

A

ABSOLUTE ALTITUDE, 4-7 ACUTE FATIGUE, 1-14 ADVECTION, 9-5 ADVERSE YAW, 3-12, 7-23 **AERODYNAMICS, 3-1 AERONAUTICAL CHARTS, 11-1** sectional. 11-1 WAC, 11-3 **AERONAUTICAL DECISION MAKING, 1-2 AERONAUTICAL INFORMATION MANUAL** (AIM), 9-26 **AEROTOW EMERGENCIES, 7-4 AEROTOW LAUNCH, 7-1** launch procedures, 7-2 AILERONS, 2-2 AIR DENSITY, 3-2 AIRFOIL, 3-1 AIR MASSES, 9-4, 9-11 AIRMET, 9-37, 11-2 AIRSPACE, 11-2 AIRSPEED, 4-1, 4-2 true, 4-2 indicated. 4-2 minimum control, 4-3, 4-4, 7-26 placard, 5-5. 5-6 maneuvering, 4-3 L/D Speed, 4-3, 5-5 minimum sink, 4-3, 5-5 aero tow, 4-3 ground launch, 4-3 flaps extended, 4-3 never exceed, 4-3 indicator. 4-1 calibrated. 4-2 AIRSPEED CONTROL, 7-26 ALCOHOL, 1-15 ALTIMETER, 4-4 ALTITUDE, 4-7, 5-1 indicated, 4-7 true. 4-7 absolute, 4-7 pressure, 4-7 density, 4-7 AMPLITUDE, 9-20 ANGLE OF ATTACK, 3-1, 3-14

ANGLE OF BANK, 3-11 ANGLE OF INCIDENCE, 3-1 ANXIETY, 1-6 AREA FORECAST, 9-36 ARM, 5-10 ASPECT RATIO, 3-7 **ASSEMBLY TECHNIQUES, 6-1 ASYMMETRICAL AIRFOIL, 3-1** ATMOSPHERE, 9-1 **ATMOSPHERIC PRESSURE, 5-1** ATMOSPHERIC STABILITY, 9-4, 9-6 **ATMOSPHERIC SOUNDINGS**, 9-4 ATTITUDE, 4-16 ATTITUDE INDICATOR, 4-16 AUTO LAUNCH PROCEDURES, 7-11 AUTO-ROTATION, 7-31 AUTO TOW, 7-2 AUTOMATED FLIGHT SERVICE STATION, 9-25, 11-2 **AVIATION AREA FORECAST, 9-36 AVIATION ROUTINE WEATHER REPORT, 9-33 AVIATION WEATHER SERVICES, 9-25** AWARDS, 11-4, 11-5 **AXES**, 3-8

B

BAILOUT, 10-12 BALLAST, 5-5, 5-13 BANK ANGLE, 3-11 BAROGRAPH, 11-2 BASE LEG, 7-35 BASIC FLIGHT MANEUVERS, 7-22 BERNOULLI'S PRINCIPLE, 3-3 BEST GLIDE (L/D) AIRSPEED, 5-5, 7-34 BOXING THE WAKE, 7-10

С

CALCULATOR, 11-3

CALIBRATED AIRSPEED (CAS), 4-2 CAS (CALIBRATED AIRSPEED), 4-2 CAMBER, 3-1 CAP CLOUD, 9-22 CARBON MONOXIDE POISONING, 1-13 CENTER OF GRAVITY, 5-11 **CENTER OF PRESSURE, 3-1 CENTRIFUGAL FORCE, 3-11 CENTRIPETAL FORCE, 3-11** CG, 3-8, 5-11 CHART SYMBOLS, 11-1 CHORD LINE, 3-1 CHRONIC FATIGUE, 1-14 **CLEARING TECHNIQUES, 10-5 CLOUDS**, 10-1 cumulonimbus, 9-13 cumulus, 10-1 lenticular, 10-12 **CLOUD FORMATION, 10-1** CLOUD STREETS, 9-11 CONVECTION, 9-5 CONVECTIVE CONDENSATION LEVEL (CCL), 9-10 CONVECTIVE OUTLOOK CHART, 9-37 **CONVENTIONAL TAIL, 2-4** CONVERGENCE, 9-4, 9-23, 10-18, 11-17 CRITICAL ANGLE OF ATTACK, 3-14 CROSS-COUNTRY PLANNING, 11-1 **CROSS-COUNTRY PREPARATION, 11-1 CROSS-COUNTRY PROFILE, 11-6** CROSS-COUNTRY SOARING, 11-1 **CROSSWIND LANDING, 7-36** CROSSWIND TAKEOFF, 7-3, 7-15, 7-18 CUMULONIMBUS CLOUDS, 10-2 CUMULUS CLOUDS, 10-1 CUMULUS CONGESTUS, 9-13

D

DATUM. 4-7 DEAD RECKONING, 11-4 **DECISION MAKING PROCESS, 1-3 DEFINITIONS**, 5-10 **DEHYDRATION**, 1-14 DENSITY, 9-2 **DENSITY ALTITUDE, 5-1** DIHEDRAL, 3-7 **DISORIENTATION, 1-12 DIVE BRAKES**, 2-2 DOWNDRAFTS, 9-14 DOWNWIND LANDING, 7-38 DOWNWIND LEG, 7-35 DRAG, 3-4 induced drag, 3-4 parasite drag, 3-4 total drag, 3-5

DROGUE CHUTE, 8-15 DRUGS, 1-15 DRY ADIABAT, 9-6 DRY ADIABATIC LAPSE RATE (DALR), 9-6 DUATS, 9-26 DUST DEVILS, 10-2 DYNAMIC PRESSURE, 3-6

Е

EFAS, 9-39 EARS, 1-11 ELECTRONIC FLIGHT COMPUTERS, 4-9 ELEVATOR, 2-3 EMERGENCY OXYGEN, 8-18 EMERGENCY PROCEDURES, 7-4 aerotow, 7-4 ground launch, 7-16 self-launching glider, 7-22 EMPENNAGE, 2-3 ENROUTE FLIGHT ADVISORY SERVICE, 9-39 ENTRY LEG, 7-35

F

FATIGUE, 1-14 chronic, 1-14 acute. 1-14 skill. 1-14 FEDERAL AVIATION REGULATIONS, 1-2 FINAL APPROACH, 7-35 FLAPS, 2-2 plain, 2-2 slotted, 2-2 fowler. 2-2 negative, 2-2 FLAPS EXTENDED SPEED, 4-3 FLIGHT COMPUTER, 4-9 FLIGHT CONTROLS, 2-2 FLIGHT MANUALS, 5-5 FLUTTER, 3-10 FREEZING RAIN, 9-31 FRONTAL WEATHER, 9-28 FUSELAGE, 2-1

G

G-FORCES, 4-17 G-METER, 4-17 GEOGRAPHIC COORDINATES, 4-10 latitude, 4-10 longitude, 4-10 GLIDER INDUCED OSCILLATIONS, 8-5 GLIDING TURNS, 3-11, 3-12 GRAVEYARD SPIRAL, 1-13 GRAVITY, 3-8 GROUND CREW PROCEDURES, 6-1 GROUND EFFECT, 3-14 GROUND HANDLING, 6-2, GROUND LAUNCH PROCEDURES, 7-11 auto tow, 7-12 auto pulley tow, 7-14 winch launch, 7-12 GUST-INDUCED OSCILLATIONS, 8-4 GYROSCOPIC, 4-15 instruments, 4-15, 4-16 principles, 4-15

Η

HAIL, 9-13 HAZARDOUS ATTITUDES, 1-6 HEATSTROKE, 1-15 HEADING INDICATOR, 4-16 HIGH DENSITY ALTITUDE 5-2 HIGH DRAG DEVICES, 2-2 HIGH LIFT DEVICES, 2-2 HIGH TOW, 7-7 HOUSE THERMALS, 10-2 HUMAN FACTORS, 1-2 HYPERVENTILATION, 1-11 HYPOXIA, 1-10

IAS (INDICATED AIRSPEED), 4-2 IMPACT PRESSURE, 4-1 INCLINOMETER, 4-14 INDICATED AIRSPEED (IAS), 4-2 INDICATED ALTITUDE, 4-7 INERTIA, 3-11 INVERSION, 9-3 ISOHUMES, 9-32 ISOPLETH, 9-32 ISOTHERM, 9-32

L

LANDING GEAR, 2-4 LANDINGS, 7-21 crosswind, 7-3 downwind, 7-38 off-field, 8-9 LANDMARKS, 11-7

LAPSE RATE, 9-3 LATERAL AXIS, 3-8 LATITUDE, 4-10 LAUNCH EQUIPMENT, 7-12 LAUNCH EQUIPMENT INSPECTION, 6-2 LAUNCH PROCEDURES, AEROTOW, 7-7 LAUNCH SIGNALS, 7-1 aerotow, 7-1 ground, 7-12 L/D SPEED, 5-5, 7-34 LENTICULAR CLOUDS, 9-22 LIFT, 3-2 LIFT SOURCES, 10-18 convergence, 10-18 slope lift, 10-10 thermal lift, 10-1 wave lift, 10-12 LIFT-TO-DRAG (L/D) RATIO, 5-5, 5-6 LIMIT LOAD, 4-3 LOAD FACTOR, 3-11 flight envelope, 5-10 LONGITUDE, 4-10 LONGITUDINAL AXIS, 3-8 LOW DENSITY ALTITUDE, 5-2 LOW LEVEL SIGNIFICANT WEATHER **PROGNOSTIC CHART, 9-28** LOW TOW, 7-7

Μ

MAGNETIC COMPASS, 4-11 deviation, 4-12 variation, 4-12 errors, 4-12, 4-13 lag, 4-13, 4-14 MAGNETIC NORTH POLE, 4-11 MAGNETIC DEVIATION, 4-12 **MAGNETIC VARIATION, 4-12** MALFUNCTIONS, 8-10, 8-11, 8-12, 8-13, 8-14, 8-15, 8-16, 8-17 MANEUVERS, 7-22 MANEUVERING SPEED, 4-3 MEDICAL FACTORS, 1-10 MESOSCALE CONVECTIVE SYSTEMS (MCS), 9-15 MICROBURSTS, 9-14 MIDDLE EAR PROBLEMS, 1-11 **MILITARY OPERATIONS AREA, 9-26 MILITARY TRAINING ROUTES, 9-26** MINIMUM CONTROL AIRSPEED, 7-26 MINIMUM SINK SPEED, 5-6, 7-33 **MIXING RATIO, 9-9** MOISTURE, 5-2 **MOMENT**, 5-11 **MOTION SICKNESS, 1-13**

MOUNTAIN SOARING, 10-12 MOUNTAIN WAVES, 10-1, 10-12 MULTI-CELL THUNDERSTORM, 9-14

N

NAVIGATION, 11-4 pilotage, 11-4 checkpoints, 11-7 dead reckoning, 11-4 radio navigation, 11-8 plotter, 11-4 NAVIGATION PLOTTER, 11-4 NETTO, 4-9, NORTH POLE, 4-11 NOTAMS, 9-26

0

OBSCURED SKY, 9-28, 9-29 OCCLUDED FRONTS, 9-27 OFF-FIELD LANDINGS, 8-7 OXYGEN, 8-15 systems, 8-15 OXYGEN DURATION, 6-4

Ρ

PARACHUTES, 7-32, 8-18 **PERFORMANCE INFORMATION, 5-6** PERFORMANCE SPEEDS, 5-6, 5-7, 5-8 L/D ratio, 5-5, 5-6, 5-7 minimum sink, 5-5, 5-6, 5-7, 5-8 curves, 5-5, 5-6, 5-7 PERFORMANCE MANEUVERS, 7-22 PERSONAL EQUIPMENT, 11-2 preflight inspection, 11-2 PHYSIOLOGICAL TRAINING, 1-11 PILOT REPORTS, 9-34 PILOTAGE, 11-4 PILOT-INDUCED OSCILLATIONS, 8-1 **PIREP**, 9-34 PITCH. 3-1 PITOT-STATIC SYSTEM, 4-1 PLACARD SPEEDS, 5-5, 5-6 PLOTTER, 11-3 POLARS, 5-6 PORPOISING, 8-1 POWER FAILURE, 8-7 POWERPLANT, 2-4 POSITIVE CONTROL CHECK, 6-4 PRECESSION, 4-15 PRECIPITATION, 9-29, 9-31 drizzle, 9-31

freezing rain, 9-31 hail, 9-31 ice pellets, 9-31 rain, 9-31 snow, 9-31 thunderstorms, 9-31 PREFLIGHT AND GROUND OPERATIONS, 6-4 inspection, 6-4 PRELAUNCH CHECKS, 6-4 PRESSURE, 9-2 PRESSURE ALTITUDE, 5-1 PRESSURE LAPSE RATE, 9-3 PSYCHOLOGICAL ASPECTS, 1-14

R

RADAR SUMMARY CHART, 9-28 **RADAR WEATHER REPORTS, 9-34** RADIANT ENERGY, 9-1 RADIO EQUIPMENT, 4-9 RADIO NAVIGATION, 11-8 RADIUS OF TURN, 3-12 RAIN, 9-29, 9-31 RATE-OF-CLIMB. 5-5 RATE OF TURN, 3-12 **REGULATIONS**, 1-2 **RELATIVE WIND, 3-1 RELEASE FAILURE, 7-9 RIDGE AND SLOPE SOARING, 10-9** RIDGE LIFT, 10-10 **RIGIDITY IN SPACE, 4-15 RISK MANAGEMENT**, 1-4 **ROLL**, 2-2 ROLL-IN, 7-24 **ROLL-OUT**, 7-24 **ROTOR**, 9-22 RUDDER, 2-3

S

SAFETY LINKS, 6-3 SAILPLANE, 1-1 SATURATED ADIABATIC LAPSE RATE (SALR), 9-7 SCUBA DIVING, 1-16 SECTIONAL CHARTS, 11-1 SELF-LAUNCH GLIDERS, 1-1, 7-18, 7-19, 7-20, 7-21, 7-22 SELF-LAUNCH TAKEOFF, 7-18 SIGMET, 11-2 SITUATIONAL AWARENESS, 1-9 SKIDS, 7-24 SKILL FATIGUE, 1-14 SLACK LINE, 7-10 SLIPS, 3-12, 7-36 forward, 3-13, 7-37 side, 3-13, 7-37 turning, 7-23 7-25 SLOPE SOARING, 9-18 SLOW FLIGHT, 7-26 SNOW, 9-29, 9-31 SOARING TECHNIQUES, 10-1 SPATIAL DISORIENTATION, 1-12 SPEED-TO-FLY, 5-6 SPEED RING, 4-8 SPIN, 3-14, 7-31 SPIRAL DIVES, 7-25 SPOILERS, 2-2 SQUALL LINE, 9-15 STABILATOR, 2-3 STABILITY, 3-8 atmospheric, 9-6 directional, 3-10 dynamic, 3-9 lateral, 3-10 longitudinal, 3-9 negative, 3-8 neutral, 3-8 positive, 3-8 static, 3-8 STALL, 3-14, 7-26, 7-27 STALL SPEED, 3-11, 3-14 STANDARD ATMOSPHERE, 5-1 STATIC PRESSURE, 4-1 STATIC STABILITY, 3-8 STEEP TURNS, 7-25 STRAIGHT GLIDES, 7-22 **STRESS**, 1-13 STRESS MANAGEMENT, 1-7 SUPERCELL, 9-14 SURFACE ANALYSIS CHART, 9-27

Т

T-TAIL, 2-4 TAKEOFF, 7-2, 7-11, 7-18 TAS (TRUE AIRSPEED), 4-2 TEMPERATURE, 5-2, 9-2 **TEMPERATURE INVERSION, 9-3 TEMPERATURE LAPSE RATE, 9-3 TERMINAL AERODROME FORECAST, 9-34** THERMAL, 9-4, 10-4, 10-5 THERMAL ACTIVITY, 10-1, 10-2, 10-3 THERMAL INDEX, 9-9 THERMAL PRODUCTION, 10-1, 10-2, 10-3 THERMAL SOARING, 9-4, 10-4, 10-5, 10-6, 10-7 THERMAL WAVES, 9-12 **THERMODYNAMIC DIAGRAM, 9-8** THRUST, 3-8 THUNDERSTORM, 9-13

TIEDOWN, 6-2 **TOTAL ENERGY COMPENSATORS, 4-8** TOWING, 7-2 aerotow, 7-2 TOWHOOK, 2-4, 6-3, 7-11, 8-14 TOW POSITIONS, 7-7 TOW RELEASE, 7-9, 7-11 TOWRINGS, 6-3 TOWROPE, 6-2 TOW SPEEDS, 7-12 TRAFFIC PATTERNS, 7-34, 7-35 TRAILERING, 6-1 TRANSCRIBED WEATHER BROADCAST, 9-39 **TRIM DEVICES**, 2-3 TRUE AIRSPEED (TAS), 4-2 **TRUE ALTITUDE, 5-1 TURBULENCE**, 3-14 **TURN COORDINATION, 3-12 TURN COORDINATOR, 4-16 TURNING FLIGHT, 3-11, 7-22** drag in turns, 7-23 radius of turn, 7-23, 7-24 rate of turn, 7-23, 7-24 stall speed in turns, 3-11 TURNS ON TOW, 7-7 TWEB, 9-39

U

UPDRAFTS, 9-13

V

V-TAIL, 2-4 VARIOMETER, 4-7 electric, 4-8 total energy, 4-8 VERTICAL AXIS, 3-8 VG DIAGRAM, 5-10

W

WAKE, 7-7 WASHOUT, 3-7, WATER VAPOR, 9-1 WAVE FORMATION, 9-20, 10-13 WAVELENGTH, 9-20, 10-13 WAVE SOARING, 9-20, 10-12 WAVE WINDOWS, 10-12 WEAK LINK, 6-3 WEATHER, 9-25 WEATHER BRIEFINGS, 9-25 WEATHER CHARTS, 9-27 WEATHER DEPICTION CHART, 9-27 WEATHER HAZARDS, WEATHER REPORTS AND FORECASTS, 9-27 WEIGHT, 3-8, 5-4 WEIGHT AND BALANCE, 5-8, 5-10, 5-11, 5-12, 5-13 graph, 5-12, 5-13, WHEEL BRAKES, 2-4 WINCH LAUNCH, 7-12 WINCH TOW, 7-12 WIND, 5-3 WIND TRIANGLE, 11-5
WINDS AND TEMPERATURES ALOFT, 9-26, 9-30 forecast, 9-30, 9-38
WING PLANFORM, 3-6
WINGWALKERS, 6-2
WORKLOAD MANAGEMENT, 1-8
WORLD AERONAUTICAL CHARTS, 11-3



YAW, 3-8, 3-10 adverse yaw, 3-12, 7-23 YAW STRING, 4-14