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 / Cautiion 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

Vr • Rotation Speed — **59**
Vx • Best Angle Climb — **66**
Vy • Best Rate Climb — **66**
Cruise climb — **73**

Vs0 • Stall w/Ldg, flaps — **49**
Vs • Stall w/o flaps — **52**
Best glide (1000 kg)— **68**
Best glide (MTOW)— **73**

Va • Max abrupt (980 kg) — **94**
Va • Max abrupt (MTOW) — **108**
Vno • Max structural cruise — **129**
Vne • Never exceed — **178**

Vfe • Flaps landing — **91**
Vfe • Flaps takeoff — **108**
XWind • Max demo'd — **20**

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

Stall speeds

	FLAPS		
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**

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 / Cautiion 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

Vr • Rotation Speed — **59**
Vx • Best Angle Climb — **66**
Vy • Best Rate Climb — **66**
Cruise climb — **73**

Vs0 • Stall w/Ldg, flaps — **49**
Vs • Stall w/o flaps — **52**
Best glide (1000 kg)— **68**
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Vfe • Flaps landing — **91**
Vfe • Flaps takeoff — **108**
XWind • Max demo'd — **20**

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

Stall speeds

	FLAPS		
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

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

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
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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

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