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U.S. Department of Transportation  
**Federal Aviation Administration**

# Aviation Standards Statistical Summary

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Prepared for  
U.S. Department of Transportation  
Federal Aviation Administration  
Office of Aviation Standards  
Washington, DC 20591

Prepared by  
U.S. Department of Transportation  
Research and Special Programs  
Administration  
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# Foreword

The *Aviation Standards Statistical Summary* is a compilation of data on aviation activities associated with the programs under the purview of the Associate Administrator for Aviation Standards (AVS). "Aviation Standards" is comprised of the Offices of Airworthiness, Aviation Medicine, Civil Aviation Security, Flight Standards, Program and Regulations Management and the Aviation Standards National Field Office.

The purpose of this report is to illustrate meaningful information that can be used to evaluate trends in certain areas; show relationships between types of information and comparisons between regions; and provide current aviation environmental data.

Comments are welcome at any time and should be addressed to the Program Management Division (APR-100), Washington, D.C., FTS:267-9667.

Distribution: A-W(VS/FS/WS/VN)-3; A-W(CS/AM)-2; AOA-1; ADA-1; APA-1(5 copies); ASF-1 (5 copies); AMS-400(5 copies); A-X(CD.FS/CS/AM)-3; A-Y(AM/CS)-2; A-Z(AM/AN)-2; AFFS/FCS/FAC-O (3 each); APR-110 (150 copies).



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## **ORGANIZATION AND FIELD OFFICES**

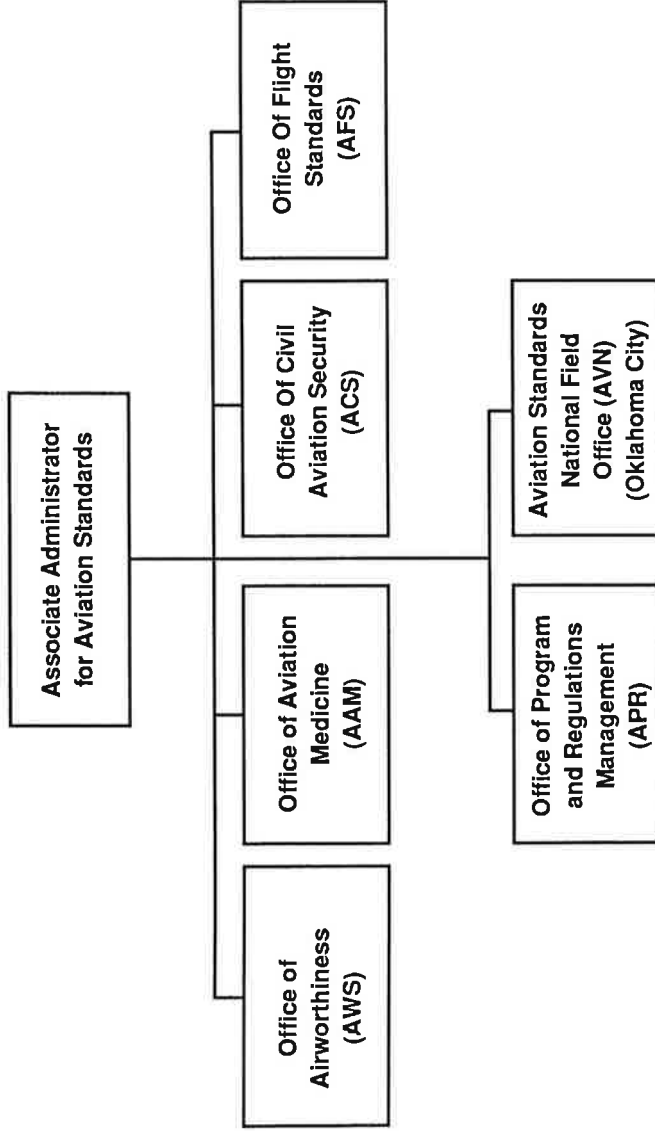
The Aviation Standards (AVS) programs have a direct impact on every facet of civil aviation, i.e.: the preliminary design and engineering of aircraft, through the manufacturing stages, flight testing, certification, and continued airworthiness and maintenance, the procedures governing flight operations of air carrier, commuter, air taxi, and general aviation operators, and the proficiency of pilots, flight engineers, dispatchers, navigators, and the certification of related air agencies, the security of domestic and international air carriers and airports, the security of corporate and general aviation operations, the safe transportation of air cargo and hazardous materials, the monitoring of atmospheric and radiological contamination incidents, investigations of aviation security incidents and criminal violations of aeronautical statutes; and the internal security of agency operations, the application of medical certification of airmen, the medical investigation of aircraft accidents, medical research on subjects relating to aviation safety, and the health programs for agency employees, the inflight inspection of air navigation facilities, the development of flight, procedures, and the management, operation, and maintenance of the agency's aircraft, and the management of aviation safety regulations, the safety data automation program, and AVS administrative programs.

## Today's Organization Structure

Aviation Standards programs are carried out by an agency workforce of approximately 4,500 employees located in Washington headquarters, 9 regional offices, the Mike Monroney Aeronautical Center in Oklahoma City, the FAA Technical Center in Atlantic City, and 165 field offices throughout the world. The AVS workforce is augmented by approximately 17,000 persons in the private sector or the aviation community who are designated to perform certain aviation safety functions on behalf of the Federal Aviation Administration.

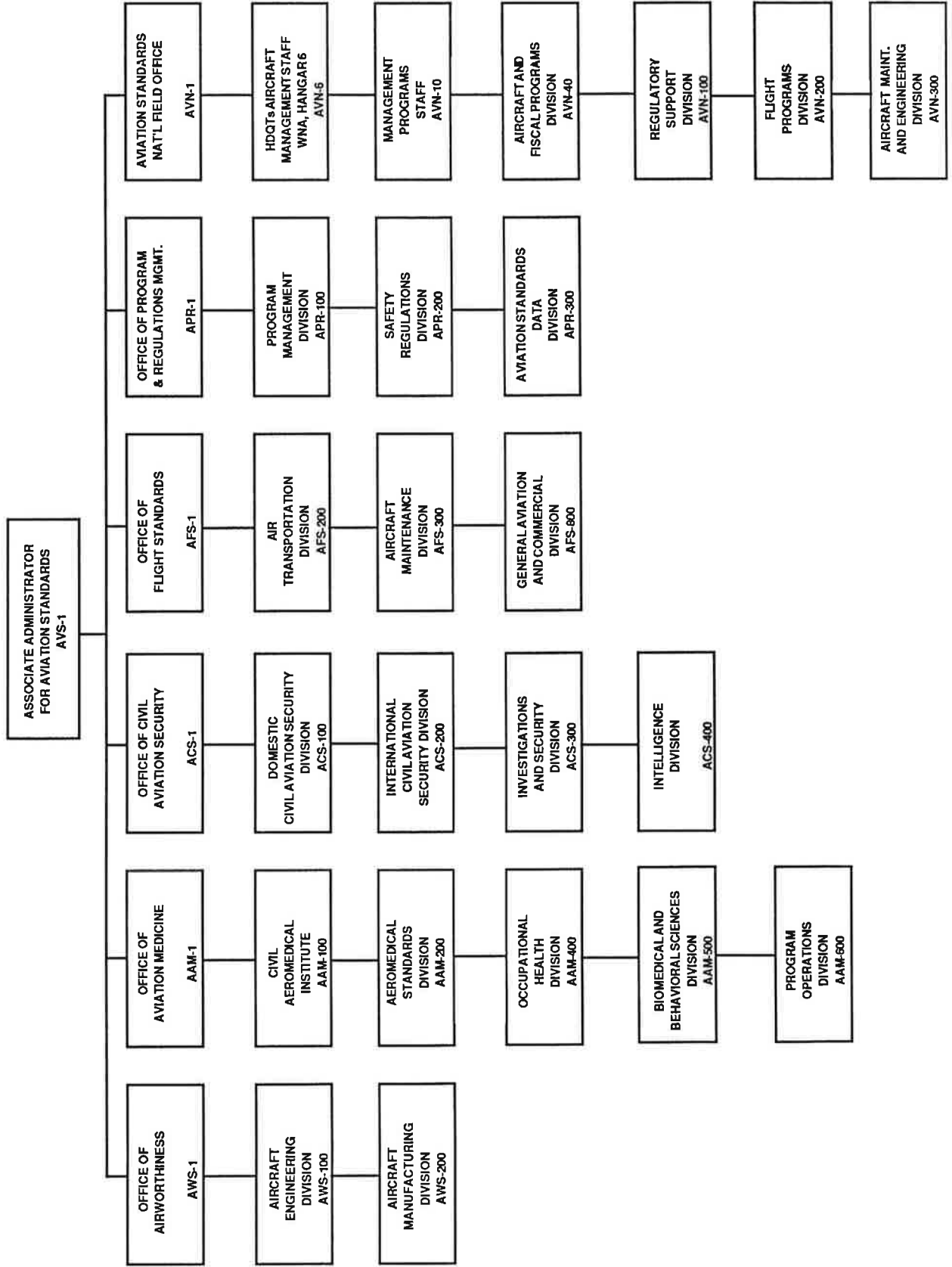
The organization structure of Aviation Standards is shown at the left.

A further breakdown of each office within the organization structure is illustrated on the following page.





# Aviation Standards Organization



## Aviation Standards Field Offices -- 1986

REGION	ACDO	GADO	FSDO	ACO	MIDO	FIFO	ARTCC MED OFF	IFO	CASFO	TOTAL
NE	-	-	3	2	4	-	1	-	-	10
EA	2	9	3	-	-	1	2	-	2	19
SO	-	-	16	-	-	1	4	-	4	25
SW	1	8	-	-	2	1	3	-	2	17
GL	2	6	6	-	-	1	2	-	4	21
CE	-	-	5	3	7	-	1	-	1	17
NM	1	5	5	5	3	-	3	-	2	24
AL	-	-	3	-	-	1	-	-	-	4
WP	-	-	14	-	-	3	2	-	5	24
EU	-	-	-	-	-	1	-	1	-	2
TOTAL	6	28	55	10	16	9	18	1	20	163

Aircraft Certification Offices (ACO) - administer FAA regulations, programs, standards, and procedures on the type design of aircraft, aircraft engines, and propellers.

Manufacturing Inspection District Offices (MIDO) and Manufacturing Inspection Satellite Offices (MISO) - responsible for original airworthiness certification and approvals of civil aircraft, engines, propellers, parts and appliances; production approvals and surveillance of manufacturing facilities; support of the engineering elements of the Regional Aircraft Certification Division during type certification programs; investigation of noncompliance of FARs and service difficulties. MIDOs and MISOs are field elements of the Aircraft Certification Offices.

Civil Aviation Security Field Offices (CASFO) - administer the FAA regulation for compliance of air carrier and airport security; perform inspections of hazardous materials; and monitor ground security training for air carrier/airport personnel. CASFOs are field elements of the Regional Civil Aviation Security Divisions.

Medical Clinics at the Air Route Traffic Control Centers (ARTCC) - provide medical services to agency field employees who are within commuting distance of the ARTCCs, and investigate aircraft accidents from a medical standpoint. The Medical Clinics are field elements of the Regional Aviation Medical Divisions.

International Field Office (IFO) - responsible for overseas air carriers and general aviation.

Source: FAA, Statistical Analysis Branch (AMS-420).

The relationship between Washington headquarters AVS offices and field offices is one of policy guidance. The field elements are organizational aligned according to the basic FAA regional/center structures. The functions of the various field elements are briefly described:

**Air Carrier District Offices (ACDO)** - administer the FAA regulation for certification of air carriers, commercial operators and related airmen, and maintain surveillance and conduct inspections of air carrier flight operations and maintenance activities for compliance with safety requirements.

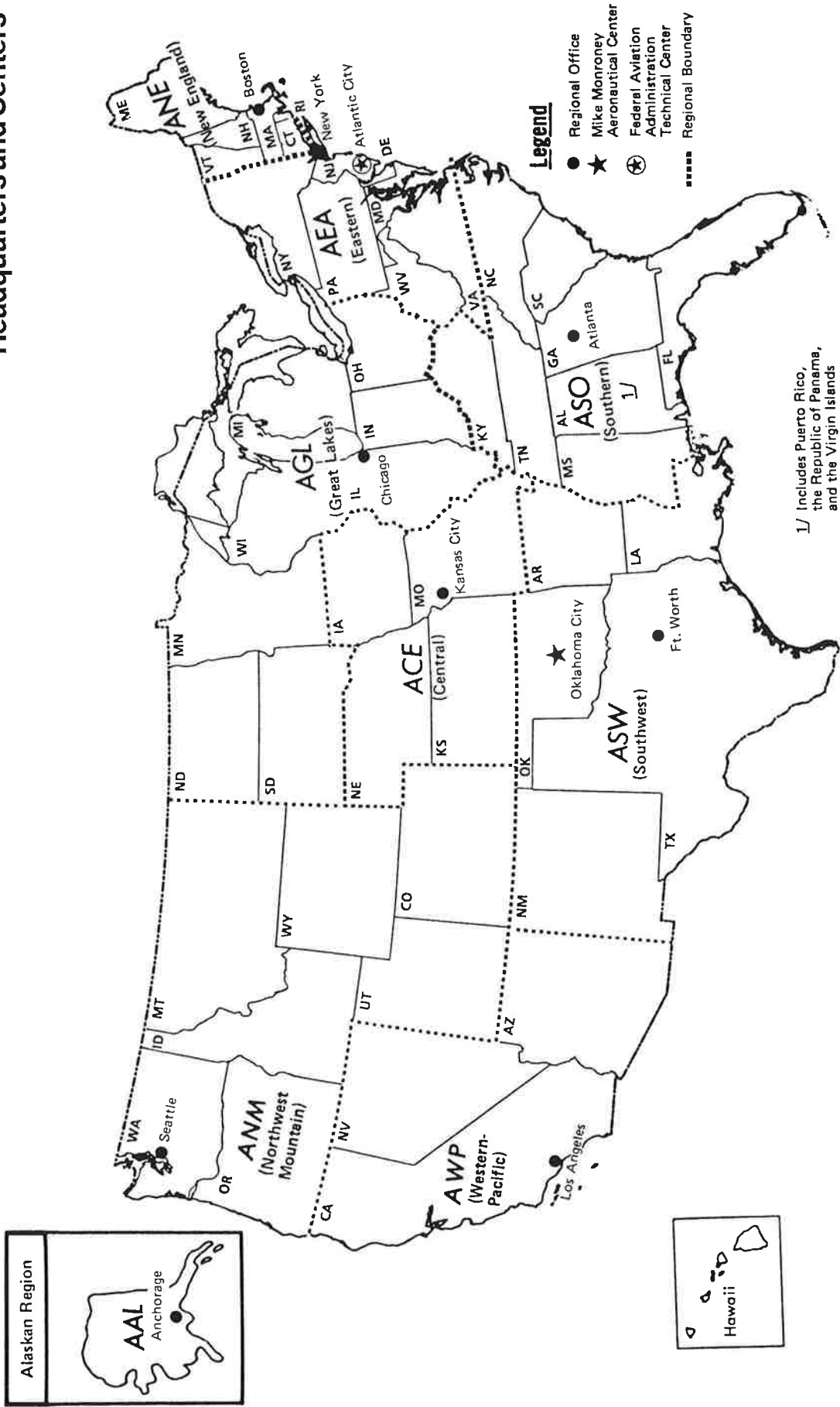
**General Aviation District Offices (GADO)** - administer the FAA regulations for certification of general aviation operators, agencies and related

airmen, and maintain surveillance and conduct inspections of general aviation flight operations and maintenance activities for compliance with safety requirements.

**Flight Standards District Offices (FSDO)** - perform combined ACDO/GADO functions. ACDOs, GADOs, and FSDOs are field elements of the Regional Flight Standards Division.

**Flight Inspection Field Offices (FIFO)** - perform inflight inspections, evaluations, and certifications of all navigational aids of the National Airspace System, military and privately-owned facilities, and provide technical development and/or revisions to instrument flight procedures. FIFOs are field elements of the Aviation Standards National Field Office.

# FAA Regional Boundaries Includes Locations of Regional Headquarters and Centers



## OFFICE OF AIRWORTHINESS

### Organization

The Office of Airworthiness is structured organizationally into two Divisions — Aircraft Engineering and Aircraft Manufacturing, and exercises operational and technical authority over the Aircraft Certification Staff in Brussels.

### Responsibilities

The Office is responsible for:

- developing minimum safety standards for the design and manufacture of U.S. civil aircraft;
- ensuring all civil aircraft designs are in compliance with the minimum safety standards, prior to introduction in service;
- ensuring that every aircraft entering U.S. service is in compliance with an approved design that meets the minimum safety standards;
- monitoring the existing aircraft fleet and taking corrective action against unsafe conditions that may develop;
- examination, appointment, and supervision of designees authorized to act as representatives of the Administrator;
- identification and marking of civil aeronautical products for airworthiness control (excluding registration); and
- implementation of the bilateral airworthiness agreements between the U.S. and foreign governments for the reciprocal acceptance of civil aeronautical products.

## Airworthiness Statistics -- FY87

Activity	Volume of Activity FY87
Number of Airworthiness Directives (ADs) Issued	348
Number of Production Quality Control Systems	1,398
Number of Designees Supervised	2,378
Number of Designee Organizations Supervised	62
Number of Enforcement Action Cases Closed	187
Regulatory Documents Issued	80
Guidance Documents Issued	10
Number of Currently Held Type Certificates	1,745
Number of New or Amended Type Certificates	188
Number of Supplemental Type Certificates Issued	1,489
Number of Technical Standard Orders and Parts Manufacturer Approvals Issued	2,265
Number of Production Certificates and Approved Production Inspection Systems Issued	63
Number of Airworthiness Certificates Issued	4,478

**Note:** During FY87, the list of activity indicators was streamlined and refined.

**Source:** FAA, Office of Airworthiness (AWS-3).

## Civil Aircraft Production, Weight, and Cost <sup>1</sup>

### Summary by Year -- 1982 - 1986

Year	Number of Aircraft	Airframe Weight (000 lbs.)	Value Complete Aircraft (\$000)	Average Complete Aircraft Cost
1982	4,053	44,383	\$ 8,639,782	\$ 2,131,700
1983	2,784	44,936	9,915,761	3,561,696
1984	2,635	33,450	7,911,543	3,002,483
1985	2,457	40,872	10,939,831	4,452,516
1986 <sup>P</sup>	2,286	N/A	12,993,802	5,684,078

P = Preliminary data

N/A = Not Available

<sup>1</sup> Represents fixed-wing, powered aircraft only

Source: FAA, *Statistical Handbook of Aviation*, 1986.

# Designees

## Summary by Year -- 1982 -1986

Designees	1982	1983	1984	1985	1986
DME	654	666	605	624	643
DPRE	64	66	66	57	49
DER	1,145	1,112	1,205	1,292	1,317
DMIR	811	924	940	938	950
DPE	1,800	1,800	1,800	1,800	1,800
AME	8,279	8,232	8,074	7,739	7,414
APC	3,727	4,059	4,175	3,939	3,420
DAR	0	137	162	197	207
Total	16,480	16,996	17,027	16,586	15,800

The FAA designates certain persons to perform examinations of pilots, mechanics, etc., on behalf of the FAA. These designees are also required to be inspected by the FAA.

## Summary by Region -- 1986

Designees	AL	CE	EA	GL	NE	NM	SO	SW	WP	Outside U.S.
DME	12	41	71	109	18	50	114	90	110	8
DPRE	3	2	7	7	1	6	10	5	6	0
DER	0	245	0	0	156	627	0	170	0	0
DMIR	0	317	46	0	237	265	0	97	0	0
DPE	28	158	213	284	80	141	212	288	261	4
DWTE	44	107	160	135	41	121	214	180	184	12
DAR-AC	0	10	0	0	7	21	0	15	0	0
DAR-FS	2	6	10	8	4	14	24	45	43	4

Source: FAA, Examination Standards Branch (AVN-130).

## Delegations

### Summary by Year -- 1982 - 1986

Delegations	1982	1983	1984	1985	1986
DAS	12	12	12	12	13
DOA	9	9	9	7	6

### Summary by Directorate -- 1986

Delegations	Engine & Propeller	Small Airplane	Rotorcraft	Transport Airplane
DAS	1	4	7	1
DOA	2	4	0	0

Source: FAA, Examination Standards Branch (AVN-130).



## OFFICE OF AVIATION MEDICINE

### Organization

The Office of Aviation Medicine is structured organizationally into five Divisions -- Aeromedical Standards, Occupational Health, Biomedical and Behavioral Sciences, Civil Aeromedical Institute (Aeronautical Center in Oklahoma City), and Program Operations.

### Responsibilities

The Office is responsible for:

- physical fitness of pilots and others associated with safety of flight;
- airmen medical standards;
- airmen medical certification systems;
- aviation medical research;
- medical investigation of aircraft accidents;
- employee occupational health program; and
- aeromedical education of pilots.

## Active Airmen Certificates Held

### By Certificate Category -- 1982 - 1986

Certificate Category	1982	1983	1984	1985	1986
Pilot: Student	156,361	147,197	150,081	146,652	150,273
Private	322,094	318,643	320,086	311,086	305,736
Commercial	165,093	159,495	155,929	151,632	147,798
Airline Transport	73,471	75,938	79,192	82,740	87,186
Helicopter (only)	7,034	7,237	7,532	8,123	8,581
Glider (only)	7,842	8,157	8,390	8,168	8,411
Lighter-than-air	1,360	1,337	1,166	1,139	1,133
Total	733,255	718,004	722,376	709,540	709,118
Non-Pilot: Mechanic <sup>1</sup>	277,436	288,335	290,028	274,100	284,241
Parachute Rigger <sup>1</sup>	9,893	10,074	10,194	9,395	9,535
Ground Instructor <sup>1</sup>	65,004	66,385	67,463	58,214	59,443
Dispatcher <sup>1</sup>	7,580	8,223	8,980	8,511	9,025
Flight Navigator	1,695	1,636	1,603	1,542	1,512
Flight Engineer	38,053	38,546	40,534	43,377	46,323
Total	399,661	413,199	426,802	395,139	410,079
Flight Instructor	62,492	62,201	61,173	58,940	57,355
Instrument Ratings	255,073	254,271	256,584	255,559	262,388

Active pilots are those pilots who hold a pilot certificate and a valid medical certificate, one that was issued within the last 25 months. For those certificates that do not require a medical certificate, i.e., glider and lighter-than-air pilots, the numbers shown include all who have been issued an airman certificate.

Instrument ratings are special ratings shown on pilot certificates and do not indicate additional certificates.

<sup>1</sup> No medical examination is required; however, in this case numbers represent all certificates on record.

Source: FAA, *Statistical Handbook of Aviation*, 1986.

## Active Airmen Certificates Held

### Summary by Region -- 1986

Region	Pilot	Student	Non-Pilot	Flight Instructor	Instrument Ratings
Alaskan	11,212	2,185	4,410	815	3,570
Central	36,574	6,380	20,918	2,973	12,188
Eastern	92,287	22,392	60,359	8,179	33,897
Great Lakes	116,844	25,360	53,400	9,777	38,897
New England	34,188	8,537	18,076	2,627	11,789
Northwest Mountain	66,826	13,484	33,934	5,730	23,376
Southern	116,459	24,952	68,692	9,442	48,531
Southwest	88,968	17,836	52,533	7,541	34,202
Western Pacific	127,500	26,274	78,446	9,507	45,535
Outside U.S. <sup>1</sup>	18,260	2,873	19,311	764	10,403
Total	709,118	150,273	410,079	57,355	262,388

Instrument ratings are special ratings shown on pilot certificates and do not indicate additional certificates.

<sup>1</sup> Includes other U.S. areas outside of the 50 states, and foreign countries.

Source: FAA, *Statistical Handbook of Aviation*, 1986.

## Airmen Certificates Issued

### By Certificate Category -- 1982 - 1986

Certificate Category	1982	1983	1984	1985	1986
<b>Pilots</b>					
Original Issuances	163,733	150,419	141,763	138,589	141,625
Additional Ratings	36,699	30,898	30,469	28,420	32,628
<b>Non-Pilots</b>					
Original Issuances	19,466	15,702	15,438	16,432	16,470
Additional Ratings	6,267	5,420	4,808	4,713	5,010
<b>Flight Instructor</b>					
Original Issuances	6,228	4,614	4,075	4,298	4,628
Additional Ratings	10,397	7,698	6,828	5,921	5,421
<b>Instrument Ratings</b>					
Original Issuances	0	0	0	0	0
Additional Ratings	14,517	11,078	10,845	11,673	13,688

Source: FAA, Statistical Handbook of Aviation, 1986.

Additional ratings are entered on current airmen certificates as follows:

- Private, Commercial, and Airline Transport Pilot - aircraft category, class, and type of instrument rating.
- Helicopter Pilot - instrument and type ratings.
- Flight Instructor - ratings for each aircraft category in which the holder is qualified, and for instrument flying instructions.
- Mechanic - airframe and powerplant ratings.
- Parachute Rigger - senior or master rigger ratings.
- General Instructor - ratings for each subject in which the holder is qualified to give instruction.
- Air Traffic Control Tower Operator - junior/senior ratings for an airport where the holder may control air traffic.

Instrument ratings are special ratings shown on pilot certificates and do not indicate additional certificates.

## **Airmen Medical Certification Activity and Appeals**

### **Certification Activity -- FY82 - 86**

	1982	1983	1984	1985	1986
Airmen Medical Records Received	467,304	476,642	465,677	481,352	472,893
Airmen Medical Certificates Denied	5,608	5,720	5,588	5,776	5,675

### **Certification Appeals -- FY82 - 86**

FAS Reconsideration Cases	687	1,899	1,316	1,143	759
Decisions Rendered					
Issued	353	738	581	756	501
Denied	334	1,161	735	387	258

**Source:** FAA, Aeromedical Certification Branch (AAM-130).

## OFFICE OF CIVIL AVIATION SECURITY

### Organization

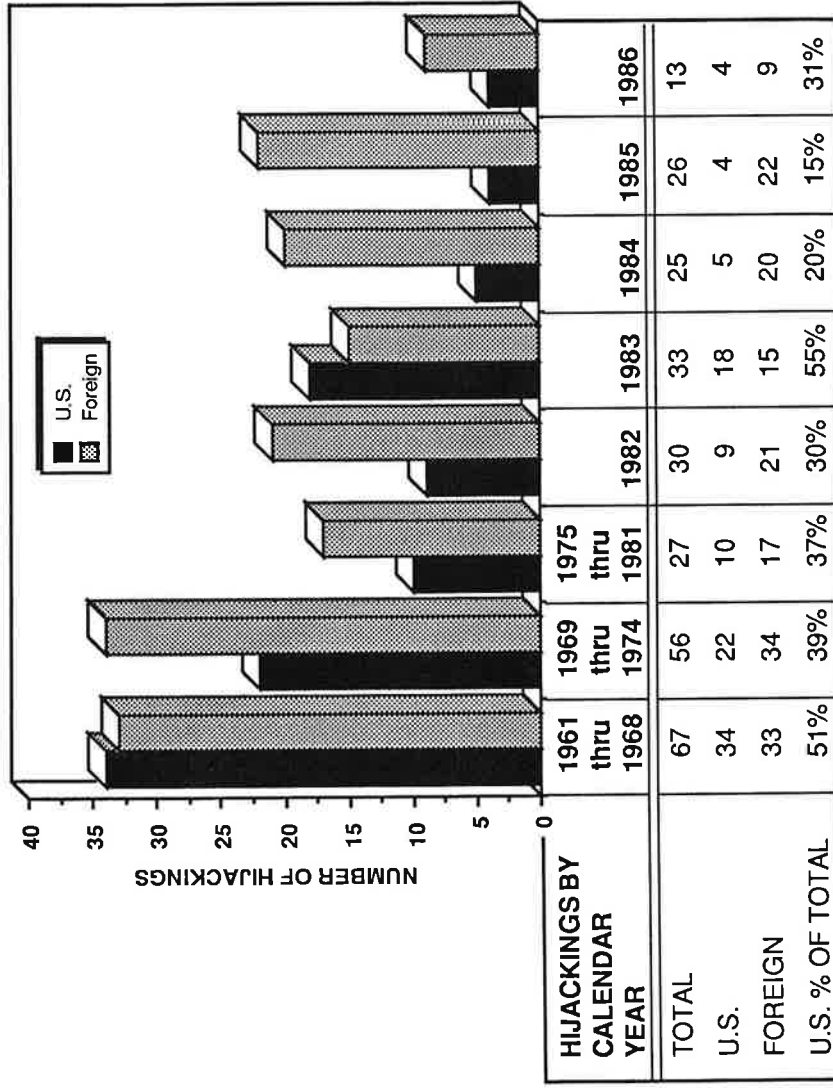
The Office of Civil Aviation Security is structured organizationally into four Divisions -- Domestic Civil Aviation Security, International Civil Aviation Security, Investigations and Security, and Intelligence.

### Responsibilities

The Office is responsible for:

- domestic and international air carrier and airport security;
- aviation counterterrorism program;
- corporate and general aviation security;
- air cargo security and hazardous materials programs;
- Federal Air Marshal program;
- monitoring atmospheric and radiological contamination incidents;
- leadership of aviation security with other Government agencies, domestic and international organizations, and foreign governments;
- investigations of aviation security incidents and criminal violations; and
- FAA's internal security programs.

# U.S. and Foreign Air Carrier Aircraft Hijackings 1961 - 1986



Note: Figures for 1969-1974 and 1975-1981 have been averaged.

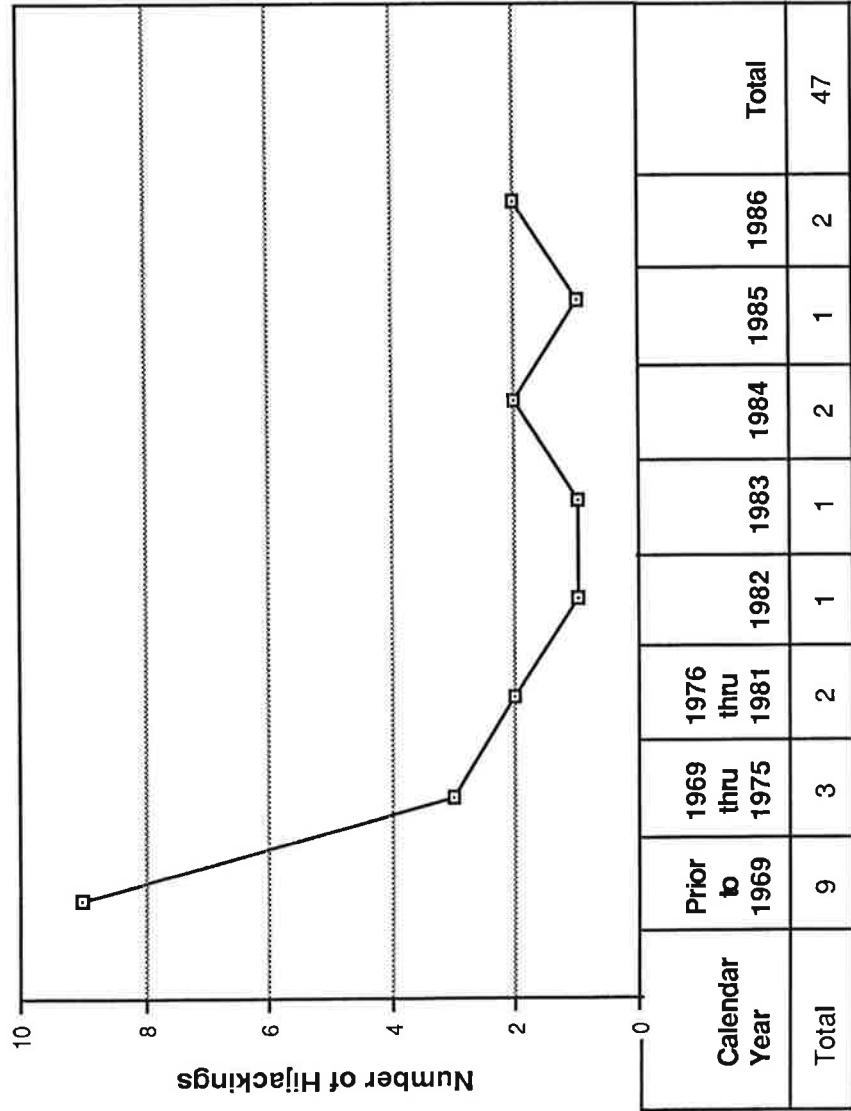
Source: FAA, Semiannual Report to Congress on the Effectiveness of the Civil Aviation Security Program, November 1987.

There are 136 U.S. scheduled and public charter air carriers of various sizes that are required to adopt FAA approved security programs. All U.S. air carriers have adopted the Air Carrier Standard Security Program (ACSSP) which was developed by the industry in consultation with the FAA. This standard requires each air carrier to implement the same standard security procedures. The FAA has authority to amend the ACSSP when the safety and the public interest are determined to be at risk.

There are 96 foreign scheduled and public charter air carriers that serve airports within the United States. Although foreign air carriers are also required to implement security programs, U.S. regulations do not currently provide authority for the FAA to approve or amend a foreign air carrier security program. To ensure that foreign air carriers which serve the U.S. implement adequate security measures, regulatory action was initiated requiring FAA acceptance of foreign air carrier security programs. It is expected that a notice of proposed rulemaking will be issued in 1988.

The above 232 domestic and foreign scheduled and public charter air carriers serve 413 airports within the United States. Each of these airports is required to implement a security program which provides a secure operating environment for these air carriers. Airport security programs are designed to meet the threat to the specific airport. Of the 413 airports, 16 have been determined to have an inherently greater threat based on criteria established by the FAA working with industry. Special security requirements for these airports are being established. FAA headquarters maintains and reviews the security programs of each of these 16 to ensure a high level of security continues to be provided.

## U.S. General Aviation Aircraft Hijackings 1969 - 1986

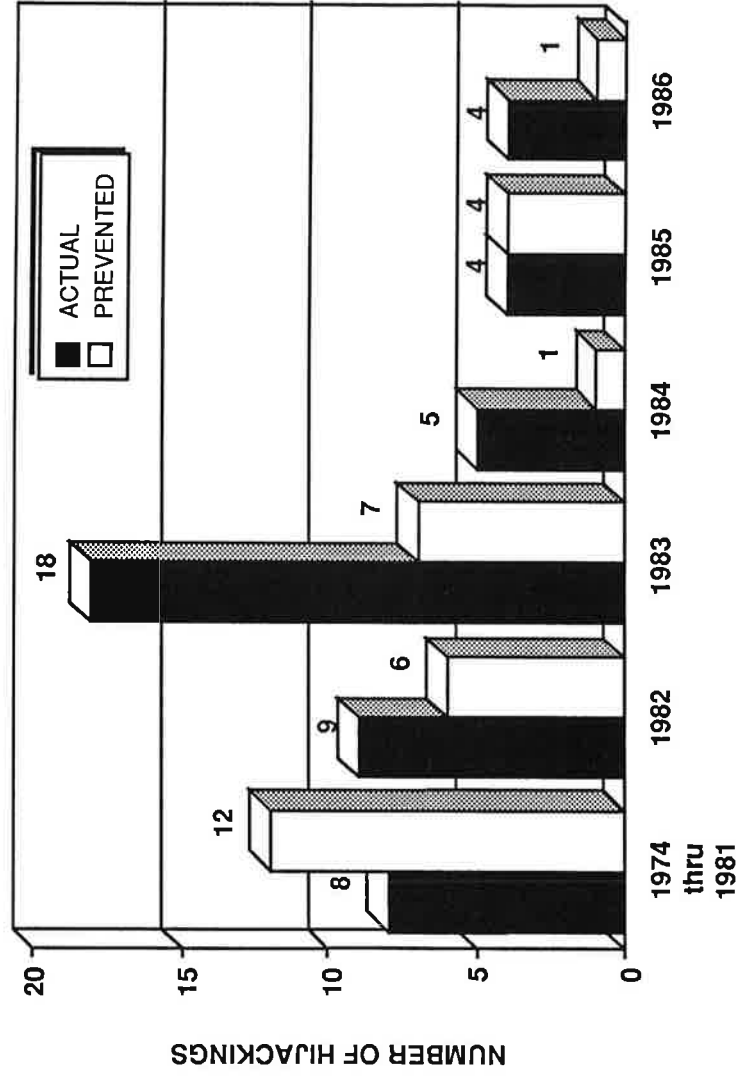


**Note:** Figures for 1969-1975 and 1976-1981 have been averaged.

**Source:** FAA, *Semiannual Report to Congress on the Effectiveness of the Civil Aviation Security Program*, November 1987.



## Actual and Prevented Hijackings of U.S. Air Carrier Aircraft 1974 - 1986



Note: Figures for 1974-1981 have been averaged.

Source: FAA, Semiannual Report to Congress on the effectiveness of the Civil Aviation Security Program, November 1987.

Operating on the concept of shared responsibilities among airlines, airports, Federal, state, and local governments, and the airline passengers, the U.S. Civil Aviation Security Program has continued to be highly effective in preventing aircraft hijackings and other criminal acts against civil aviation. In furtherance of assuring safe air travel, the Federal Aviation Administration establishes and enforces regulations, policies, and procedures; provides highly trained professional Federal Air Marshals for in-flight security on U.S. airlines operating in sensitive areas of the world; and, in general, provides overall guidance and direction to the program.

Prevented hijackings are incidents in which it appeared the individuals involved intended to hijack an aircraft but were prevented from doing so by security procedures.

## Airline Passenger Screening Results

### Six Month Intervals -- 1982 - 1986

Screening Category	1982		1983		1984		1985		1986	
	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec
Persons Screened (Millions)	319.5	310.7	313.9	395.2	367.4	408.2	481.1	511.8	550.3	505.0
Weapons Detected										
Firearms	1,286	1,390	1,363	1,421	1,325	1,632	1,448	1,539	1,525	1,716
(1) Handguns	1,243	1,316	1,303	1,331	1,265	1,501	1,385	1,438	1,415	1,566
(2) Long guns	16	41	22	45	31	67	38	52	49	97
(3) Other	27	33	38	45	29	62	25	49	61	53
Explosive/Incendiary Devices	0	1	4	0	4	2	5	7	4	7
Persons Arrested										
For Carriage of Firearms/Explosives	651	663	633	649	565	720	602	708	645	770
For Giving False Information	21	6	7	27	6	21	17	25	64	25

Source: FAA, *Semiannual Report to Congress on the Effectiveness of the Civil Aviation Security Program*, November 1987.

Passenger screening is carried out to detect and prevent the carriage aboard air carrier aircraft of firearms, explosives, incendiaries, and other deadly weapons. The FAA's analysis of screening checkpoint activity includes the recording and study of the number of items detected and the false threats received, as well as related information concerning individuals arrested. In addition to criminal action taken by Federal and local authorities, individuals who, without proper authorization, attempt to carry firearms or explosives/incendiaries through screening checkpoints also may be subject to civil penalties imposed by the FAA.

## **AVIATION SAFETY**

The following data present a sampling of safety statistics that reflect the safety record of the various segments of the aviation industry.

## Aircraft Accidents, Fatalities, and Accident Rates by Carrier Type

### U.S. Air Carrier -- 1982 - 1986

Year	Total Flt. Hrs.	Total Acc.	Tot. Acc. per 100,000 Hrs.	Total Fatal Acc.	Fat. Acc. per 100,000 Hrs.	Total Fat.	Fat. per 100,000 Hrs.
1982	6,440,163	15	0.23	3	0.05	233	3.61
1983	6,649,009	22	0.33	4	0.06	15	0.22
1984	7,438,497	12	0.16	1	0.01	4	0.05
1985	7,934,135	18	0.23	4	0.05	197	2.48
1986 <sup>P</sup>	8,941,000	22	0.25	1	0.01	1	0.01

The 1986 fatal accident rate for major U.S. scheduled airlines was the lowest since 1980, and the same rate for all other categories of aviation declined from the previous year.

### U.S. General Aviation -- 1982 - 1986

Year	Total Flt. Hrs.	Total Acc.	Tot. Acc. per 100,000 Hrs.	Total Fatal Acc.	Fat. Acc. per 100,000 Hrs.	Total Fat.	Fat. per 100,000 Hrs.
1982	32,095,000	3,233	10.1	591	1.84	1,187	3.69
1983	31,048,000	3,075	9.9	555	1.79	1,064	3.42
1984	31,510,000	3,010	9.5	466	1.72	1,039	3.29
1985	30,590,000	2,745	9.0	500	1.63	957	3.12
1986 <sup>P</sup>	30,361,000	2,568	8.5	466	1.53	958	3.15

In 1986, general aviation's fatal accident rate improved for the fourth consecutive year, with a record-low 466 fatal accidents, and is as low as it has been in a decade.

<sup>P</sup> Preliminary data.

Source: National Transportation Safety Board.

## Aircraft Accidents, Fatalities, and Accident Rates by Carrier Type

### Commuter -- 1982 - 1986

Year	Total Flt. Hrs.	Total Acc.	Tot. Acc. per 100,000 Hrs.	Total Fatal Acc.	Fat. Acc. per 100,000 Hrs.	Total Fat.	Fat. per 100,000 Hrs.
1982	1,299,748	26	2.00	5	0.38	14	1.07
1983	1,510,908	18	1.19	2	0.13	11	0.72
1984	1,745,762	22	1.26	7	0.40	48	2.74
1985	1,737,106	22	1.27	7	0.40	37	2.13
1986 <sup>P</sup>	1,707,000	14	0.82	2	0.12	4	0.23

In 1986, commuter airlines, scheduled carriers operating smaller airplanes on short-haul or regional routes, had the lowest total and fatal accident rates since the NTSB began tabulating statistics on that segment of the industry in 1975.

### Air Taxi -- 1982 - 1986

Year	Total Flt. Hrs.	Total Acc.	Tot. Acc. per 100,000 Hrs.	Total Fatal Acc.	Fat. Acc. per 100,000 Hrs.	Total Fat.	Fat. per 100,000 Hrs.
1982	3,256,763	132	4.05	31	0.95	72	2.21
1983	2,574,883	140	5.44	27	1.05	62	2.40
1984	3,079,007	146	4.74	23	0.75	52	1.68
1985	2,782,696	152	5.46	35	1.26	76	2.73
1986 <sup>P</sup>	2,763,000	118	4.27	31	1.12	64	2.31

On-demand air taxis, small aircraft operating in nonscheduled service, had 31 fatal accidents in 1986, resulting in 64 fatalities. The 118 accident total was a record low.

<sup>P</sup> Preliminary data.

Source: National Transportation Safety Board.

## Reported Near Midair Collisions

### By Degree of Hazard -- 1982 - 1986

Classification	1982	1983	1984	1985	1986
Critical	56	98	127	180	162
Potential	191	283	317	423	473
No Hazard	64	84	115	133	198
Unclassified	0	10	30	22	7
Total	311	475	589	758	840

**Critical:** A situation where collision avoidance was due to chance rather than an action on the part of the pilot. Less than 100 ft. of aircraft separation would be considered critical.

**Potential:** An incident which would probably have resulted in a collision if no action had been taken by either pilot. Closest proximity of less than 500 feet would usually be required in this case.

**No Hazard:** When direction and altitude would have made a midair collision improbable regardless of evasion action taken.

**Unclassified:** No determination could be made either due to insufficient evidence or unusual circumstances.

Source: FAA, Office of Aviation Safety (ASF-200).

# Service Difficulty Reports

Service Difficulty Reports are occurrences reported on the General Aviation Malfunction or Defect Reports (M or D) and Air Carrier Mechanical Reliability Report (MRR) subsets.

## Summary by Year -- 1982 - 1986

Year	No. of SDRs	No. of Active Aircraft	No. of SDRs per 1000 Aircraft
1982	18,929	212,676	89.00
1983	22,215	215,940	102.88
1984	19,775	223,986	88.29
1985	20,170	226,225	89.16
1986	20,730	227,013	91.32

## By Make of Aircraft -- 1982 - 1986

Year	Beech	Boeing	Cessna	Douglas	Lockheed	Piper
1982	1,214	3,172	3,285	2,265	696	2,181
1983	1,214	3,945	3,256	2,230	704	2,096
1984	1,309	4,041	2,820	2,196	666	1,644
1985	1,212	4,164	2,474	2,428	688	1,559
1986	1,121	5,429	2,481	2,606	642	1,355

Source: FAA, Office of Aviation Safety (ASF-200).

## Enforcement Actions

Number of Initiated and Closed Cases by Region -- 1982 - 1986

Region	1982		1983		1984		1985		1986	
	Initiated	Closed	Initiated	Closed	Initiated	Closed	Initiated	Closed	Initiated	Closed
AL	348	374	295	293	336	328	525	407	631	537
CE	457	440	460	452	621	591	617	524	978	699
EA	1,041	864	998	1,030	1,305	1,158	1,462	1,158	1,847	1,274
GL	1,436	1,308	1,478	1,630	1,506	1,362	1,829	1,362	2,015	1,482
NE	313	285	318	311	315	298	333	296	465	383
NM	949	814	979	1,033	952	949	1,075	989	1,318	1,156
SO	2,046	1,726	2,067	1,913	2,042	1,949	2,378	2,040	2,858	2,098
SW	2,147	1,930	2,033	2,264	2,254	2,239	2,455	2,250	2,513	2,027
WP	2,510	2,145	2,513	2,348	2,259	2,297	2,338	2,025	2,527	2,258
Total	11,247	9,886	11,141	11,274	11,590	11,171	13,012	11,051	15,152	11,914

Source: FAA, Office of Aviation Safety (ASF-200).

The criteria set forth in the FAA's National Aviation Safety Inspection Program (NASIP) provides comprehensive national programs for regulatory oversight. These programs, together with original certification, ensure regulatory compliance and adherence to safe operating practices by systematically sampling various segments of the industry to check continuing compliance with Federal regulations. The concept is that a high degree of compliance with safety regulations results in a high level of safety. Those found in noncompliance are subject to enforcement action that results in returning them to full compliance on a continuing basis or certificate suspension or revocation.

This concept of systematically policing all segments of the aviation industry has a strong deterrent effect.



## OFFICE OF FLIGHT STANDARDS

### Organization

The Office of Flight Standards is structured organizationally into three Divisions -- Air Transportation, General Aviation and Commercial, and Aircraft Maintenance.

### Responsibilities

The Office is responsible for FAA's national safety programs governing:

- flight procedures and operating methods of air carriers, commuter airlines, air taxis and general aviation operators;
- proficiency of pilots, flight engineers, dispatchers and navigators, and the certification of related air agencies;
- operational aspects of en route and instrument flight procedures;
- management of the national general aviation accident prevention program;
- publication of the safety magazine, FAA General Aviation News;
- operational requirements for aviation weather systems;
- airworthiness and maintenance standards for U.S. registered aircraft; and
- approval and surveillance of the aircraft maintenance programs of operators and pilot schools.

## Composition of the U.S. Air Carrier Fleet

### Large Aircraft Only -- 1982 - 1986

Aircraft	1982	1983	1984	1985	1986
Turbojet	2,674	2,767	2,959	3,164	3,283
Turboprop	827	876	956	1,076	1,204
Piston	566	551	443	433	420
Helicopter	5	9	12	5	2
Total	4,072	4,203	4,370	4,678	4,909

Source: FAA, Air Carrier Aircraft Utilization and Propulsion Reliability Report.

## Active General Aviation Aircraft and Hours Flown

### Summary by Region -- 1986

Region	Estimated Active Aircraft	Estimated Hours Flown (000)
Alaskan	7,557	1,478
Central	13,085	1,929
Eastern	25,487	4,235
Great Lakes	37,838	5,047
New England	8,952	1,415
Northwest Mountain	22,004	3,414
Southern	33,642	5,084
Southwest	32,669	5,537
Western-Pacific	38,764	6,111
Total	220,043	34,416

Source: FAA, General Aviation Activity and Avionics Survey, December 1987.

Results of the General Aviation Activity and Avionics Survey at the national level reveal that during 1986 an estimated 34.4 million hours of flying time were logged by the 220,044 active general aviation aircraft in the U.S. fleet. The mean annual flight time was 148.9 hours. These aircraft comprised 81.9 percent of the registered general aviation fleet. The statistics for 1986 show a 0.9 percent increase in flying hours, a 4 percent increase in the number of active aircraft in the general aviation fleet.

Column summations may differ from printed totals due to estimation procedures.

## **General Aviation Accident Prevention Program Activity**

### **Summary by Year -- 1982 - 1986**

Activity	1982	1983	1984	1985	1986
Safety Meetings/Seminars/Clinics	10,800	9,900	12,507	13,469	12,705
Attendance at Meetings	461,600	390,000	523,639	602,986	523,675
Safety Counseling	58,900	54,300	58,406	69,999	55,568
Proficiency Flights	16,000	15,000	17,555	19,812	19,124
Safety Improvement Reports					
Received	951	989	744	860	853
Resolved	930	816	632	764	796
Environmental Hazards					
Identified	1,266	1,185	1,424	1,659	1,586
Resolved	1,020	974	1,135	1,321	1,313

**Source:** FAA, General Aviation & Commercial Division (AFS-810).

## General Aviation Accident Prevention Program Activity

### Summary by Region -- 1986

Activity	AL	CE	EA	GL	NE	NM	SO	SW	WP
Safety Meetings	439	1,062	1,128	1,399	720	817	1,277	3,863	2,020
Attendance at Meetings	11,834	29,900	46,362	70,993	36,264	36,828	52,941	139,093	91,860
Safety Counselings	1,194	6,839	4,022	4,181	2,642	3,495	6,442	18,241	8,552
Proficiency Flights	418	2,140	1,661	2,020	1,403	675	1,697	7,009	2,001
Safety Improvement Flights									
Received	16	77	14	261	29	23	30	269	134
Resolved	13	71	14	227	27	17	22	243	118
Environmental Hazards									
Identified	52	76	88	211	112	57	130	536	324
Resolved	44	69	71	157	104	36	101	493	237

**Source:** FAA, General Aviation And Commercial Division (AFS-810).

## OFFICE OF PROGRAM AND REGULATIONS MANAGEMENT

### Organization

The Office of Program and Regulations Management (APR) is structured organizationally into three Divisions -- Program Management, Safety Regulations, and Aviation Standards Data.

### Responsibilities

The office is responsible for AVS activities pertaining to:

- budget and fiscal resource management;
- human resource management;
- organization and staffing;
- training program management;
- R&D projects management;
- international aviation activities coordination;
- management improvement studies;
- management information reporting;
- program planning;
- program evaluation;
- civil aviation emergency operations planning;
- administrative management leadership;
- rulemaking;
- management and regulatory reviews; and
- safety data automation and policy development.

## Staffing, Aircraft/Medicine -- FY87

### Aircraft Certification by Class

Class	Authorized	Onboard
Field		
Supervisors	114	106
Flight Test Pilots	36	27
Engineers	281	246
Manufacturing Inspectors	101	94
Administrative/Clerical	148	135
Subtotal	680	608
Directorate Headquarters		
Supervisors	27	27
Flight Test Pilots	3	3
Engineers	32	30
Manufacturing Inspectors	15	13
Administrative/Clerical	43	39
Subtotal	120	112
Total	800	720

### Aviation Medicine by Class

Class	Authorized	Onboard
Field		
Medical Officers	24	21
Other Professionals	24	22
Administrative/Clerical	48	44
Subtotal	96	87
Headquarters		
Medical Officers	16	13
Other Professionals	83	76
Administrative/Clerical	108	98
Subtotal	207	187
Total	303	274

## Staffing, Aircraft/Medicine/Security -- FY87

### By Region/Centers/Headquarters

Region	Aircraft Certification		Aviation Medicine		Civil Aviation Security	
	Authorized	Onboard	Authorized	Onboard	Authorized	Onboard
Alaskan						
Central	207	185	4	4	12	11
Eastern			8	7	21	21
Great Lakes			10	9	41	36
New England	115	106	14	14	48	42
Northwest Mountain	286	251	7	7	12	12
Southern			15	12	34	32
Southwest	90	84	13	12	65	62
Western Pacific			11	8	51	43
Aeronautical Ctr.			14	14	53	55
Europe					7	6
Technical Ctr.			2	2	13	13
Wash. Hdqts.	102	94	205	185	4	3
<b>Total</b>	<b>800</b>	<b>720</b>	<b>303</b>	<b>274</b>	<b>427</b>	<b>399</b>

Source: FAA, (APR-3).

## Staffing, Flight Standards -- FY87

### By Class

Class	Authorized	Onboard
Aviation Safety Inspectors		
General Aviation	1,175	1,142
Air Carrier	845	797
Total	2,020	1,939
Other		
Administrative Support	445	394
Field Office Total	2,465	2,333

### By Region/Headquarters

Region/Headquarters	Authorized	Onboard
Alaskan	84	88
Central	186	183
Eastern	294	289
Great Lakes	344	329
New England	93	94
Northwest Mountain	308	291
Southern	454	439
Southwest	337	338
Western Pacific	423	417
Washington Headquarters	235	207
Europe	24	19
Total	2,782	2,694

Source: FAA, (APR-3).



## Staffing, Program and Regulations Management -- FY87

### By Class

Class	Authorized	Onboard
Field:		
Managers	14	12
Technical Support	37	37
Administrative/Clerical	14	12
Total	65	61

Source: FAA, (APR-3).

## Staffing, National Field Office -- FY87

### By Class

Class	Authorized	Onboard
Field: (Includes AVN-6/310/311/ 320/330/340/350/FIFOs)		
Airspace System Inspection Pilot	148	126
Electronics Tech. (Airborne)	55	52
Maintenance (Aircraft)	141	131
Maintenance (Avionics)	91	80
Other Technical	95	90
Administrative/Clerical	74	63
Manager/Supervisor	97	94
Subtotal	701	636
(Includes AVN-210/250)		
Technical	12	9
Administrative/Clerical	16	13
Manager/Supervisor	4	3
Subtotal	32	25
Headquarters: (Includes AVN-1/ 10/40/100/200/220/230/240/ 300/303/312)		
Technical	74	61
Administrative/Clerical	93	86
Manager/Supervisor	40	37
Subtotal	207	184
Total	940	845

Source: FAA, (APR-3).

# Rulemaking Workload Summary

## Summary by Year -- 1982 - 1986

Calendar Year	1982	1983	1984	1985	1986	Calendar Year	1982	1983	1984	1985	1986
Petitions for Exemptions/ Waivers	488	428	371	358	332	NPRMs	13	6	12	7	4
Received	371	344	285	365	283	Issued	2	1	3	2	1
Accepted	117	84	70	39	96	Withdrawn	31	3	15	17	15
Rejected	210	226	195	302	135	Amendments/Parts	0	0	0	0	0
Granted	54	42	18	23	26	Issued	18	3	8	13	6
Withdrawn/Cancelled	1	0	0	0	0	Rescinded	0	0	0	0	0
Transferred	3	0	0	1	0	Packages Issued	1	1	0	2	0
Rescinded	21	37	26	15	28	Ops Specs	0	0	0	0	0
Petitions for Rulemaking	16	16	10	10	17	Authorized	1	0	0	2	0
Received	7	18	11	5	7	Issued	0	0	0	0	0
Accepted	3	1	2	0	0	Denied	1	0	1	1	5
Rejected	16	7	2	7	8	Withdrawn/Cancelled	0	0	0	0	0
Granted*	5	2	0	1	2	TSOs	0	0	0	0	0
Denied	6	0	0	0	0	Authorized	0	0	0	0	0
Withdrawn/Cancelled	10	10	0	6	1	Issued	0	0	0	0	0
Transferred	8	3	3	2	0	Withdrawn/Cancelled	0	0	0	0	0
*Figure included in NPRMs issued	6	0	0	0	0	Amendments to ADs	0	0	0	0	0
Step I Projects	10	10	0	6	1	Authorized	0	0	0	0	0
Authorized	8	3	3	2	0	Issued	0	0	0	0	0
Terminated	6	0	0	0	0	Denied	0	0	0	0	0
Transferred	12	7	5	5	0	Withdrawn/Cancelled	0	0	0	0	0
R Projects or I to R	1	4	1	0	0						
Authorized	4	0	0	0	0						
Terminated	1	0	0	0	0						
Transferred	1	0	0	0	0						
Completed											
(by other than amendment)											

Source: FAA, Safety Regulations Division (APR-200).

## **Number of Issued Amendments and NPRMs, Summary by Year-- 1985 -1986**

### **Amendments**

	1985	1986
ACE		1
ANE		1
ANM		3
AVS	9	6
Total	9	11

### **NPRMs**

	1985	1986
AAC		1
ACE	2	3
ANE	2	1
ANM	4	1
ASW		6
AVS	8	6
Total	16	18

**Source:** FAA, Safety Regulations Division (APR-200).

## AVIATION STANDARDS NATIONAL FIELD OFFICE

### Organization

The Aviation Standards National Field Office is structured organizationally into four Divisions — Aircraft and Fiscal Programs, Regulatory Support, Flight Programs, and Aircraft Maintenance and Engineering. There are nine Flight Inspection Field Offices that are sub-elements of the Flight Programs Division.

### Responsibilities

The Office has the responsibility for:

- flight inspection activities;
- development of flight procedures;
- management of the FAA aircraft fleet;
- direction of the Washington headquarters flight program at Hangar 6 (DCA);
- maintenance, modifications, and engineering of FAA aircraft, avionics, and related equipment;
- engineering and manufacturing assistance to regions, centers, and Washington headquarters;
- management of national safety databases;
- development of airmen written and flight examinations and examining standards; and
- conduct of standardization training for designated examiners.

# Inventory of FAA Aircraft -- FY86

Ownership	Distribution by Registration N Number													Mission Assignment								
	AL	CE	EA	GL	NE	NM	SO	SW	WP	AVN			HGR6	AAC	ACT	A/C	# of LOG	FI/ECT	TRNG	R&D		
FAA Owned																						
Lockheed L-1329													1								1	
Boeing B-727									77						40						1	1
Douglas DC-3									34												1	
Douglas DC-9														29								1
Sabreliner																						
NA265-40										86	88	89									3	1
Sabreliner										51	52*	53	54*	55							15	15
NA265-80										56	57	58	59*	60								
										61	62	63	64*	65								
Jet Commander																						
AC-1121										80	81	82	83	84							5	5
Cessna C-500													25								1	1
Cessna C-550													2									1
Convair CV-580															49							
															74							
															91						2	
									90	92												3
Grumman G-159									48												1	1
Beechcraft BE-200									4												1	1
Beechcraft BE-C90		16		20		5	19	17													5	5
Beechcraft BE-F-90																					3	1
									14	18	15											
Aero Commander																						
AC-680																						1
Sikorsky SK-76																						1
Total Aircraft	0	1	0	1	0	1	1	1	0	32			4	3	6	50	32	9	3	6		

\* Maintenance

Source: FAA, Fleet Management Branch (AVN-41).

## ***Summary of Surveillance Inspections -- FY86***

The FAA Program Guidelines specify a baseline surveillance program to ensure systematic accomplishment of minimal inspection activities and establish priorities for investigation, certification, and aviation education and promotion.

Surveillance (inspection) takes precedence over all other Flight Standards field activities. As a minimum, each air carrier certificated under FAR is required to be inspected. The inspections are to be conducted by operations, maintenance, and avionics inspectors to ensure compliance with the FAR and continued safe operating practices by the airline industry.

Region	Planned	Actual	Region	Planned	Actual	Region	Planned	Actual
<b>Alaskan</b>			<b>New England</b>			<b>Western Pacific</b>		
Baseline Inspection <sup>1</sup>			Baseline Inspection			Baseline Inspection		
Operations	2,010	1,338	Operations	1,527	810	Operations	4,439	3,134
Airworthiness	3,791	1,573	Airworthiness	2,343	925	Airworthiness	7,250	4,325
Other Inspection <sup>2</sup>			Other Inspection			Other Inspection		
Operations	674	558	Operations	1,522	1,454	Operations	7,697	6,649
Airworthiness	1,082	921	Airworthiness	1,177	1,071	Airworthiness	9,449	7,689
Total	7,557	4,390	Total	6,569	4,260	Total	28,835	21,797
<b>Central</b>			<b>Northwest Mountain</b>			<b>National Totals</b>		
Baseline Inspection			Baseline Inspection			National Totals		
Operations	1,630	1,321	Operations	3,204	2,081			
Airworthiness	2,880	1,914	Airworthiness	5,017	2,848			
Other Inspection			Other Inspection					
Operations	2,726	2,438	Operations	7,762	6,293			
Airworthiness	4,718	4,108	Airworthiness	8,280	5,769			
Total	11,954	9,781	Total	24,263	16,991			
<b>Eastern</b>			<b>Southern</b>					
Baseline Inspection			Baseline Inspection					
Operations	3,114	2,259	Operations	4,300	3,950			
Airworthiness	5,708	3,626	Airworthiness	6,297	5,040			
Other Inspection			Other Inspection					
Operations	4,186	3,921	Operations	17,453	9,406			
Airworthiness	7,841	7,063	Airworthiness	18,750	12,267			
Total	20,849	16,869	Total	46,800	30,663			
<b>Great Lakes</b>			<b>Southwest</b>					
Baseline Inspection			Baseline Inspection					
Operations	5,404	2,712	Operations	3,014	2,462			
Airworthiness	8,033	4,310	Airworthiness	5,858	3,813			
Other Inspection			Other Inspection					
Operations	7,415	6,376	Operations	8,703	7,964			
Airworthiness	10,176	8,680	Airworthiness	12,401	10,542			
Total	31,028	22,078	Total	29,976	24,781			

1 Baseline inspections are those minimum numbers recommended for systematically scheduling inspections and utilizing resources for surveillance of the industry on an annual basis.

2 Other inspections are those discretionary inspections deemed necessary by FAA regional/district managers to effectively monitor the industry or those on-demand inspections required by changes in the environment or resulting from enforcement actions.

**Note:** Figures for 'planned' inspections are those numbers initially planned and do not reflect dynamic changes in planned inspections resulting from environmental or industry changes.

**Source:** FAA, Report on the FY86 Safety Enforcement Program Performance of the Federal Aviation Administration, April 1987.



# Flight Inspection Facility Count Summary -- FY86

MAJOR FACILITIES	FAA	NON-FAA	MIL	INT'L	TOTAL
DME	0	0	0	0	0
SECRA	18	0	4	2	24
VOT	62	1	0	1	64
ASR	150	0	167	5	322
ARSR	8	0	2	0	10
DF	236	0	1	4	241
PAR	0	0	174	4	178
VDME	216	39	4	45	304
VTAC	614	2	25	9	650
MLS	1	2	1	0	4
TAC	0	2	174	16	192
VOR	44	25	35	12	116
NDB	301	871	178	45	1,395
NDB/L	7	0	0	0	7
NDB/O	265	14	2	3	284
ILS	748	25	173	32	978
ILS/L	112	40	1	2	155
ILS/S	0	38	0	0	38
IMLS	0	4	0	0	4
Subtotal	2,782	1,063	941	180	4,966
SECONDARY FACILITIES	FAA	NON-FAA	MIL	INT'L	TOTAL
APL	147	138	40	40	365
TCOM	4	0	6	0	10
RCOM	9	0	1	0	10
MB	203	13	16	29	261
ILS/D	55	6	0	10	71
MLS/D	0	1	0	0	1
NDB/D	4	2	0	0	6
NDB/L	0	0	0	5	5
NDB/O	39	3	1	1	44
VDME/D	165	31	4	36	236
SECRA	145	0	129	4	278
Subtotal	771	194	197	125	1,287
Total	3,553	1,257	1,138	305	6,253

Source: FAA, Data Branch (AVN-250).

## Hours Flown

### By Region and Program -- FY86

Region	Eval./ Curr./ Transp.	Flight Insp.	Logistics	Training	R&D	Total
Alaskan	596					596
Central	2,575					2,575
Eastern	1,272					1,272
Great Lakes	3,374					3,374
New England	671					671
Northwest Mountain	3,136					3,136
Southern	2,231					2,231
Southwest	3,124					3,124
Western Pacific	1,682					1,682
Europe	244					244
AVN	392	22,001	497			22,890
AAC				8,305		8,305
ACT					968	968
Washington Hdqts.	1,846			658		2,504
Total	21,141	22,001	497	8,963	968	53,571

Note: Numbers have been rounded.

Source: FAA, Aircraft and Fiscal Programs Division (AVN-40).

# Hours Flown

## By Type of Aircraft -- FY86

Type of Aircraft	Purpose of Flight	Hours Flown
L-1329	Eval./Curr./Transp./Training/R&D	362
B-727	Training/Fit. Insp./R&D	788
DC-3	Flight Inspection	121
DC-9	Training	881
Sabre 80	Flt. Insp./Training/Logistics	12,403
Sabre 40	Flt. Insp./Training/Logistics	2,628
C-1121	Flight Inspection	4,262
CE-500	Eval./Curr./Transp.	341
CE-550	ECT/Training/R&D	753
CV-580	Flt. Insp./Logistics/Trng./R&D	2,066
G-159	ECT/Training/Fit. Insp.	598
BE-200	ECT/Fit. Insp.	292
BE-C90	Eval./Curr./Transp.	3,356
AC-680	R&D/Fit. Insp./Logistics	150
SK-76	R&D/Training	203
BE-F90	ECT/Fit. Insp.	1,450
BE-C90*	ECT/Training	533
B-727 Simulator	Training	2,473
Rental Aircraft	Flt. Insp./ECT/Training/R&D	17,556
Rental Simulator	Eval./Curr./Transp.	2,356
Total		53,571

\*Exclusive Use-Lease Aircraft

**Note:** Numbers have been rounded.

**Source:** FAA, Aircraft and Fiscal Programs Division (AVN-40).

## ECT Program Agency and Rental Aircraft

### Summary by Region -- FY86

Region	Agency A/C Hours Flown	Open Market Rental				Total Hours
		Hours Flown	Total Cost	Average Cost/ Hour	Hours Flown(SIM)	
Alaskan		569	\$ 157,063	\$276	26	596
Central	835	1,623	183,226	113	117	2,575
Eastern	169	842	110,599	131	262	1,272
Great Lakes	619	2,388	315,096	132	368	3,374
New England	206	446	54,238	122	19	671
Northwest Mountain	679	1,877	234,302	125	580	3,136
Southern	533	1,247	182,663	146	451	2,231
Southwest	806	1,933	283,608	147	385	3,124
Western Pacific	638	895	115,517	129	149	1,682
Europe		244	109,684	450		244
AVN	44	348	23,624	68		392
Washington Hdqts.	1,169	677	119,788	177		1,846
Total	5,698	13,088	\$1,889,408		2,356	21,142

Note: Numbers have been rounded.

Source: FAA, Aircraft and Fiscal Programs Division (AVN-40).

## Repair Stations and Authorized Ratings -- 1987

The Program Guidelines, issued by the FAA, require the inspection of all repair stations certificated under the Federal Aviation Regulations (FAR) Part 145 that perform complex modifications to aircraft, avionics, and accessories; or that perform contractual maintenance and inspections under FAR Section 145.2; or that hold powerplant class ratings.

	AL	CE	EA	GL	NE	NM	SO	SW	WP	EU <sup>1</sup>	TOTAL
<b>Repair Stations</b>	73	722	454	264	169	551	719	587	974	142	4,655
<b>Authorized Ratings</b>											
Airframe	49	212	271	339	132	212	368	253	527	129	2,389
Powerplant	28	55	138	214	58	121	278	195	335	129	1,551
Propeller	16	15	8	33	16	52	52	39	79	39	349
Radio	62	142	330	429	87	222	572	368	585	212	3,009
Instrument	26	118	177	215	45	141	330	232	239	210	1,933
Accessory	17	81	154	176	43	140	328	182	491	198	1,810
Spec. Serv.	21	89	220	302	150	151	393	363	368	87	2,144
Mfg. Maint. Facility <sup>2</sup>	6	29	14	44	50	44	4	18	36	0	245
<b>Authorized Ratings Total</b>	<b>225</b>	<b>638</b>	<b>1,312</b>	<b>1,752</b>	<b>581</b>	<b>1,083</b>	<b>2,325</b>	<b>1,650</b>	<b>2,860</b>	<b>1,004</b>	<b>13,430</b>

<sup>1</sup> Foreign Repair Stations are included in region having jurisdiction.

<sup>2</sup> MMF limited ratings are issued for aircraft, aircraft engines, propellers, appliances, and parts.  
**Source:** FAA, Examination Standards Branch (AVN-130).

## Aviation Schools and Air Agencies

### Summary by Region -- 1987

Schools/Agencies	AL	CE	EA	GL	NE	NM	SO	SW	WP
Pilot Schools	16	35	88	123	34	61	110	83	68
Aircraft Maintenance Technician Schools	2	13	18	30	4	17	29	21	25
Repair Stations	73	264	454	587	169	551	719	722	974
Parachute Lofts	1	2	5	8	1	9	6	5	8

Source: FAA, Examination Standards Branch (AVN-130).

Requirements are established by the Federal Aviation Administration for aviation safety promotion and education. Norms are set for the frequency of attendance and/or FAA representation at flight instructor refresher courses, public/user meetings, inspection authorization refresher courses and aircraft maintenance industry seminars.

# Acronyms

AAM	Office of Aviation Medicine	FSDO	Flight Standards District Office
ACDO	Air Carrier District Office	GADO	General Aviation District Office
ACO	Aircraft Certification Office	IFO	International Field Office
ACS	Office of Civil Aviation Security	IFR	Instrument Flight Rules
AFS	Office of Flight Standards	ILS	Instrument Landing System
ARTCC	Air Route Traffic Control Center	MB	Marker Beacon
ALS	Approach Light System	MIDO	Manufacturing Inspection District Office
AME	Aviation Medical Examiner	MIL	Military
APC	Accident Prevention Counselor	MLS	Microwave Landing System
APR	Office of Program and Regulations Management	NDB	Nondirectional Beacon
ARSR	Air Route Surveillance Radar	NPRM	Notice of Proposed Rulemaking
ASR	Airport Surveillance Radar	PAR	Position Approach Radar Remote Communications
AVN	Aviation Standards National Field Office	RCOM	Remote Communications
AVS	Office of Associate Administrator for Aviation Standards	REIL	Runway-end Identification Lights
AWS	Office of Airworthiness	SDF	Simplified Directional Facility
CASFO	Civil Aviation Security Field Office	SECRA	Secondary Radar
DAR	Designated Airworthiness Representative	TACAN	Tactical Navigation
DAS	Designated Alteration Station	TCOM	Tower Communications
DER	Designated Engineering Representative	VASI	Visual Approach Slope Indicator
DF	Direction Finder	VOT	Very high frequency Omnidirectional range Test
DME	Designated Mechanic Examiner	VOR	Very high frequency Omnidirectional Radio range
DMIR	Designated Manufacturing Inspection Representative	VTAC	Very high frequency Omnidirectional range with Tactical air navigation
DOA	Delegation Option Authority		
DPE	Designated Pilot Examiner		
DPRE	Designated Engineering Representative		
ECT	Evaluation Currency of Transport		
FAR	Federal Aviation Regulations		
FAS	Flight Advisory Service		
FIFO	Flight Inspection Field Office		





# Glossary

**Active Aircraft**

All legally registered civil aircraft which flew one or more hours.

**Air Carrier**

The commercial system of air transportation consisting of the certificated air carriers, air taxis (including commuters), supplemental air carriers, commercial operators of large aircraft and air travel clubs.

**Aircraft Accident**

An occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft until such time as all such persons have disembarked, and in which any person suffers death or injury as a result of being in or upon the aircraft or by direct contact with the aircraft or anything attached thereto, or in which the aircraft receives substantial damages.

**Airman**

A pilot mechanic, or other licensed aviation technician.

**Airman Certificate**

A document issued by the Administrator of the FAA certifying that the holder complies with the regulations governing the capacity in which the certificate authorizes the holder to act as an airman in connection with aircraft.

**Air Route Traffic Control Center**

A facility established to provide air traffic control service to aircraft operating on IFR flight plans within controlled airspace, and principally during the en route phase of flight.

**Airport Surveillance Radar**

Radar providing position of aircraft by azimuth and range data. ASR does not provide elevation data. It is designed for range coverage up to 60 nautical miles and is used by terminal area air traffic control.

**Certificated Air Carrier**

An air carrier holding a Certificate of Public Convenience and Necessity issued by DOT to conduct scheduled services interstate. These carriers operate large aircraft (30 seats or more or a maximum payload capacity of 7,500 pounds or more) in accordance with the FAR.

**Commuter Air Carrier**

An air taxi operator which performs at least five round trips per week between two or more points and publishes flight schedules which specify the times, days of week, and points between which such flights are performed.

**Fatal Injury**

Any injury which results in death within 7 days of the accident.

**Fixed-Wing Aircraft**

Aircraft having nonrotating wings fixed to the airplane fuselage and outspread in flight.

**General Aviation**

The portion of Civil Aviation which encompasses all facets of aviation except Air Carriers.

**Instrument Flight Rules**

Rules governing the procedures for conducting instrument flights. Also used to indicate type of flight plan.

**Instrument Landing System**

A precision instrument approach system which normally consists of the following electronic and visual aids:

Localizer - Provides course guidance to the runway.

Glide Slope - Provides vertical guidance during approach.

Marker Beacon - Provides aural and/or visual identification of a specific position along an instrument approach landing.

**Microwave Landing System**

An instrument landing system operating in the microwave spectrum which provides lateral and vertical guidance to aircraft having compatible avionics equipment.

**Nonscheduled Service**

Revenue flights not operated in regular scheduled service, principally contract and charter operations.

**On-demand Air Taxi**

A classification of air carriers which transports in accordance with the FAR persons, property and mail using small aircraft (under 30 seats or a maximum payload capacity of less than 7,500 pounds).

**Pilot** Student Pilot -- A student pilot who may not operate an aircraft that is carrying a passenger or that is carrying property for compensation or hire.

Private Pilot -- A private pilot who may not act as a pilot-in-command of aircraft that is carrying passengers for compensation or hire nor may a private pilot act as pilot-in-command for compensation or hire.

Commercial Pilot -- A commercial pilot who may act as pilot-in-command of an aircraft carrying passengers for compensation or hire and as pilot-in-command of an aircraft for compensation or hire.

Airline Transport Pilot -- An airline transport pilot who may act as a pilot-in-command of an aircraft engaged in air carrier services.

**Repair Stations**

Stations certificated under the FAR that perform complex modifications to aircraft, avionics, and accessories or that perform contracted maintenance and inspections.

**Scheduled Service**

Transport service operated over an air carrier's certificated route, based on published flight schedules, including extra section and related nonrevenue flights.

**Turbojet**

Aircraft propelled by jet engines incorporating a turbine-driven air compressor to take in and compress the air for the combustion of fuel, the gases of combustion (or the heated air) being used both to rotate the turbine and to create a thrust-producing jet.

**Turboprop**

Aircraft in which the main propulsive force is supplied by a conventional propeller driven by a gas turbine. Additional propulsive force may be supplied from the discharged turbine exhaust gas.

**VOR**

Very high frequency Omnidirectional Radio range used as the basis for navigation in the national airspace system.