330	0.22%	64
5	A340	Airbus A340	0.58%	32
6	ATP	British Aerospace Jetstream 61	0.82%	24
7	ATR	ATR42/72	5.59%	4
8	B707	Boeing 707, all series	0.11%	85
9	B727	Boeing 727, all series	1.69%	13
10	B73A	Boeing 737-100/200	3.22%	7
11	B73B	Boeing 737-300/400/500	14.55%	1
12	B73C	Boeing 737-600/700/800	0.44%	39
13	B747A	Boeing 747-100/200/300	1.46%	16
14	B74B	Boeing 747-400	1.15%	19
15	B757	Boeing 757 all series	3.33%	6
16	B767	Boeing 767 all series	2.63%	10
17	B777	Boeing 777, all series	0.39%	43
18	BA11	British Aerospace Bac 111 One-eleven	0.29%	52
19	BA46	British Aerospace BAe 146	4.51%	5
20	BE20	Beech 200, 1300 Super King Air	1.01%	20
21	BE99	Beech 99 Airliner	0.02%	157
22	BE9L	Beech 90 King Air	0.37%	45
23	C130	Lockheed C130	0.50%	35
24	C160	Transall C160	0.23%	61
25	C421	Cessna 421 Golden Eagle	0.16%	74
26	C550	Cessna 550 Citation	0.45%	38
27	C560	Cessna 560 Citation 5/5 Ultra	0.22%	65
28	CARJ	Canadair RJ Regional Jet	2.04%	11
29	CL60	Canadair CL600/601/604 Challenger	0.22%	63
30	D228	Dornier 228	0.42%	41
31	D328	Dornier 328	0.62%	31
32	DC10	Mc Donnell Douglas DC10	0.69%	27
33	DC8	Douglas DC8, all series	0.16%	73
34	DC9	Douglas DC9	2.02%	12
35	DHC8	De Havilland Canada DHC8 Dash 8	2.77%	9
36	E120	Embraer EMB120 Brasilia	0.47%	36
37	F100	Fokker 100	1.54%	15
38	F27	Fokker 27 Friendship	0.63%	30
39	F28	Fokker 28 Fellowship	0.55%	33
40	F50	Fokker 50 Maritime Enforcer	3.13%	8
41	F70	Fokker 70	0.92%	22
42	F900	Dassault Breguet Falcon 900	0.19%	69
43	FA10	Dassault Breguet Falcon 10	0.19%	67
44	FA20	Dassault Breguet Falcon 20	0.24%	59

45	FA50	Dassault Breguet Falcon 50	0.29%	51
46	H25B	Hawker Siddeley HS125	0.33%	47
47	JSTA	BAe Jetstream 3100	0.80%	25
48	JSTB	BAe Jetstream 4100	0.39%	44
49	L101	Lockheed L1011	0.28%	53
50	LJ35	Gates Learjet 35, 36,	0.35%	46
51	MD11	McDonnell Douglas MD11	0.65%	29
52	MD80	McDonnell Douglas MD81/82/83/87/88	8.15%	3
53	MU2	Mitsubishi Mu2	0.05%	125
54	P31T	Piper PA31T/PAY2 Cheyenne 2	0.12%	82
55	PA27	Piper PA23 235/250 Aztec	0.07%	115
56	PA28	Piper PA28 Cherokee Archer/Dakota/Warrior	0.44%	40
57	PA31	Piper PA31P Navajo	0.30%	48
58	PA34	Piper PA34 Seneca	0.52%	34
59	PA42	Piper PA42 Cheyenne 3/400	0.10%	90
60	SB20	Saab 2000	1.35%	17
61	SF34	Saab Fairchild SF340	1.68%	14
62	SH36	Short 360	0.89%	23
63	SW3	Swearingen SA226T/TB Merlin 3	0.29%	50
64	T134	Tupolev TU134	0.30%	49
65	T154	Tupolev TU154	0.66%	28
66	TRIN	Socata TB20/21 Trinidad	0.24%	60
TOTAL			89.58%	