Index

A
Adjustable stabilizer6-12
Adverse balance
Adverse conditions
Adverse yaw6-3
Advisory circular (AC)1-10
Aeromedical factors
Aeronautical charts
Aeronautical decision-making2-1
History of ADM2-2
Aeronautical Information Manual (AIM)1-9
After-landing14-34
Ailerons 6-3
Coupled ailerons6-4
Differential ailerons6-4
Frise-type ailerons6-4
Airborne radar13-4
Aircraft documents9-6
Aircraft engine7-1
Aircraft inspections9-8
100-hour Inspection9-8
Altimeter system inspection9-9
Annual inspection9-8
Preflight inspections9-9
Transponder inspection9-9
Aircraft maintenance9-8
Aircraft owner/operator responsibilities9-13
Aircraft Owners and Pilots Association (AOPA)3-13
Aircraft types and categories1-15
Air data computer (ADC)8-14
Airfoil
Leading edge4-6
Trailing edge4-6
Airframe systems7-25
Airline Deregulation Act of 19781-7
Air masses
Air navigation16-1
Airplane1-15
$Airplane\ flight\ manuals\ (AFM)9-1,\ 16-17$
Airport beacon14-16
Airport lighting14-18
Airport markings14-5

Runway markings	14-13
	14-5
Taxiway markings	
Airports	14-2
Civil airports	14-2
Military/federal government airports	14-2
Private airports	14-2
Towered	14-2
Nontowered	14-2
Airport signs	14-15
Destination signs	14-12, 14-16
Direction signs	14-16
Information signs	14-16
Location signs	14-15
Mandatory instruction signs	14-15
Runway distance remaining signs	14-16
Airport surveillance radar	
Air Route surveillance radar (ARSR)	
Air Route traffic control center (ARTCC)	13-2
Airship	
Airspace	15-1
Airspeed	9-2, 16-10
Airspeed indicator (ASI)	11-2
Airspeed indicator markings	8-9
Airspeed limitations	8-9
Airspeed tape	8-12
Air traffic control (ATC)	14-24, 15-7
Airworthiness certificate	
Airworthiness directives (ADs)	
Alcohol	
Alert areas	15-4
Alternator	7-30
Altimeter	8-3, 8-13
Setting the altimeter	8-5
setting the attilient	
=	
Altimeter operation	
Altimeter operation	8-6, 12-6
Altimeter operation	8-6, 12-6
Altitude	8-6, 12-6
Altimeter operation	8-6, 12-6 8-7 8-7 8-6
Altimeter operation	8-6, 12-6 8-7 8-6 8-6

Ammeter	/-31	wind	13-0
Aneroid barometer	12-5	Zulu time	13-7
Aneroid wafer	8-3	Pilot weather reports (PIREPs)	13-8
Angle of attack (AOA)	6-4	Axes of an aircraft	5-12
Anti-ice	7-40	Axes of rotation	6-3
Antiservo tab	3-6, 6-11		
Approach light systems	14-16	В	
Arm	10-4		10.2
Assembling necessary material	16-17	Balance tabs	
ATC Automation	1-6		_
ATC delays	13-5	Balloon	
ATC radar beacon system (ATCRBS)	14-24	Barbs	
ATC radar weather displays		Basic aerodynamics	
Atmosphere4-1		Drag	
Atmospheric circulation	12-3	Lift	
Atmospheric pressure		Thrust	
Atmospheric stability		Weight	
Attitude indicator		Basic empty weight	
Autokinesis		Bernoulli, Daniel	
Automatic decision-making		Bernoulli's Principle of Differential Pressure	
Operational pitfalls		Best angle-of-climb speed (V_x)	
Automatic direction finder (ADF)		Best rate-of-climb speed (V _Y)	
Automation		Binocular cues	
Automation management		Blade angle	
Autopilot		Bleed air heating systems	
Autopilot systems		Blocked pitot system	
Aviation forecasts		Blocked static system	
Area forecasts (FA)		Boundary layer	
Terminal aerodrome forecasts (TAF)		Brake horsepower (BHP)	
Forecast change group		Brakes	
Forecast significant weather		Bus bar	/-31
Forecast sky condition			
Forecast visibility		C	
Forecast wind		Cabin pressure control system	7-35
ICAO station identifier	13-9	Cabin pressurization system	7-35
Probability forecast		Calibrated airspeed (CAS)	
Type of report		Canard	
Aviation medical examiner (AME)		Carbon monoxide (CO) poisoning	
Aviation routine weather report (METAR)		Carburetor air temperature gauge	
Aviation safety inspector (ASI)		Carburetor heat	
Aviation weather reports		Carburetor icing	7-9
Aviation routine weather report (METAR)		Carburetor systems	
Altimeter setting	13-7	Float-type carburetor	
Modifier		Pressure-type carburetor	
Remarks		Ceiling	
Sky condition		Center of gravity (CG)	
Station identifier		CG limits	
Temperature and dew point		CG range	
Type of report		Central blind spot	
Visibility		Certificated flight instructor (CFI)	
Weather		Certificate of aircraft registration	
		-	

Chandelles	5-36	Course deviation indicator (CDI)	16-23
Chart Supplement U.S.	16-17	Course intercept	16-27
Clearing procedures	14-28	Angle of intercept	16-27
Before takeoff	14-28	Rate of intercept	16-27
Climbs and descents	14-28	Cross-country flying	16-1
Straight and Level	14-28	Crosswind and headwind component chart	11-25
Traffic at VOR sites	14-28	Current conditions	13-5
Traffic patterns	14-28		
Training operations	14-28	D	
Climb performance	11-6		17.00
Angle of climb (AOC)	11-7	Dark adaptation	
Climb Performance Factors		Datum	
Rate of climb (ROC)	11-7	Data link weather	
Clouds		Data link weather products	
Cloud classification	12-17	Flight information service-broadcast (FIS-	
Alto	12-17	Daylight saving time	
Castellanus	12-17	Dead reckoning	
Cirrus		DECIDE model	
Cumulus		Choose (a course of action)	
Fracto		Detect (the problem)	
Lenticularus		Do (the necessary actions)	
Nimbus		Estimate (the need to react)	
Stratus		Evaluate (the effect of the action)	
Code of Federal Regulations (CFR)		Identify (solutions)	
Collision avoidance		Decision-making in a dynamic environment.	
Combustion		Use of resources	
Combustion heater systems		External resources	
Compass heading		Internal resources	
Composite materials in aircraft		Decision-making process	
Composites		Dehydration	
Compressor stalls		Deice system	7-40
Control		Delta	
Control instruments		Density altitude	4-4
Controllability		Density altitude charts	
Controlled airport		Density altitude (DA)	
_		Department of transportation (DOT)	1-6
Class A signage		Deposition	12-15
Class A airspace		Designated pilot examiner	1-24
Class B airspace		Design maneuvering speed (V _A)	8-10
Class C airspace		Destination forecast	13-5
Class D airspace		Determining loaded weight and CG	10-7
Class E airspace(CEA.)		Deviation	16-8, 16-16
Controlled firing areas (CFAs)		Dew point	12-13, 13-13
Convective currents	12-/	Distance measuring equipment (DME)	
Convective significant meteorological	12 12	Doppler radar	
information (WST)		Drag	
Converting KTS to MPH		Form drag	
Converting minutes to equivalent hours		Induced drag	
Cooling		Interference drag	
Coriolis force		Parasite drag	
Corkscrew effect		Skin friction drag	
Course	10-10	=	

Drift angle	Filing a VFR flight plan	16-21
Drugs17-16	Flameout	
Dutch roll5-20	Flaperons	6-5
Dynamic hydroplaning11-13	Flaps	6-8
	Fowler flaps	6-9
E	Plain flap	
	Split flap	
Eddy current damping8-27	Flicker vertigo	
Electrical	Flight	
Electrical system	Flight computers	
Electronic flight display (EFD)3-12, 8-12, 13-18	Flight controls	
Elevator	Flight control systems	
Emergency locator transmitter (ELT)9-9	Flight diversion	
Empennage	Flight limits	
Empty-field myopia17-22	Flight maneuvers	
Engine7-1	Flight planning	
Engine cooling systems7-17	Flight school	
Engineered materials arresting systems (EMAS) 14-35	Flight service station	
Engine pressure ratio (EPR)7-22	Flight Standards District Office (FSDO)	
Engine temperature limitations7-23	_	
Enhanced flight vision system17-28	Flight Standards Service (AFS) Floor load limit	
Enhanced night vision systems		
Enhanced situational awareness2-30	Flux gate compass system	
Enhanced taxiway centerline markings14-12	Fog	
En route forecast	Advection fog	
Environmental control systems7-1	Ice fog	
Equipment use2-27	Radiation fog	
Equivalent airspeed (EAS)11-18	Sea smoke	
Equivalent shaft horsepower (ESHP)7-24	Steam fog	
Estimated time en route (ETE)16-17	Upslope fog	
Exhaust gas temperature (EGT)7-22	Forces in climbs	
Exhaust gas temperature (EGT) gauge7-9	Forces in descents	
Exhaust heating systems7-29	Forces in turns	
Exhaust systems	Foreign object damage (FOD)	
Explosive decompression7-36	Free directional oscillations	
Exposure to chemicals	Free-stream velocity	
Engine oil17-14	Friction	
Fuel	Fronts	
Hydraulic fluid17-13	Cold front	
·	Fast-moving cold front	
F	Occluded front	
	Warm front	
Fairings	Fuel	
False horizon 17-26	Fuel consumption	
Fascination (fixation)	Fuel contamination	
Fatigue	Fuel fired geaters	
FDC NOTAMs1-13	Fuel gauges	
Featureless terrain illusion	Fuel grades	
Federal Aviation Administration (FAA)1-3	Aviation gasoline (AVGAS)	
Federal certification of pilots and mechanics1-4	Supplemental type certificate (STC)	
Federal Communications Commission (FCC). 9-13, 14-22	Fuel injection system	7-11
Field offices	Fuel load	10-5

Fuel primer	
Fuel rate10	5-17 Hydromechanical6-2
Fuel selectors	• 1
Fuel systems	* *
Fuel-pump system	7-25 Histotoxic hypoxia
Gravity-feed system	Y-25 Hypemic hypoxia
Fuel tanks	7-25 Hypoxic hypoxia
Full authority digital engine control (FADEC)	• • • • • • • • • • • • • • • • • • • •
Fuselage	3-3
	T I
G	Ice5-26
General Aviation Manufacturers	Icing
Association (GAMA)	e e e e e e e e e e e e e e e e e e e
Generator	8
Glider	8
Global positioning system (GPS) 3-13, 10	
RAIM capability10	1 1
Selective availability10	·
VFR use of GPS10	
Graphical METARs13	1 , ,
Ground adjustable tabs	
Ground lighting illusions17	•
Ground power unit (GPU)	8
Groundspeed (GS)8-9, 16-10, 16	
Gyroscopic action	
Precession	: 0
Rigidity in space	
Gyroscopic attitude indicators	
Gyroscopic flight instruments	
Gyroscopic principles	
	Inversion
н	Isobars
Hazard	
Hazardous attitudes	.2-3
Hazardous in-flight weather advisory (HIWAS)	
Haze	
Heading	**
Heading indicator	Knowledge examination1-21
Heatstroke	7-14
High speed flight	
Hypersonic	-43
Subsonic flow	_
Supersonic flow	
Transonic	
High speed flight controls	
High speed stalls	
Horizontal situation indicator	LL
Human behavior	
Humidity 4-5, 12	
Relative humidity	2-13 Landing strip indicators

Lattitude		Medical certification requirements	1-20
Lazy eights	5-36	Meridians	16-3
Leading edge device	6-9	Mesopic vision	
Leading edge cuffs	6-10	Mesosphere	12-3
Leading edge flaps	6-10	Meteorologists	13-1
Leads	8-27	Microjets	7-20
Licensed empty weight	10-5	Middle ear	
Lift	5-1	Military operation areas (MOAs)	15-4
Lift/drag ratio		Military training routes (MTRs)	15-6
Lighter-than-air aircraft	1-15	Minimum control speed (VMC)	8-10
Lightning		Minimum equipment lists (MEL)	9-9
Lightning strike protection	3-11	Mixture control	7-9
Likelihood of an event	2-6	Moisture	12-13
Improbable	2-6	Moment	10-5
Occasional	2-6	Moment arm	10-4, 5-13
Probable	2-6	Moment index	10-5
Remote	2-6	Monocoque	3-3, 3-8
Load distribution	5-43	Motion sickness	17-12
Loadmeter	7-31	Multi-function display (MFD)	3-12, 13-18
Local airport advisory	15-6		
Longitude	16-3	N	
Lost procedures	16-34	N. indicator	7.22
Lubrication	7-1	N ₁ indicator N ₂ indicator	
		National Aeronautics and Space Admini	
M		(NASA)	
Mach buffet	5.40	National airspace system	
Mach number		National Oceanic and Atmospheric Adn	
Magnetic compass		(NOAA)	
Induced errors		National security areas (NSAs)	
Acceleration error		National weather service (NWS)	
Deviation		Navigation instruments	
Dip errors		Negative arm	
Northerly turning errors		Negative dynamic stability	
Oscillation error		Negative static stability	
Southerly turning errors		Net thrust	
Variation		Neutral dynamic stability	
Magnetic compasses		Neutral static stability	
Magnetic heading		Newton's Basic Laws of Motion	
Magnus effect		Newton's First Law	
Maintenance entries		Newton's First Law of Motion	
Managing aircraft automation		Newton's Second Law	
5 5		Newton's Third Law	
Maneuverability		Newton's Third Law of Physics	
Manifold absolute pressure (MAP) Maximum landing weight		Next generation weather radar system	
		(NEXRAD)	13-18
Maximum ramp weight		Abnormalities	
Maximum takeoff weight		Limitations	
Maximum weight		Night blind spot	
Maximum zero fuel weight		Night landing illusions	
Mean aerodynamic chord (MAC)		Night vision	
Measurement of direction		Night vision illusions	
TVICUICAL CELLITICALE	1/-/.		

Night vision protection	Pitch5-13
Nondirectional beacon (NDB)3-13	Pitching5-15
Notices to Airmen (NOTAM)13-5	Pitot-static flight instruments8-1
FDC NOTAMs1-12	Placards9-4
NOTAM composition1-13	Plotter16-12
NOTAM (D) information1-12	Positive dynamic stability5-15
	Positive static stability5-14
0	Postural considerations
	Powered-lift1-15
Obstruction lights 14-19	Powered parachute1-15
Dual lighting	Powerplant3-3, 3-7, 7-1, 9-3
High intensity white obstruction lights14-19	Practical test1-22
Red obstruction lights 14-19	Precipitation12-17
Obstructions on wind	Precision approach path indicator (PAPI)14-16
Oil Systems	Pre-landing14-34
Operational incidents (OI)14-31	Pressure4-3
Optical illusions	Pressure altimeter8-3
Original equipment manufacturer (OEM)7-4	Pressure altitude
Outside air temperature (OAT) gauge 7-11, 8-28	Pressurized aircraft
Oxygen masks7-38	Preventive maintenance9-10
Oxygen systems7-37	Primary flight controls6-2
Continuous-flow oxygen system7-38	Primary flight display3-12
Diluter-demand oxygen systems7-38	Primary locations of the FAA
Electrical pulse-demand oxygen system7-38	Field offices
Pressure-demand oxygen systems7-38	Flight Standards District Office (FSDO)1-9
	Flight Standards Service (AFS)1-8
P	Primary radar14-24
Parachute jump aircraft operations15-6	Procedures, vortex avoidance
Parachute jumps	Professional Air Traffic Controllers Organization
Parallels16-3	(PATCO) strike1-6
PAVE checklist2-8	Prohibited areas
Payload	Propeller
Pennants	Adjustable-pitch propeller7-6
Perceive, Process, Perform (3P)2-15	Fixed-pitch propeller
Forming good safety habits2-18	Propeller anti-ice
Performance 11-5	Propeller blade5-28
Performance charts	Propeller principles5-28
Performance data	Published VFR routes
Performance instruments	Pulse oximeters
P factor	
Photopic vision	R
Pilotage	
Pilot certifications	Radar observations
Airline transport pilot1-18	Radar traffic advisories
Commercial pilot1-18	Radio communications
Private pilot1-17	Radio equipment
Recreational pilot1-17	Radio magnetic indicator (RMI)16-24
Sport pilot1-16	Radio navigation
Pilot deviations	Radius of turn5-39
Pilot's operating handbook (POH)9-1, 16-17	Range performance

Rapid decompression	/-36	Severity of an event	2-6
Reciprocating engines	7-2	Catastrophic	2-6
Four-stroke engines	7-3	Critical	
Horizontally-opposed engine	7-2	Marginal	
In-line engines	7-2	Negligible	2-6
Radial engines	7-2	Shock waves	5-46
Two-stroke engine	7-3	Significant Meteorological Information (SIGMET)13-12
Reference datum	10-5	Single-engine best rate-of-climb (V _{YSE})	8-10
Refueling procedures	7-29	Single-pilot resource management	2-4
Region of reversed command	11-11	Sinus problems	17-5
Repairs and alterations	9-12	Situational awareness	2-24
Respect for onboard systems	2-29	Obstacles to maintaining situational awareness.	2-24
Restricted areas	15-3	Size-distance illusion	17-27
Retractable landing gear	7-34	Skidding turn	5-23
Reversible perspective illusion	17-26	Slipping turn	5-23
Risk	4, 2-6	Slip/skid indicator	8-13
Mitigating risk	2-8	Slotted flap	6-8
Risk management	2-3	Spatial disorientation	17-6
Rocket	1-15	Special airworthiness certificate	9-8
Roll	5-13	Special flight permits	9-12
Rolling	5-17	Special use airspace	
Rotorcraft	1-15	Spins	
Gyroplane	1-15	Spiral instability	
Helicopter	1-15	Spoilers	6-10
Rough air		Squall line	
Rudder3-0	6, 6-4	SRM and the 5P check	2-13
Ruddervators	6-8	Passengers	2-14
Runway and terrain slopes illusion		Pilot	
Runway approach area holding position signs and		Plan	2-14
markings	14-14	Plane	2-14
Runway centerline lighting system (RCLS)	14-18	Programming	2-15
Runway confusion	14-31	Stabilator	
Runway end identifier lights (REIL)	14-17	Stability5-14, 5-42, 10)-2, 10-3
Runway holding position marking	14-8	Dynamic stability	
Runway holding position sign		Lateral stability	
Runway incursion avoidance	14-30	Dihedral	
Runway lighting	14-17	Sweepback and wing location	
Runway surface and gradient		Keel effect and weight distribution	
Runway width illusion		Longitudinal stability	
•		Static stability	
S		Vertical stability	
		Stalls	
Safety program airmen notification system	1 1 4	Stall speed performance charts	
(SPANS)		Standard airworthiness certificate	
Satellite		Standard datum plane (SDP)	
Scanning techniques		Standard empty weight	
Scotopic vision		Standard temperature lapse rate	
Sectional charts		Standard weights	
Segmented circle visual indicator system		Starting system	
Self-Imposed stress		Static pressure chamber and lines	
Semimonocoque		Station	
Servicing of oxygen systems	/-39	SWII011	10 3

Straight and Level	Transcribed weather broadcast (TWEB)
Stratosphere12-3	(Alaska only)13-4
Stress	Transponder
Stress management2-21	Trend vectors8-14
Student pilot1-20	Tricycle landing gear airplanes7-33
Student pilot solo requirements1-21	Trim systems6-10
Subcomponents of an airplane3-8	Trim tabs
Airframe3-8	Tropopause12-3
Brakes	Troposphere
Electrical system3-8	True airspeed (TAS) 8-9, 11-18
Flight controls3-8	True course
Sublimation	True heading16-16
Sumps7-27	Truss structure3-8
Superchargers7-12	T-tail configuration6-6
Surface aviation weather observations (METARs) 13-2	Turbine engines7-20
Sweepback5-48	Turbofan7-21
Synopsis	Turbojet7-20
Synthetic vision system17-28	Turboprop7-21
	Turboshaft7-21
Т	Turbosuperchargers
Tachometer8-13	Turbulence12-24
	Turn indicators
Tailwheel landing gear airplanes	Turn-and-slip indicator8-16
Takeoff charts	Turn rate indicator8-13
Takeoff performance	
Taxiway centerline lead-on lights	U
Taxiways, marking and lighting of permanently	
Closed runways	Ultralight vehicle
_	•
Temporary flight restrictions (TFR)	Class G airspace
Terminal doppler weather radar (TDWR)	Unmanned free balloons
Tetrahedron	Upper air observations
Thirdert Freel	Useful load10-5
Thielert, Frank	
Three-color visual approach path	V
Thrust	V ₄ 11-18
Thrust horsepower (THP)	Variable inlet guide vane (VIGV)7-24
Thunderstorms 12-22	Variation 16-6, 16-16
Time and distance check from a station	Vector analysis
Time Zones	Vehicle (driver) deviations14-31
Central standard time	Vertical card magnetic compass8-27
Eastern standard time	Vertical speed indicator (VSI) 8-7, 8-13
Mountain standard time	Very high frequency (VHF)16-22
Pacific standard time	Very high frequency (VHF) omni-directional
Tornadoes 12-23	radio range (VOR) 3-13, 16-22
Torque	Very light jets (VLJs)7-20
Torquemeter	Vestibular illusions
Total distance	Coriolis illusion17-7
Touchdown zone lights (TDZL)	Elevator illusion17-8
Track	Graveyard spiral17-7
Transcontinental air mail route1-4	

Somatogravic illusion	17-7	Wind	13-13
The leans	17-7	Weather depiction chart	13-15
vestibular system	17-6	Weather check	16-17
V _{FF}	11-18	Weather products age and expiration	13-18
VFR terminal area charts	16-2	Weight 5-1, 5-2, 5-8	, 5-40, 10-2
VFR waypoints	16-33	Weight and balance	. 5-40, 10-4
Vg diagram	5-37	Weight and balance computations	10-5
Viscosity	4-2	Weight and balance restrictions	
Visibility	12-17	Weight and loading distribution	9-3
Vision in flight	17-19	Weight control	10-1
Visual approach slope indicator (VASI)	14-16	Weight-shift-control	1-15
visual flight rules (VFR)	16-1	Wind correction angle (WCA)	16-16
Visual glide slope indicators	14-16	Wind direction indicators	
Visual illusions		Wind patterns	12-7
Autokinesis		Winds and temperature aloft forecast (FB)	
False horizon	17-8	Winds and temperatures aloft	
V _{LE}	11-18	Wind shear	
V _{1.0}		Low-level wind shear	12-11
V _{NF}		Wind shifts	12-21
V _{NO}		Wind sock	
VOR/DME RNAV		Wind triangle	16-13
Vortex avoidance procedures		Winglets	
Vortex behavior		Wings	
Vortex generation		Wingtip vortices	
Vortex strength		World aeronautical charts	
V _{so}		WSR-88D NEXRAD radar	
V _{S1}			
V-Tail		Y	
V _x			~
V _v		Yaw	
Y		Yawing	
W		Yaw String	8-18
	5.0.14.26	_	
Wake turbulence		Z	
Warning areas		Zero fuel weight	10-10
Water refraction			
WCA			
Weather			
Weather avoidance assistance			
Weather briefings			
Abbreviated briefing			
Outlook briefing			
Standard briefing			
Weather charts			
Significant weather prognostic charts			
Surface analysis chart			
Dew point			
Present weather			
Pressure change/tendency			
Sea level pressure			
Sky cover			
Temperature	13-13		