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IRIS FLIGHT SIMULATION SOFTWARE



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PILOT'S CHECKLIST

PC-9/A (T)

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PRE-FLIGHT

BEFORE EXTERIOR INSPECTION CHECKS

1. Form EE500	Checked and Signed
2. Seat Pin	IN
3. BAT MASTER	OFF
4. STARTER	Guarded OFF (front and rear cockpits).
5. IGNITION	Guarded OFF (front and rear cockpits).
6. LG Handle	DOWN (front and rear cockpits).
7. PCL	OFF
8. Command ejection	OFF (rear cockpit)
9. Cockpit	Clear of loose articles (front and rear).
10. Flight Controls	Unlocked (If conditions permit).
11. BAT MASTER	ON
12. CVR	Test
13. FDR Fault annunciator	Test
14. BAT MASTER	OFF

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EXTERIOR INSPECTION CHECKS

Systematically check the aircraft for signs of damage and leaks, and for the security of panels and doors.

Look generally for:

- a. Damaged surfaces.
- b. Fluid leaks.
- c. Security of access doors, panels, covers, filler caps and antennae.
- d. Removal of ground safety guards, covers and earthing leads.

Perform the Following Checks:

1. Left Wing:

- | | |
|------------------------------------|------------------------------------|
| a. Left aileron | Free movement. |
| b. Left aileron trim tab lock wire | Secure. |
| c. Left aileron shroud | No deformation or waviness. |
| d. Navigation lights | Serviceable. |
| e. Pitot tube | Cover removed, holes clear. |
| f. AOA probe | Cover removed, vane free. |
| g. Fuel contents filler cap | Secure. |
| h. Maintenance fuel shut-off panel | Secure. |

2. Left Main Landing Gear:

- | | |
|------------------------|---|
| a. LG oleo extension | Min 85 mm. |
| b. Tyre | No excessive wear, correct inflation, no damage. |
| c. LG wheel brake hose | No damage or leaks. |
| d. Heavy LG indicator | No damage. |

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3. Nose:

- | | | |
|----|----------------------------|---|
| a. | Oil cooler intake | Blank Removed, clear. |
| b. | Exhaust Stubs | Covers removed. |
| c. | Engine air intake | Blank Removed, clear. |
| d. | Inertial separator | Flap Up, door closed. |
| e. | Propeller | Restraint removed,
Serviceable |
| f. | ECS air intake and exhaust | Blanks removed. |

4. Nose Landing Gear:

- | | | |
|----|-------------------|--|
| a. | Nose leg | Restraint collar removed. |
| b. | Tyre | No excessive wear, correct
inflation, no damage |
| c. | LG oleo extension | Min 90 mm |

5. Right Main Landing Gear:

- | | | |
|----|---------------------|---|
| a. | LG oleo extension | Min 85 mm. |
| b. | Tyre | No excessive wear, correct
inflation, no damage. |
| c. | LG wheel brake hose | No damage or leaks. |
| d. | Heavy LG indicator | No damage. |

6. Right Wing:

- | | | |
|----|----------------------------------|------------------------------------|
| a. | OAT Bulb | No damage. |
| b. | Fuel contents filler cap | Secure. |
| c. | Navigation lights | Serviceable. |
| d. | Right aileron shroud | No deformation or waviness. |
| e. | Right aileron | Free movement. |
| f. | Right aileron trim tab lock wire | Secure. |

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7. Right Fuselage:

a. Static Port **Clear.**

8. Tail Assembly:

a. Elevator and Rudder **Free movement, elevator control rod connection secure.**

9. Left Fuselage:

a. Baggage Compartment **Contents and door secure. If aircraft display smoke modified, check: Correctly fitted and locked.**

(1) Oil tank cap

(2) Retaining pins holding tanks in guide rails. **Connected.**

(3) Oil pipe quick-release connector **Connected.**

(4) Electrical plug **Connected.**

(5) Bonding lead **Connected.**

(6) Oil quantity **Agrees with EE500.**

(7) Compartment surfaces **No excess oil.**

b. Static Port **Clear.**

c. Oxygen overpressure indicator **Green.**

REAR COCKPIT SOLO CHECKS

1. Seat Pin **IN.**

2. 4 Pin Ground Servicing Safety Streamer **FITTED.**

3. Harness **Secure, Locked, Apron Fitted.**

4. Command Ejection **OFF.**

5. Oxygen regulator **OFF, 100%.**

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6. Oxygen Hose	Secure
7. Intercom lead	Secure.
8. Anti-G valve	Outlet CLOSED.
9. Electronics/Avionics	All ON.
10. All other switches	OFF / guarded.
11. Air distribution lever	Fully up.
12. Air louvers	Closed.
13. Map cases	Empty and closed.
14. Wander light	Secure.
15. Canopy breaker knife	Secure.
16. SEC ATTD, ADI, HSI C/Bs	Pulled, all others in.
17. Cockpit	Clear of loose articles.

BEFORE ENTERING COCKPIT CHECKS

Front Cockpit:

1. Seat Pin	IN.
2. Seat panel firing breech	Safety pin removed.
3. Leg Restraint Lines	Secure.
4. 4 pin Servicing Streamer	Removed and stowed.
5. Oxygen	EO handle not pulled, contents in white sector.
6. PSP Lug	Secure in sticker clip.
7. Drogue Gun Trip Rod	Connected, safety pin removed.
8. Top latch	Flush.
9. Drogue withdrawal line	Piston secure, drogue line connected.

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- | | |
|----------------------------------|---|
| 10. Ejection gun gas initiator | Quick release pin and spring loaded latch correctly engaged. |
| 11. BTRU Trip rod | Connected, safety pin removed. |
| 12. Command firing connectors | Secure. |
| 13. Main oxygen quick disconnect | Connected. |
| 14. MOR handle | Safety pin removed. |
| 15. Harness | All attachments secure. |
| 16. Single handed release strap | Correctly routed and connected. |

Rear Cockpit:

- | | |
|---------------------|-------------|
| 1. Command Ejection | OFF. |
|---------------------|-------------|

BEFORE START CHECKS

- | | |
|------------------|---|
| 1. EPU | As Required, Voltage within limits. |
| 2. BAT MASTER | As Required, ESDP voltage checked. |
| 3. Seat Height | SET. |
| 4. Rudder Pedals | SET. |
| 5. Strapping in | Complete. |
| 6. Oxygen | Contents sufficient, system checked, ON, NORMAL, NORMAL. |

If two pilot crew:

- | | |
|--------------------------------|-----------------|
| a. Check Rear | Checked. |
| 7. Audio Control Panel | |
| a. Rotary selector | SET |
| b. Comms System RCVR Selectors | SET |

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c. Volume	SET
8. FIREWALL SHUT-OFF HANDLE	Down, Safety Wired
9. BATTERY BUSBAR C/Bs	IN.
10. LH Map Case	Secure.
11. LIGHTS and SYSTEM TEST:	
a. CWS Annunciator Panel	Checked.
b. LG Position Indicators	Checked.
c. Master WARNING PRESS TO RESET	Checked.
d. Master CAUTION PRESS TO RESET	Checked.
e. ESDP	Checked.
12. CPI Light	Test
13. AOA test	HIGH, LOW, and ON SPEED.
14. PCL	IDLE, Check boost pumps run.
	Check movement, adjust friction, set off.
	Reset BOOST PUMPS.
If two pilot crew:	
a. Check Rear	Checked.
15. FLAPS	UP
16. ELS ISOLATE/EMERG FUEL	Guarded OFF.
If two pilot crew:	
a. Check Rear	Checked.
17. ELT	Guarded ARM.
18. INRT SEP	OFF.
19. PROBES	OFF.

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20. Emergency Trim SW

Guarded NORM.

If two pilot crew:

a. Check Rear

Checked.

21. LDG LIGHT

OFF

22. INVERTER

**GEN, check INV caption
extinguished.**

23. AVIONICS

a. BAT

OFF

b. GEN

OFF

24. Trim Gauges

**Conditions, Trims functioning, set
for Take-off.**

25. Clock

SET.

26. LG handle

DOWN, 3 greens

27. EMER LDG GR Handle

IN, safety wired.

28. EMER ALL JTSN

Guarded, Safety wired.

If two pilot crew:

a. Check Rear

Checked.

27. Standby AI

Uncaged, Erect, pitch bar SET.

If two pilot crew:

a. Check Rear

Checked.

30. Accelerometer

Note readings, reset.

31. Master CAUTION

Press to reset.

32. Flight instruments

Condition.

33. FUEL

**Contents agrees with analogue
gauge, Balanced.
RESET (if required).**

34. FUEL USED

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35. N2 HYD pressure	Checked.
36. PARKING BRAKE	SET (brakes positive feel).
37. Chocks	Removed.
38. GEN MASTER	OFF
39. BOOST PUMPS	ARM
40. EXT FUEL TRANSFER PUMPS	OFF
41. INSTR LIGHTS	SET (As required).
42. NAV light	OFF
43. STROBE/BCN lights	OFF
44. ECS	OFF.
45. Smoke panel lamp	TEST (if fitted).
46. Smoke Generator Master Switch	OFF (if fitted).
47. GENERATOR BUSBAR C/Bs in	CHECKED
48. Wander light	Secure
49. Map case (right)	Secure
50. Canopy breaker knife	Secure
51. Standby Compass	Condition
53. RAM AIR	Closed
54. Controls	Full (Free and correct movement).

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STARTING

ENGINE STARTING CHECKS

1. Canopy	Closed, Locked or Latched.
2. Propeller Area	Clear.
3. NAV light	ON.
4. STROBE/BCN lights	BCN.
5. BOOST PUMPS	ON.
6. Volts	Checked.
7. STARTER	ON.
8. ENG OIL Pressure	Confirmed Rising.
9. IGNITION	ON.

At stabilized NG (minimum 12%):

10. PCL	IDLE.
11. ITT	Monitor, check light up within 10 seconds of PCL to IDLE.

If ITT exceeds the above limits or rapidly approaches the absolute limit, proceed as follows:

12. PCL	OFF.
13. IGNITION	OFF.
14. STARTER	ON, until ITT 800°C, or for a max of 10 seconds, then OFF.
15. BOOST PUMPS	ARM.
16. Place the aircraft U/S	

When NG Stabilised at or above 56%:

17. IGNITION	OFF.
18. STARTER	OFF.

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- | | |
|--------------------------------------|---------------------|
| 19. BOOST PUMPS | ARM. |
| 20. ENG OIL Pressure and Temperature | Green arcs. |
| 21. Propeller | Unfeathered. |

If engine does not light up within 10 seconds of moving PCL to idle, or if NG stabilizes below 45%:

- | | |
|---------------------------------|------------|
| 22. PCL | OFF |
| 23. IGNITION | OFF |
| 24. STARTER | OFF |
| 25. BOOST PUMPS | ARM |
| 26. Carry out an Engine Dry Run | |

ENGINE DRY RUN CHECKS

Allow 30 seconds for fuel draining, then:

- | | |
|----------------|------------------------------------|
| 1. PCL | OFF |
| 2. IGNITION | OFF |
| 3. BOOST PUMPS | ON |
| 4. STARTER | ON for 15 seconds then OFF. |
| 5. BOOST PUMPS | ARM |

AFTER START CHECKS

- | | |
|--------------------|--|
| 1. EPU | Disconnected |
| 2. BAT MASTER | ON |
| 3. CWS | GEN caption only |
| 4. GEN MASTER | ON |
| 5. CWS GEN Caption | OUT, check volts and positive charge. |

If first flight of the day:

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a. GEN TEST:	
(1) Overvolt light	ON, Reset
(2) Overload light	ON, Reset
6. INVERTER	BAT
7. AVIONICS:	
a. BAT	ON
b. GEN	ON
8. ECS	LOW
9. NG	Minimum 56%
10. N2 HYD	Green sector.
11. FLAPS:	
a. Select Take-Off	Indicating
b. Select Land	Indicating
c. Select Up	Indicating
12. AIR BRAKE:	
a. Select OUT	Indicating
b. Select IN	Indicating
13. Radio and nav aids:	
a. COMM1	SET
b. COMM2	SET
c. NAV/TAC	SET
d. ADF	SET
e. Transponder	STBY
f. Transponder CODE	SET

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g. HSI Mode	SET
14. Altimeter:	
a. QNH	SET
b. INDICATING	ft., Within Limits. (+/- 60 ft. of actual elevation).
If two pilot crew:	
c. Check Rear	Indicating ft., Within Limits (Maximum of 50 ft. between Front and Rear Altimeters).
15. AHRS:	
a. Warning Flags	Away
b. ADI and STBY AI	Agree
c. RMI	State reading
d. HSI	State reading
e. Standby	State reading
If two pilot crew:	
f. Check Rear	Checked.
16. CWS no Red or Amber captions	Checked
17. Seat Pin	Removed and Stowed.
If two pilot crew:	
a. Check Rear	Seat Pin Removed and Stowed.

TAXI CHECKS

- | | |
|-----------------------------------|-------------------------------|
| 1. PARKING BRAKE | OFF |
| 2. Brakes | Functionality checked. |
| 3. Nosewheel steering: | |
| a. Select | ON |
| b. Steering function | Checked |
| 4. Flight Instruments Functioning | Checked |

PRE-TAKE-OFF VITAL ACTIONS

- | | |
|-----------|--------------------------------------|
| 1. Canopy | Closed and locked, light out. |
|-----------|--------------------------------------|

If two pilot crew:

- | | |
|--|--|
| a. Check Rear | Checked |
| 2. Air brake | IN |
| 3. Take-Off FLAPS | SET, Indicating. |
| 4. PROBES | ON, Indicating. |
| 5. Trims | SET. |
| 6. Flight Instruments | Functional check carried out.
No Flags. |
| 7. Engine Instruments | Indications in green arc. |
| 8. Volt/Amps | Normal, positive charge. |
| 9. N2 HYD press | Indications in green arc. |
| 10. Fuel: | |
| a. Digital Quantity agrees with
analogue gauge. | Checked. |
| b. Balance | Checked. |

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c. Flow	Checked.
11. CWS, No red or amber captions	Checked
12. Oxygen:	
a. Contents	Checked
b. Supply	ON
c. Normal/100%	NORMAL
d. Flow	NORMAL
e. Flow, Connections and Mask	CHECKED
If two pilot crew:	
a. Check Rear	Checked
13. Controls	Full, and free movement.
14. Harness and Helmet:	
a. T-handle	Locked
b. Leg restraints, PSP and G-suit hose	Connected.
c. Chin strap	Secure.
d. Visor(s)	Down.
If two pilot crew:	
a. Check Rear	Checked
15. Seat Ejection System:	
a. Seat Pin	Removed and Stowed.
If two pilot crew:	
b. Command ejection	SET (as required).
c. Check Rear	Seat Pin Removed and Stowed.
16. Emergency Briefing	Conducted.

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LINE UP CHECKS

- | | |
|----------------------|----------------------------------|
| 1. LDG LIGHT | ON. |
| 2. Clock | Start. |
| 3. Transponder | As required. |
| 4. STROBE/BCN Lights | As required. |
| 5. AHRS | Fast erect (if required.) |

TAKE-OFF

NORMAL TAKE-OFF

- | | |
|-------------------------|-----------------------------|
| 1. Brakes | Release |
| 2. PCL | MAX. |
| 3. ESDP | TQ, ITT, Ng Limiting |
| 4. Airspeed, at 80 KIAS | Rotate. |

OBSTACLE CLEARANCE TAKE-OFF

- | | |
|--|--|
| 1. PCL | Maximum available for conditions. |
| 2. ESDP | TQ, ITT, Ng Limiting. |
| 3. Brakes | Release |
| 4. PCL | MAX |
| 5. Airspeed | At 77 KIAS rotate for 2250 kg
(85 KIAS for 2700 kg) |
| 6. Landing Gear and Flap up, climb at 95 KIAS, until clear of obstacles (100 KIAS at 2700 kg). | |

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UNSEALED / UNSWEPT RUNWAY TAKE-OFF

1. PCL

**Minimum required for
manoeuvring.**

2. Brakes

**Apply as required to maintain
directional control.**

When lined up and following aircraft are clear:

3. PCL – Advance smoothly for rolling take-off aiming for MAX power at greater than 30 KIAS (commensurate with TODA).

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AFTER TAKE-OFF CHECKS

When the aircraft is safely airborne, proceed as follows;

- | | |
|-----------------------|----------------------|
| 1. LG | UP |
| 2. FLAPS | UP |
| 3. AIR BRAKE | IN |
| 4. Check by 150 KIAS: | |
| a. LG Light | OUT |
| b. Flap | Indicating UP |
| c. AIR BRAKE | Indicating IN |

At airspeeds above 130 KIAS, the landing gear may not fully retract.
Proceed as follows:

5. Reduce speed to below 130 KIAS.
6. Stabilise 1G flight.
7. Await gear retraction (all green and reds extinguished).
8. Proceed as normal.

IN-FLIGHT

CLIMB/PERIODIC CHECKS

- | | |
|------------------|--|
| 1. Engine | Indications Checked |
| 2. Propeller RPM | Within Limits |
| 3. Electrics | Greater than 25 VDC and no discharge. |
| 4. N2 HYD Press | Checked. |
| 5. FUEL | Contents, agrees with analogue gauge, balanced. |
| 6. CWS | No Red or Amber captions. |

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7. Oxygen

**Contents, ON, NORMAL,
NORMAL, flow and connections.**

If two pilot crew:

a. Check Rear

Checked

PRE-MANOEUVRE CHECKS

1. Height

Sufficient for recovery.

2. Airframe

Clean or as required. Trims SET.

3. Security

Harness secure, no loose articles.

4. ESDP:

a. Engine

Within limits.

b. Fuel Balance

Within limits.

5. Locality

Suitable.

6. Lookout

Clear.

SMOKE DISPLAY CHECKS

Before smoke is required:

1. SMOKE GENERATOR MASTER

ARM.

To select smoke on:

2. Control column trigger

**Press and release
(SMOKE lamp illuminates).**

To select smoke off:

3. Control column trigger

**Press and release
(SMOKE lamp extinguishes).**

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MAXIMUM RATE DESCENT

- | | |
|-----------------------|--|
| 1. PCL | Max power (or idle if above cruise power and airspeed). |
| 2. Attitude | Lower to 22° nose down. |
| Approaching 250 KIAS: | |
| 3. PCL | IDLE. |
| 4. AIR BRAKE | OUT. |
| 5. Airspeed | Maintain 250 KIAS. |

REJOIN CHECKS

- | | |
|------------------------------|--|
| 1. FUEL | Contents, agrees with analogue gauge, balanced. |
| 2. Instruments | Erect, Off flags away, Compass comparison. |
| 3. Radio and navigation aids | Tune and identify. |
| 4. Altimeter | Set QNH as required. |
| 5. ECS | LOW or HIGH (as required). |
| 6. Demist | As required. |

LANDING

PRE LANDING CHECKS

- | | |
|--------------|--|
| 1. Airspeed | Below 150 KIAS. |
| 2. AIR BRAKE | IN |
| 3. LG | DOWN, 3 Greens |
| 4. FLAP | As required. |
| 5. Brakes | Positive Feel |
| 6. FUEL | Contents, agrees with analogue gauge, balanced. |

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7. Threshold speed **Nominate, Bug set**

If aircraft display smoke modified:

8. SMOKE GENERATOR MASTER **OFF**

If landing on an unsealed/unswept runway:

9. INRT SEP **ON**

AFTER LANDING

AFTER LANDING CHECKS

When clear of the runway, carry out the following checks:

1. Seat Pin **IN**

If two pilot crew:

a. Check rear Seat Pin **IN**

2. Command Ejection **OFF**

If two pilot crew:

a. Check rear Command Ejection **OFF**

3. AIR BRAKE **IN**

4. FLAPS **UP**

5. PROBES **OFF**

6. LDG LIGHT **OFF**

7. Transponder (XPDR) **STBY**

8. STROBE/BCN lights **BCN**

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SHUTDOWN CHECKS

Proceed as follows to shutdown the engine:

- | | |
|------------------|--------------|
| 1. PCL | IDLE |
| 2. PARKING BRAKE | ON |
| 3. Seat Pin | IN |
| 4. Standby AI | Caged |

If two pilot crew:

- | | |
|---------------|----------------|
| a. Check rear | Checked |
|---------------|----------------|

5. AVIONICS:

- | | |
|--------|------------|
| a. BAT | OFF |
|--------|------------|

- | | |
|--------|------------|
| b. GEN | OFF |
|--------|------------|

- | | |
|-------------|------------|
| 6. INVERTER | OFF |
|-------------|------------|

- | | |
|--------|------------|
| 7. PCL | OFF |
|--------|------------|

- | | |
|--------|------------|
| 8. ECS | OFF |
|--------|------------|

- | | |
|---------------|------------|
| 9. GEN MASTER | OFF |
|---------------|------------|

- | | |
|----------------------------------|--|
| 10. Note time and fuel remaining | |
|----------------------------------|--|

When propeller has stopped:

- | | |
|------------|-----------|
| 11. Chocks | IN |
|------------|-----------|

- | | |
|----------------|------------|
| 12. NAV lights | OFF |
|----------------|------------|

- | | |
|-----------------------|------------|
| 13. STROBE/BCN lights | OFF |
|-----------------------|------------|

- | | |
|----------------|------------|
| 14. BAT MASTER | OFF |
|----------------|------------|

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15. PARKING BRAKE **As required.**

16. OXYGEN:

a. NORMAL/100% **Checked**

b. Supply **OFF**

17. Flight Controls **LOCKED**