

<p><b>INITIAL</b></p> <p>Weather &amp; Den. Alt. Weight &amp; Balance Performance Req. Flight Plan - File Papers - A.R.O.W. Fuel - Both Control Lock Master - On Flaps - Extend Pitot Heat - Test Lights - Int. / Ext. Fuel Gauges - True Master - Off</p>	<p><b>START</b></p> <p>Seat Track/Back-Lock Avionics - Off Autopilot - Off Carb Heat - Off Beacon - On Mixture - Full Rich Throttle - Slight Prime Brakes Prop - Clear Master - On Mags - Start Oil Pressure Lights - As Req. Mixture - As Req.</p>	<p><b>RUN-UP</b></p> <p>Brakes - Set Fuel - Both Trim - Takeoff Flight Controls Instruments Mixture - Best Power Primer - In &amp; Lock</p> <p>1700 RPM Mags (R&amp;L) - Test Carb Heat - Test Vacuum Amps / Volts Oil Pressure Oil Temperature Idle - Check Closed Throttle Friction</p>	<p><b>TAKEOFF</b></p> <p>Full Throttle 2280 RPM (Min) Oil Pressure Rotate * <b>55</b> (63) Vy - <b>73</b> (84) Flaps - Up</p>	<p><b>DESCENT</b></p> <p>Mixture - Richen Fuel - Both Carb Heat-As Req. ATIS / AWOS Altimeter - Set Instruments H.I. To Compass</p>	<p><b>AFTER LANDING</b></p> <p>Flaps - Up Carb Heat - Off Strobes - Off Landing Light - Off Taxi Light - As Req. Pitot Heat - Off Mixture - As Req. Trim - Takeoff XPDR - STBY</p>
<p><b>EXTERIOR SUMMARY</b> <i>After Geographical Check</i></p> <p>Fuel Quantity Fuel Quality Caps/Drains/Vents Engine / Oil / Belt Prop / Air Intake Exhaust System Stall Indicator - Test Surfaces &amp; Controls Pitot &amp; Static Ports Gear / Tires / Brakes Antennas Ties / Chocks Baggage Door Final Walk Around</p>	<p><b>PRE-TAXI / TAXI</b></p> <p>Seat Belts / Harness Flaps - Up Heat / Vent / Defrost Avionics - On / Set XPDR - STBY ATIS / AWOS Altimeter - Set Radio - Test Taxi Light - As Req. Brakes - Test Attitude Indic. - Test Turn Coord. - Test H.I./Compass - Test</p>	<p><b>PRE-TAKEOFF</b></p> <p>Flaps - 0°-10° Mixture - Best Power Carb Heat-Off Or As Req. H.I. To Compass Doors / Windows XPDR - Alt + Sqwk Landing Light - On Strobes - As Req. Time - Note Brakes - Release</p> <p><i>Abort Plan - Ready!</i></p>	<p><b>CLIMB</b></p> <p><b>70-80</b> (81-92) Power Mixture Instruments Taxi / Land Light - Off Flight Plan - Open</p>	<p><b>PRE-LANDING</b></p> <p>Landing Light - On Autopilot - Off Seat Belt / Harness Mixture - Best Power Carb Heat - On Fuel - Both Flaps - As Req.</p>	<p><b>SECURING</b></p> <p>ELT - Verify Silent Avionics - Off Mixture - Full Lean Mags - Off Master - Off Fuel - Left or Right Lights - Off Hobbs / Tach Time Control Lock Chocks Tie Downs Pitot Cover Baggage Door Cabin Doors</p>
<p><b>INTERIOR</b></p> <p>Passenger Brief Hobbs / Tach Time Circuit Breakers Alternate Static Brakes - Pedal Test</p>			<p><b>CRUISE</b></p> <p>Power Mixture Instruments H.I. To Compass</p>	<p><b>LANDING</b></p> <p>Flaps - 40° Or As Req. Speed * <b>60</b> (69)</p> <p><b>G.U.M.P.F.S.</b></p>	<p><b>GO AROUND</b> Power - Full Carb Heat - Off Positive Rate Climb Flaps - Retract Slowly</p> <p>* Adjust Speed As Needed For Conditions</p>

X Wind • Max Demo'd - <b>15</b> (17)	V <sub>SO</sub> • Stall w/flaps (77-79) - <b>41</b> (47)	Best Glide (2000 lbs) - <b>61</b> (70)	V <sub>NO</sub> • Max Struct. Cruise - <b>127</b> (146)
V <sub>R</sub> • Max Speed - <b>55</b> (63)	V <sub>SO</sub> • Stall w/flaps (1980) - <b>33</b> (38)	Best Glide (Full Gross) - <b>65</b> (75)	V <sub>NE</sub> • Never Exceed - <b>158</b> (182)
V <sub>X</sub> • Best Angle Climb - <b>59</b> (68)	V <sub>S</sub> • Stall w/o flaps (77-79) - <b>47</b> (54)	V <sub>A</sub> • Max Abrupt Ctrl (2000 lbs) - <b>90</b> (104)	V <sub>FE</sub> • 10° Flaps (79-80) - <b>110</b> (127)
V <sub>Y</sub> • Best Rate Climb - <b>73</b> (84)	V <sub>S</sub> • Stall w/o flaps (1980) - <b>44</b> (51)	V <sub>A</sub> • Max Abrupt (Full Gross) - <b>97</b> (112)	V <sub>FE</sub> • Full Flaps - <b>85</b> (98)

	KNOTS (MPH)	FLAPS °	- NOTES -
<b>DEPARTURE</b>			
Rotation *	<b>55</b> (63)	0	172n V-Speeds Vary 1 or 2 Knots Depending On Year. We Use The Most Conservative Figure.
Best Angle Climb	<b>59</b> (68)	0	'77-'79: Short w/Obstacle: 0° Flaps - <b>59</b> (68)
Best Rate Climb	<b>73</b> (84)	0	'77-'79: Short w/o Obstacle: 0° Flaps - <b>55</b> (63)
			1980: Short Field: 10° Flaps - <b>53</b> (61).
			'77-'80 Soft Field: 10° Flaps
<b>CRUISE</b> (TAS-5,000')			
Economy	<b>99</b> (114)	0	2300 RPM - 6.3 GPH - 55%
Normal	<b>107</b> (123)	0	2450 RPM - 7.3 GPH - 65%
Maximum	<b>114</b> (131)	0	2575 RPM - 8.4 GPH - 75%
<b>ARRIVAL</b>			
Approach	<b>70</b> (81)	10-20	1700 RPM (Initially)
Short Final *	<b>60</b> (69)	30-40	Idle - 1200 RPM

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Specs Are Approximate Because Of Environment & Plane Model / Year Variables. Specs Are In: LBS, KIAS, Sea Level, Standard Day, Normal Category. Max Gross Wt., No Wind, "Best Power", Wheel Pants, New Engine. ( ) = MPH.

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## POWER LOSS IMMEDIATELY AFTER TAKEOFF / NO RESTART

MAINTAIN AIRCRAFT CONTROL  
 BEST GLIDE – **65 KIAS** (75 MPH) (Full Gross Weight)  
 FUEL SELECTOR – OFF  
 MIXTURE – FULL LEAN / IDLE CUTOFF  
 FLAPS – DOWN  
 MASTER & MAGS – OFF (Unlatch Doors)

## POWER LOSS IN FLIGHT

BEST GLIDE – **65 KIAS** (75 MPH) (Full Gross Weight)  
 CARB HEAT – ON (Also Supplies Alternate Air)  
 NOTE WIND DIRECTION & VELOCITY  
 PICK LANDING SITE  
 MIXTURE – FULL RICH  
 FUEL SELECTOR – CHECK / SWITCH / BOTH (Note Gauges)  
 FUEL PRIMER – LOCKED (Try Re-Priming)  
 MAGNETOS – CHECK ALL  
 MASTER – ON

## IF NO RESTART & TIME PERMITS

MAINTAIN BEST GLIDE  
 SQUAWK 7700  
 DECLARE EMERGENCY (TWR, APP, Unicom, 121.5)  
 FUEL SELECTOR – OFF  
 MIXTURE – FULL LEAN / IDLE CUTOFF  
 SEATBELTS / HARNESS  
 FLAPS – AS NEEDED (Full Flaps When Field Assured)  
 MASTER & MAGS – OFF  
 UNLATCH DOORS  
 PROTECT BODY

## ELECTRICAL FIRE IN FLIGHT

ALL ELECTRICAL DEVICES + MASTER – OFF (Mags On)  
 CLOSE VENTS, CABIN HEAT, & AIR  
 IF FIRE OUT – MASTER ON ONLY IF CRITICAL (Vents – Open)  
 THEN ONE ESSENTIAL ELECTRICAL DEVICE AT A TIME  
 RESET CIRCUIT BREAKERS ONLY IF CRITICAL

## ENGINE FIRE IN FLIGHT

MIXTURE – FULL LEAN / IDLE CUTOFF  
 FUEL SELECTOR – OFF  
 MASTER SWITCH – OFF  
 CABIN HEAT & AIR – OFF (Except Overhead Vents)  
 INCREASE AIRSPEED TO EXTINGUISH – LAND ASAP

## ENGINE FIRE DURING START

CONTINUE CRANKING ENGINE  
 IF START – RUN A FEW SECONDS - SHUTDOWN - INSPECT  
 IF NO START – MIXTURE IDLE CUTOFF & FUEL SELECTOR OFF  
 THROTTLE FULL OPEN  
 CONTINUE CRANKING ENGINE A FEW SECONDS  
 MASTER & MAGS – OFF  
 EVACUATE / FIRE EXTINGUISHER

## ICING

PITOT HEAT – ON  
 CARB HEAT – ON  
 CABIN HEAT & DEFROST – MAXIMUM  
 STRONGLY CONSIDER 180° TURN  
 ATTAIN HIGHER OR LOWER ALTITUDE  
 INCREASE ENGINE SPEED  
 FLAPS – NOT RECOMMENDED FOR LANDING  
 LAND FASTER AS NEEDED

## OTHER

**AMMETER w/EXCESS RATE OF CHARGE:** Alternator – Off, Pull C.B. / Nonessential Electric – Off / Terminate Flight A.S.A.P.

**LOW VOLTAGE:** Avionics Power Switch – Off / Alt. C.B. - In / Master – Off, then, Master – On / Ck. Volt Lt. Off / Avionics – On  
 If Illuminates Again: Alt. & Electric – Off / Terminate Flight A.S.A.P.

**RADIO OUT:** Check Circuit Breakers & VOLUME  
 Recycle Alternator Switch  
 If IFR & Still Out, Set XPDR To 7600.  
 (Suggested For VFR If In B, C, D Airspace.)

UNICOM: 122.7 – 122.8 – 122.95 – 123.0 – 123.05  
 MULTICOM: 122.9 (CTAF), 122.75, 122.85 (Air To Air)  
 FLIGHT WATCH: 122.0

TOWER SIGNALS	ON GROUND	IN FLIGHT
Steady Green	Cleared For Takeoff	Cleared To Land
Flashing Green	Cleared To Taxi	Return For Landing
Steady Red	Stop	Yield & Continue Circling
Flashing Red	Taxi Clear of Landing Area	Airport Unsafe - Do Not Land
Flashing White	Return To Starting Point	N/A
Alternating Red & Green	Use Extreme Caution	Use Extreme Caution

\* Every Plane Has A Different Empty Weight And Useful Load  
 Cessna 172n (Lycoming O-320-H2AD, 160 HP)

\* Empty Weight:  LBS (Specific Plane Weight)  
 \* Max. Useful Load:  LBS (Including Fuel @ 6 lbs/gal)  
 Max. Baggage Area: 120 LBS (Included In Useful Load)  
 Max. T.O. Weight: 2300 LBS

Fuel Type: 100LL (Blue) / 100 (Green)  
 Usable Fuel: 40 Gallons (50 L.R Tanks)  
 Oil Capacity: 6 Quarts (Minimum 4)  
 Electrical: 24-28 VOLT / 60 AMP  
 Tire Pressure: Nose - 31 PSI / Main - 29 PSI