

**Outside**

Fuel Quantity / Quality  
 Drains 3  
 Engine / Oil 4.5-6 Liter  
 Prop & Spinner  
 Air intakes  
 Exhaust System  
 Canopy  
 Stall Indicator Test  
 Surfaces & Controls  
 Pitot & Static ports  
 Gears / Tires / Brakes  
 Antennas  
 Ties / Chocks  
 Final walk around

**Cockpit**

Weight & Balance  
 Documents  
 Flight Plan Filed  
 Outside check Done  
 Canopy Locked  
 Pedals Locked  
 Seat belts  
 Parking brake Set  
 Alternate air Closed  
 Alt. static valve Closed  
 Electric master Off  
 Avionics master Off  
 Essential bus Off  
 Engine master Off  
 ECU Swap Auto  
 All lights Off  
 Emerg. switch Guarded  
 ELT Armed  
 Emerg. fuel val. Normal  
 Circuit breakers  
 Pitot heating Off  
 Fuel transfer Off  
 Power lever  
 Check moving, Idle

**Start**

Electric master On  
 G1000 Ack  
 G1000 Backup mode  
 MFD Chk. fuel  
 MFD Time noted  
 MFD - Engine - System  
 Fuel temp.  
 Power lever Idle  
 Strobes On  
 Engine master On  
 -wait until „Glow“ is off-  
 Prop Clear  
 Electric master Start  
 Oil pressure Check  
 RPM 890 ± 20  
 Pitot heat Chk. Amps  
 G1000 Normal mode  
 Warm up Idle 2 min  
 Then 1400 RPM

**After start**

Avionics master On  
 FMS/COM/NAV Set  
 Flaps Test / T/O  
 Heat / Vent / Defrost  
 Stby. instruments  
 Altimeter G1000 Set  
 Altimeter KAP140 Set  
 Standby altimeter Set  
 Autopilot Tested  
 Transponder Checked  
 G1000 No warnings  
 Departure briefing

**Taxi**

Taxi light On  
 Brakes Checked  
 Flight controls Free  
 & Correct  
 Instruments T-T-E  
 Emergency briefing

**Pre-Takeoff**

Canopy Locked  
 Brakes  
 Engine Instr. Checked  
 Fuel Temp Checked  
 Electric Trim Checked  
 Circuit breakers  
 Trim T/O  
 Flaps T/O  
 Throttle Full 10 sec.  
 2240 - 2300 RPM  
 90 - 100 % Load  
 Throttle Idle  
 ECU Test Press & hold  
 ECU A / B / Caution blinks  
 ECU BACKUP UNSAFE blinks  
**(No IFR if not blinking)**  
 ECU B Caution blinks  
 Prop RPM cycles  
 ECU A Caution blinks  
 Prop RPM cycles  
 Cautions off  
 ECU BACKUP UNSAFE off  
 ECU Test Release  
 ECU Swap ECU B  
 Check RPM  
 AUTO  
 Fuel quantity Checked

**Lineup**

Landing light On  
 Pitot heat On  
 Transponder On/Code  
 Direct. Gyro RWY Hdg  
 Localizer Centered

**Takeoff**

Full throttle  
 Oil pressure Check  
 Rotate **59**  
 Initial climb **66**  
 - Above safe alt. -  
**73**  
 Flaps Up

**Climb**

**73**  
 Throttle 90 %  
 Trim Adjust  
 Instruments  
 Altimeters X-Check  
 Landing light Off  
 Flight plan Open  
 Pitot heat As req.

**Cruise**

Throttle 65 %  
 Instruments  
 FMS/GPS Review  
 Brief OBS / SUSP  
 Fuel transfer As req.

**Descent**

Throttle As req.  
 Above 5000 ft > 30 %  
 ATIS / AWOS  
 Altimeter G1000 Set  
 Altimeter KAP140 Set  
 Standby altimeter Set  
 G1000 Alt sel. Set  
 Instruments

**Approach**

Seat belts / Harness  
 Approach briefing  
 FMS/COM/NAV Set  
 Fuel quantity Checked  
 Fuel transfer As req.  
 Landing light On  
 Flaps As req.  
 Altimeters X-Check  
 Minimums

**Landing**

Flaps Landing  
 Taxi light On  
 Speed **71**

G.U.M.P.F.S.

GO AROUND

Throttle Full  
 Flaps Takeoff  
 Airspeed **66**

**After landing**

Power lever Idle  
 Flaps Up  
 Pitot Heat Off  
 Strobes Off  
 Landing light Off  
 Trim Takeoff

**Parking**

Parking brake Set  
 Engine idle 2 min  
 ELT Verify silent  
 MFD Time noted  
 Avionics master Off  
 Elec. consumers Off  
 Engine master Off  
 All lights Off  
 Electric master Off  
 Interior light Chk. off  
 Control lock  
 Chocks  
 Tie downs  
 Canopy  
 Flight plan Closed

<b>Vr</b> • Rotation Speed — <b>59</b>	<b>Vs0</b> • Stall w/Ldg, flaps — <b>49</b>	<b>Va</b> • Max abrupt (980 kg) — <b>94</b>	<b>Vfe</b> • Flaps landing — <b>91</b>
<b>Vx</b> • Best Angle Climb — <b>66</b>	<b>Vs</b> • Stall w/o flaps — <b>52</b>	<b>Va</b> • Max abrupt (MTOW) — <b>108</b>	<b>Vfe</b> • Flaps takeoff — <b>108</b>
<b>Vy</b> • Best Rate Climb — <b>66</b>	<b>Best glide</b> (1000 kg)— <b>68</b>	<b>Vno</b> • Max structural cruise — <b>129</b>	<b>XWind</b> • Max demo'd — <b>20</b>
<b>Cruise climb</b> — <b>73</b>	<b>Best glide</b> (MTOW)— <b>73</b>	<b>Vne</b> • Never exceed — <b>178</b>	

**Emergency Briefing**  
 In case of engine failure and no runway available: Best glide speed 66-72 • Land straight ahead ± 30° left/right • Flaps as required • Electric off • Open canopy before impact

Speeds			
	KNOTS	FLAPS	- NOTES -
<b>Departure</b>			
Rotation	<b>59</b>	<b>Takeoff</b>	
Best angle climb	<b>66</b>	<b>Takeoff</b>	
Best rate climb	<b>66</b>	<b>Takeoff</b>	
<b>Cruise</b>			
Economy	<b>118</b>	Up	65 % • 4.5 gph • 17 l/h
Normal	<b>127</b>	Up	75 % • 5.5 gph • 21 l/h
<b>Arrival</b>			
Approach	<b>85</b>	<b>Takeoff</b>	
Short final	<b>71</b>	<b>Landing</b>	

Stall speeds			
BANK	UP	T/O	LDG
0°	52	51	49
30°	57	55	55
45°	66	64	62
60°	79	78	76

Squawk VFR — **7000** (EU), **1200** (USA)  
 Radio problem — **7600**  
 Emergency — **7700**

**POWER LOSS IMMEDIATELY AFTER TAKEOFF**

Airspeed 72 KIAS  
 Flaps Landing or as req.  
 If time allows:  
 Power lever check MAX  
 ECU SWAP ECU B

**ENGINE PROBLEMS**

**(a) Engine Running Roughly**

Airspeed 73 KIAS  
 Power lever MAX  
 Engine caution check  
 If in icing conditions Alternate Air ON  
 Fuel qty. MAIN tank check  
 Fuel transfer pump ON  
 Emergency fuel valve check NORMAL  
 ECU SWAP ECU B  
 If selecting ECU B does not solve the problem, switch back to AUTOMATIC.

**(b) Loss of Power**

Airspeed 73 KIAS  
 Power lever MAX  
 If in icing conditions Alternate Air ON  
 Fuel qty. MAIN tank check  
 Fuel transfer pump ON  
 Emergency fuel valve check NORMAL  
 ECU SWAP ECU B  
 ECU reset:  
 ENGINE MASTER OFF - ON

**RESTARTING THE ENGINE**

**(a) Windmilling propeller**

Airspeed best glide 73 KIAS  
 Power lever IDLE  
 Emergency fuel valve check NORMAL  
 Alternate air OPEN  
 Fuel transfer pump ON  
 AVIONIC MASTER OFF  
 ELECTRIC MASTER ON  
 Airspeed 73 to 110 KIAS  
 Altitude below 8000 ft pres. alt.  
 ECU reset:  
 ENGINE MASTER OFF - ON  
 AVIONIC MASTER ON, if required

**(b) Stationary propeller**

Airspeed best glide angle 73 KIAS  
 ENGINE MASTER OFF  
 Power lever IDLE  
 Emergency fuel valve check NORMAL  
 Alternate air OPEN  
 Fuel transfer pump ON  
 AVIONIC MASTER OFF  
 ELECTRIC MASTER ON  
 ENGINE MASTER ON  
 ELECTRIC MASTER START  
 (release when engine is running)

**SMOKE / FIRE ON GROUND**

Emergency fuel valve OFF  
 Fuel transfer pump OFF  
 ENGINE MASTER OFF  
 ELECTRIC MASTER OFF  
 Canopy open & evacuate immediately

**SMOKE AND FIRE IN FLIGHT WARNING**

**(a) Engine Fire in Flight**

Cabin heat OFF  
 Select emergency landing area  
 Emergency fuel valve OFF  
 Power lever MAX  
 Emergency windows open if required  
 Emergency landing with engine off  
 CAUTION In case of extreme smoke, front canopy may be unlatched during flight. Flight characteristics will not be affected significantly.  
 When airplane has stopped:  
 Canopy open & evacuate immediately

**(b) Electrical Fire in Flight**

EMERGENCY switch ON  
 AVIONIC MASTER OFF  
 ELECTRIC MASTER OFF  
 Cabin heat OFF  
 Emergency windows open if required  
 Land at appropriate airfield immediately  
 When airplane has stopped:  
 Canopy open & evacuate immediately

**EMERGENCY LANDING WITH ENGINE OFF**

Select suitable landing area  
 If no level landing area is available, a landing on an upward slope should be sought.  
 Consider wind  
 Approach: If possible, fly along a short-cut rectangular circuit. On the downwind leg of the circuit the landing area should be inspected for obstacles from a suitable height. The degree of offset at each part of the circuit will allow the wind speed and direction to be assessed.  
 Airspeed 73 KIAS  
 Radio advise ATC  
 Emergency fuel valve OFF  
 ENGINE MASTER check OFF  
 When it is certain that the landing field will be reached:  
 Flaps LDG  
 Safety harnesses tighten  
 ELECTRIC MASTER OFF  
 Touchdown with the lowest possible airspeed

**RECOVERY FROM AN UNINTENTIONAL SPIN**

Steps 1 to 4 must be carried out immediately and simultaneously  
 1. Power lever IDLE  
 2. Rudder full against spin direction  
 3. Elevator (control stick) fully forward  
 4. Ailerons neutral  
 Flaps UP  
 When rotation has stopped:  
 Rudder neutral  
 Elevator (control stick) pull carefully  
 Return to normal flight attitude

**ICING**

Leave the icing area  
 Pitot heating ON  
 Cabin heat ON  
 Air distributor lever DEFROST  
 Power lever increase power  
 Alternate air OPEN  
 Emergency windows open if required  
 ATC advise if emergency is expected  
 When the Pitot heating fails:  
 Alternate static valve OPEN  
 Emergency windows close

**COMPLETE FAILURE OF THE ELECTRICAL SYSTEM**

Circuit breakers check if all OK  
 ESSENTIAL BUS ON  
 If there is still no electrical power:  
 EMERGENCY switch ON  
 Flood light, if necessary ON  
 Power set based on lever positions and engine noise  
 Prepare landing with flaps in the given position  
 Land on the nearest appropriate airfield

Tower signals	On ground	On 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
Alt'n red / green	Use extreme caution	Use extreme caution

<b>Empty weight</b>	844 kg
<b>Max useful load (full fuel)</b>	210 kg
<b>Max baggage area</b>	45 kg
<b>Full fuel (0.84 kg/l)</b>	96 kg
<b>Max TO weight</b>	1150 kg
<b>Fuel type</b>	Jet A-1
<b>Usable fuel</b>	30 gallons / 113.6 liters
<b>Oil capacity</b>	8 quarts (min. 4 VFR - 6 IFR)
<b>Electrical</b>	12-14 V / 90 A
<b>Tire pressure</b>	Front - 29 psi / Main - 36 psi