BOURNEMOUTH
FLYING CLUB

This document is intended as an aide to the pilot. The information it contains is not a replacement for the Flight Manual (which takes precedence in all cases) and is not a substitute for adequate pre-flight planning.

Change Control

Page	Change	Name	Date

Out Brief

This is a non-exclusive list of items to consider before each flight. Please ask an instructor for advice if you have any doubts or questions – advice is free!

1. Health, Medication & Fatigue
2. Medical: current and valid
3. Currency of Licence and ratings
4. Operating currency: club, legal & personal requirements
5. Planning: route, diversion, fuel, daylight, bad weather plan, chart prepared, PLOG prepared
6. Destination: opening times & PPR
7. Weather: departure, en-route, destination, diversion, freezing level
8. Equipment: checklists, fuel sampler, sick bags, torch, spare spectacles, aircraft documents, headsets, aircraft covers
9. NOTAMs
10. Red Arrows & temporary restrictions (0500 354802)
11. Mass & Balance
12. Aircraft Performance
13. Customs
14. Special Branch
15. Flight Plan
16. Safety equipment (condition, serviceability, knowledge)
17. Passengers briefed & temporary memberships in place
18. Special briefs (aerobatic floor, etc.)
19. Booking out
20. Flight authorisation
21. Aircraft serviceability and defects

Preliminary Checks

1. Parking brake .....On
2. Tie-downs .....Removed; stowed
3. Towing arm .....Removed; stowed
4. Chocks.....Removed; stowed (Brakes holding)
5. Pitot head cover.....Removed; stowed
6. Control locks.....Removed; stowed
7. Aircraft documents .....Checked; stowed
8. Fire extinguisher .....Secure; serviceable
9. Turn indicator .....Warning flag displayed
10. Flaps .....Down
11. Engine master.....Off
12. Thrust lever.....Idle
13. Fuel cock.....On
14. Battery Master .....On
15. Main bus .....On
16. Water level light (AED) .....Off
17. Fuel pump .....On; Check engine drain for
    .....contamination; Off
18. Pitot heater .....On; check pitot head warm; Off
19. Instrument & cabin lights .....Working (Night only)
20. Navigation lights .....Working (Night only)
21. Anti-collision lights .....On; check; Off
22. Landing & taxi lights .....On; check; Off
23. Stall warning .....Working
24. All electrical services.....Off
25. Battery Master .....Off
26. Elevator Trim .....Full & free; correct sense
27. Rudder Trim .....Full & free
28. Windscreen.....Undamaged; clean
29. OAT probe .....Undamaged; secure
30. Door .....Undamaged; clean
31. Static drain(s).....Operate
32. First aid kit .....Condition; security
33. Check cockpit for loose objects, security of seats, security of any baggage, condition of harnesses, etc

... continue to external checks

External Checks

Carry out a systematic check of the aircraft for serviceability, signs of damage, snow/ice, leaks, & loose panels or fairings. In particular:

1. Fuel tanks .....Contents; breather; cap secure
2. Fuel drains .....Sample wing drains (total 2)
3. Right flap .....Condition; linkage; hinges;
   .....static wicks; bonding wires
4. Right aileron .....Condition; linkage; hinges;
   .....static wicks; bonding wires;
   .....free movement
5. Right nav. light & strobe .....Condition; security
6. Right wing surfaces .....Condition; panels; screws; rivets
7. Right undercarriage .....Condition; oleo extension; fairing
8. Right brake & pipes .....Condition; leaks
9. Right wheel & tyre.....Condition; creep; pressure
10. Right engine compartment ...Engine bay; cowling secure
11. Intakes .....Clear
12. Gearbox oil.....Sufficient
13. Landing light.....Condition
14. Spinner & propeller.....Condition; screws
15. Exhaust.....Secure
16. Torque Link .....Secure
17. Nose oleo .....77-89 mm extension
18. Nose wheel & tyre .....Condition; creep; pressure
19. Left engine compartment .....Hydraulic fluid; engine bay;
    .....cowling secure; alternator belt
20. Oil level .....Between min & max (4.5-6.0)
    .....litres; access panel secure
21. Left wheel & tyre.....Condition; creep; pressure
22. Left brake & pipes .....Condition; leaks
23. Left undercarriage .....Condition; oleo extension; fairing
24. Taxi light.....Condition
25. Left wing surfaces .....Condition; panels; screws; rivets
26. Pitot static head .....Condition; unobstructed

... continued

27. Left nav. light & strobe .....Condition; security
28. Left aileron .....Condition; linkage; hinges;
    .....static wicks; bonding wires
    .....free movement
29. Left flap .....Condition; linkage; hinges;
    .....static wicks; bonding wires
30. Left fuselage & windows .....Condition
31. Stabilator & trim tab .....Condition; linkage & hinges;
    .....static wicks; bonding wires;
    .....free movement
32. Fin and rudder .....Condition; hinges; linkage
33. Aerials & access panels .....Secure
34. Right fuselage & windows .....Condition; baggage door secure
35. Fuselage under-surface .....Condition; access panels secure

Pre-Start Checks

1. Seats .....Adjusted; locked
2. Control locks.....Removed; stowed
3. Loose articles.....None
4. Parking brake .....Re-set On
5. Flaps .....Set Up
6. Harnesses .....Fitted; adjusted
7. Door .....Closed; latched
8. Ailerons & elevator .....Correct movement; full; free
9. Alternate static (if fitted).....Off
10. Electrical services & radios ...Off
11. Engine master switch.....Off
12. Battery master.....Set On
13. Main bus/Alternator .....Set On
14. Circuit breakers.....All "made"
15. Instruments.....Condition; indications
16. CED/AED lights .....Press/hold CED/AED test button
    .....for 2 seconds, check all illuminated
17. Fuel gauges .....Correct indications
18. Fuel temperature.....AVTUR: warmer than -30°C
    .....DIESEL: warmer than 0°C
19. Cabin air controls .....Closed

... continue to Starting checks

Starting Engine

1. Anti-collision light.....On
2. Engine friction lock .....As required
3. Alternate air .....Exercise; Set Closed
4. Fuel selector .....Set lowest tank
5. Thrust lever.....Exercise; Set idle
6. FADEC, AED & CED.....Indications normal
7. Fuel pump .....Set On
8. Propeller area .....Call "clear prop"; check clear
9. Engine master switch.....Set On
10. Glow control lamp .....Check on, then off
11. Starter.....Engage
12. Oil Pressure .....In green region within 3 seconds
    .....(Min 1.0 bar, Max 6.5 bar)
13. RPM.....890 RPM
14. AED/CED caution lamps .....Clear; Check Off
15. Fuel pump .....Set Off
16. Alternator warning.....Off
17. Alternate air .....Set On; verify engine runs
    .....normally; Set Off
18. Vacuum gauge .....Indicating
19. Ammeter.....Charging
20. Avionics .....On; set; indicating correctly
21. ATIS .....Obtain
22. Altimeters .....Indicating within +/- 50 feet
23. Suction..... Check
24. Gyro instruments .....Erect; set
25. Thrust lever.....2 minutes after start set 1400 RPM
    Note: do not exceed 1400 RPM until Oil Temperature reaches 50°C and Coolant temperature reaches 60°C
26. RT..... Obtain taxi clearance

... continue to Taxying checks

Taxying Checks

1. Brakes .....Working
2. Rudder.....Full and free
3. Flight instruments .....Indicating correctly

Power Checks

1. Aircraft into wind; clear all around
2. Parking brake .....On
3. Fuel selector .....Set fuller tank
4. Thrust lever.....Idle
5. FADEC, CED, AED.....All indications normal
6. FADEC test .....Press and hold FADEC test button; monitor automatic test sequence:
    a. Both FADEC lamps on
    b. RPM increase
    c. FADEC lamp B on (lamp A off)
    d. RPM decrease
    e. FADEC lamp A on (lamp B off)
    f. RPM increase
    g. RPM decrease to idle
    h. Both FADEC lamps off
    i. Release FADEC test button
7. Full power test
    a. Thrust lever to maximum (max 10 seconds)
    b. Brakes: holding
    c. Load indication: at least 94%
    d. RPM: 2240-2300 RPM
    e. Vacuum: 4½-5”
    f. Thrust lever to idle

Notes

1. If the FADEC test button is released during the test cycle the FADEC will immediately switch to normal operation
2. do not takeoff if the test sequence does not complete or if there are any abnormal indications

... continue to Pre-takeoff checks

Pre-takeoff Checks

1. Rudder trim .....In T/O band
2. Elevator trim .....In T/O band
3. Flap.....Set 10°
4. Throttle lever friction .....Set On
5. Alternate air .....Closed
6. Fuel.....Contents sufficient; correct tank
7. Warning lights.....Out
8. Ammeter.....Indicating correctly
9. Vacuum .....Indicating
10. Radios .....As required
11. Navaids.....As required
12. Harnesses .....Adjusted
13. Door.....Latched
14. Engine indications .....FADEC, CED & AED all normal
15. Main bus/Alternator .....On
16. Fuel pump .....Set On
17. Take-off emergencies .....Brief complete
18. Departure Clearance..... Obtained

Line-up Checks

1. Strobes .....Set On
2. Landing light.....As required
3. Flight instruments .....All set
4. Time.....Noted
5. Transponder .....Correct Squawk; Set "ALT"
6. Pitot heater .....As required
7. Ailerons & elevator .....No restrictions

After Take-Off Checks

1. Brakes .....Pedals On/off
2. Flaps .....Up at 100-200 feet
3. Power .....FADEC indications normal
4. Altimeters .....Set; indicating correctly
5. Instruments.....Engine instruments within limits
6. Navigation aids .....As required
7. Landing light.....Set Off
8. Pump.....Set Off above 1000 feet agl

Cruise and Pre-descent Checks

1. Fuel.....Sufficient; correct tank selected
   Note: change tanks every 30 minutes to maintain balance and fuel heating
2. Fuel temperature.....AVTUR: warmer than -30°C
   .....DIESEL: warmer than 0°C
3. Radio.....As required
4. Engine indications .....FADEC, CED & AED all normal
5. Direction indicator .....Set
6. Altimeter.....Set as required
7. Pitot heat .....As required

Pre-Landing Checks

1. Brakes .....Off
2. Undercarriage .....Not applicable
3. Mixture .....Not applicable
4. Propeller .....Not applicable
5. Pump.....On
6. Fuel.....Sufficient; correct tank selected
7. Flap.....As required
8. Landing light.....As required
9. Instruments.....FADEC indications normal;
   .....Altimeter & DI set
10. Hatches .....DV panel and door latched
11. Harnesses .....Tight

After Landing Checks

1. Strobes .....As required
2. Pump .....Set Off
3. Landing light.....Set Off
4. Taxy light .....As required
5. Transponder .....Set Off
6. Time .....Noted
7. Pitot heat .....Set Off
8. Flaps .....Set Up
9. Thrust lever friction .....Set Loose

Shut Down Checks

1. Parking brake .....Set On
2. Thrust lever.....Idle for 2 minutes before shutdown
3. Avionics .....Set Off
4. Engine master switch.....Set Off
5. Main bus/Alternator .....Set Off
6. Anti-collision lights .....Set Off
7. All electrical services.....Set Off
8. Battery Master .....Set Off
9. Fuel selector .....As required
10. Trim .....Set neutral
11. Chocks.....As required
12. Control locks.....As required

If last flight of the day – Secure controls
Cover Aircraft
Chock

Engine Fire During Start

1. Engine master.....Off
2. Fuel selector .....Off
3. Fuel pump .....Off
4. Cabin heat.....Off
5. If safe to do so, inform ATC
6. Battery master.....Off
7. Brakes .....Off (if level ground)
8. Abandon aircraft taking the fire extinguisher
9. If safe to do so, extinguish the fire

Cabin Fire On Ground

1. Battery master switch .....Off
2. Engine master switch.....Off
3. Main bus/Alternator .....Off
4. Brakes .....Off (if level ground)
5. Evacuate the aircraft, taking fire extinguisher
6. If safe to do so, extinguish the fire

Electrical Fire or Smoke In Cabin During Flight

1. Main bus .....Off
2. Avionics .....Off
3. Cabin Heater .....Off
4. Vents.....Open
5. Fire Extinguisher .....As required
6. Land as soon as possible
7. Prepare for non-radio airfield join

Engine Fire During Flight

1. Engine master.....Off
2. Fuel selector .....Off
3. Select an airspeed to avoid engine overspeed
4. Fuel Pump .....Off
5. Main bus/Alternator .....Off
6. Cabin Heater .....Off
7. Carry out forced landing procedure

Engine Power Loss During Take Off

1. Maintain safe speed (Flapless 73kts, Flaps 65kts)
2. Make only shallow turns to avoid obstacles
3. Flaps .....as required
4. If sufficient altitude has been gained to attempt a restart, proceed with the *Engine Power Loss in flight* procedure
5. If insufficient altitude has been gained to attempt a restart
    a. Fuel selector .....Off
    b. Engine master.....Off
    c. Battery master.....Off

Engine Power Loss In Flight (non-mechanical failure)

1. Maintain safe speed (Ideal 75kts)
2. Thrust lever.....Full
3. Fuel pump .....On
4. Fuel Selector.....Change to tank containing fuel
   Note: running a tank dry requires an inspection of the pump before further flight
5. Alternate air .....On
6. If power not restored:
    a. Thrust lever.....Idle
    b. Engine master.....Off, then On
    c. If propeller stationary Engage starter
7. If power not regained: *Forced Landing* procedure

Forced Landing

1. Trim for 75kts
2. Locate suitable field
3. Plan and initiate pattern into field
4. Radio.....Mayday call
5. Passenger brief
6. Seat belts & harness.....Tight
7. Engine master.....Off
8. Fuel selector .....Off
9. Brakes .....Off
10. Door .....Unlatched
11. Flaps .....As required
12. Battery master.....Off before touchdown

Propeller RPM Too High

If propeller RPM 2400-2500 RPM for more than 10 seconds, or over 2500 RPM:

1. Thrust lever.....Retard
2. Airspeed.....Reduce
3. Land as soon as practical

Note: if the propeller control fails, climbing at 65kts with the thrust lever fully forward will produce 100% power; at higher speeds the FADEC will reduce the power to prevent propeller overspeed

Propeller RPM Fluctuation

If propeller RPM fluctuates more than ±100 RPM with constant thrust lever position:

1. Change power setting to find a better setting
2. If necessary, reduce airspeed to <100 kts
3. If not resolved .....Reduce power to 55-75%
   .....Land as soon as practical

Low Oil Pressure

If OP less than 2.3 bar in the cruise, or less than 1.2 bar at idle:

1. Reduce power
2. If oil temperature is high.....Land as soon as possible
   .....Expect engine failure

High Oil Temperature

If OT in red range:

1. Reduce power
2. Increase airspeed
3. If oil pressure is low .....Land as soon as possible
   .....Expect engine failure
4. If oil pressure is normal .....Land as soon as practical

Note: during warm-weather operation or during prolonged climbs at low airspeed the engine temperature may enter the caution range and illuminate the caution lamp

High Coolant Temperature

If CT in red range:

1. Reduce power
2. Increase airspeed
3. Cabin heat .....Set **Cold**
4. If CT returns to normal range - Continue
5. If fault not corrected.....Land as soon as practical
   .....Be prepared for engine failure

High Gearbox Temperature

If GT in red range:

1. Reduce power to 55-75%
2. Land as soon as practical

Water Level Warning

If water level warning lamp illuminates:

1. Reduce power
2. Increase airspeed
3. Monitor CT and OT, if either rises into yellow or red range:
   a. Land as soon as practical
   b. Be prepared for a power off landing
   c. Expect Engine Failure

Alternator Failure

If alternator warning lamp illuminates, or ammeter shows a discharge for more than 5 minutes:

1. Check Ammeter to confirm a discharge
2. Alternator CB.....Reset if tripped
3. Alternator.....Recycle On/Off
4. If fault not corrected:
   a. Switch off all non-essential electrical services
   b. Land as soon as practical
   c. Be prepared for a power off landing

FADEC Malfunction

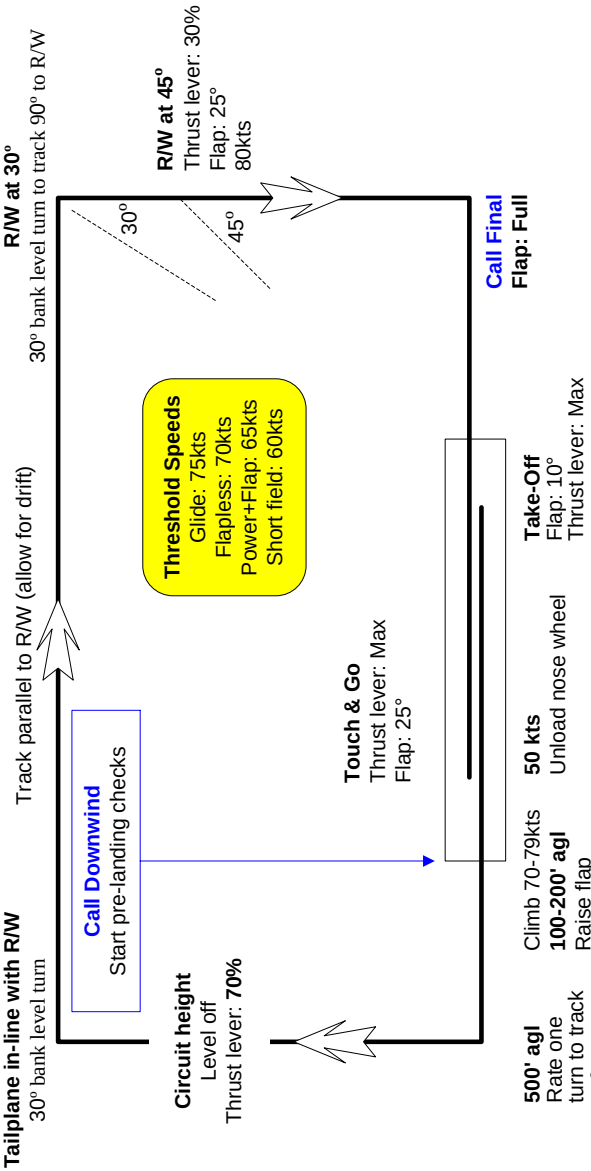
If one or both lamps are flashing:

1. Reset FADEC (press "test" button for at least 2 secs) and check lights:
    a. If both lamps Off – continue
    b. If one lamp On:
        i. Monitor the other lamp
        ii. Land as soon as practical
        iii. Choose airspeed to avoid engine overspeed
    c. If both lamps On
        i. Choose airspeed to avoid engine overspeed
        ii. Check available engine power
        iii. Land as soon as practical
        iv. Be prepared for a power off landing
2. Engine abnormality
    a. Reduce speed to avoid engine overspeed
    b. Force a change to FADEC B using FADEC-Force switch
    c. Land as soon as practical
    d. Be prepared for a power off landing

Airframe Icing

1. Pitot heat .....On
2. Cabin heat.....Set Defrost
3. Exit icing level or area as soon as possible
4. If static blocked, consider breaking VSI glass in emergency

Recommended Circuit



Aircraft Data

Speeds (KIAS @ MAUW)

Vx 63 Vy 70 (65 f0); 79 recommended for cooling Vglide 73 Va 111 (MAUW) Vfe(full) 103	Vne 160 Vno 126 Vs1 50 Vs0 44
Max demonstrated crosswind 17	

Take-off

Conditions: MAUW, ISA, Sea level, nil wind, level, dry, paved
Technique: Full power, alternate air off, flaps 10°, 55 kts to 50'
TODR: 512 m
TORR: 309 m

Cruise – 2000 ft, MAUW

Power	Fuel		TAS
	US G/h	Litre/h	(kts)
60%	4.6	17.4	88
70%	5.1	19.4	95
80%	5.8	22.1	101

Landing

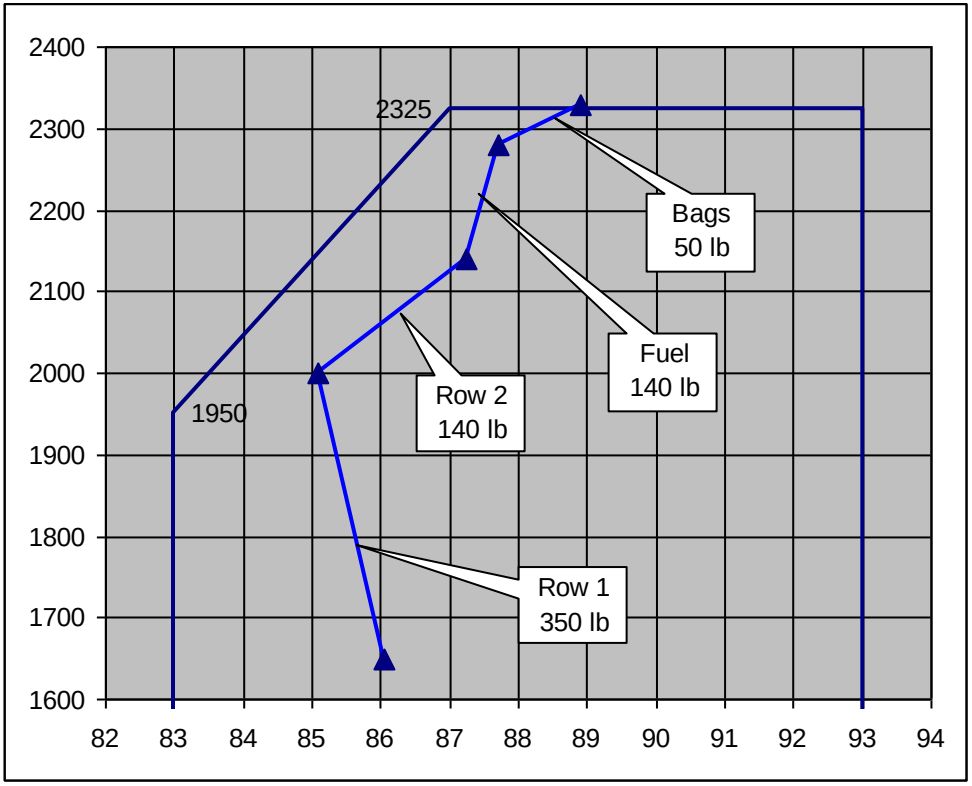
Conditions: MAUW, ISA, Sea level, nil wind, level, dry, paved
Technique: Idle power, alternate air off, flaps full, 63 kts at 50'
LRR: 180 m
LDR: 340 m

General Notes

- Electrics: 12 V
- Do not run a fuel tank dry, if this happens the high pressure fuel pump must be inspected before further flight
- Any FADEC warning must be reported after flight
- 2 X 22.5 USG (unusable 2.0 USG)

Mass and Balance

MTOW: 2325 lb
MLW: 2325 lb
Fuel arm: 95.0”
Row 1 arm: 80.5”
Row 2 arm: 118.1”
Baggage (max 200 lbs) arm: 142.8”



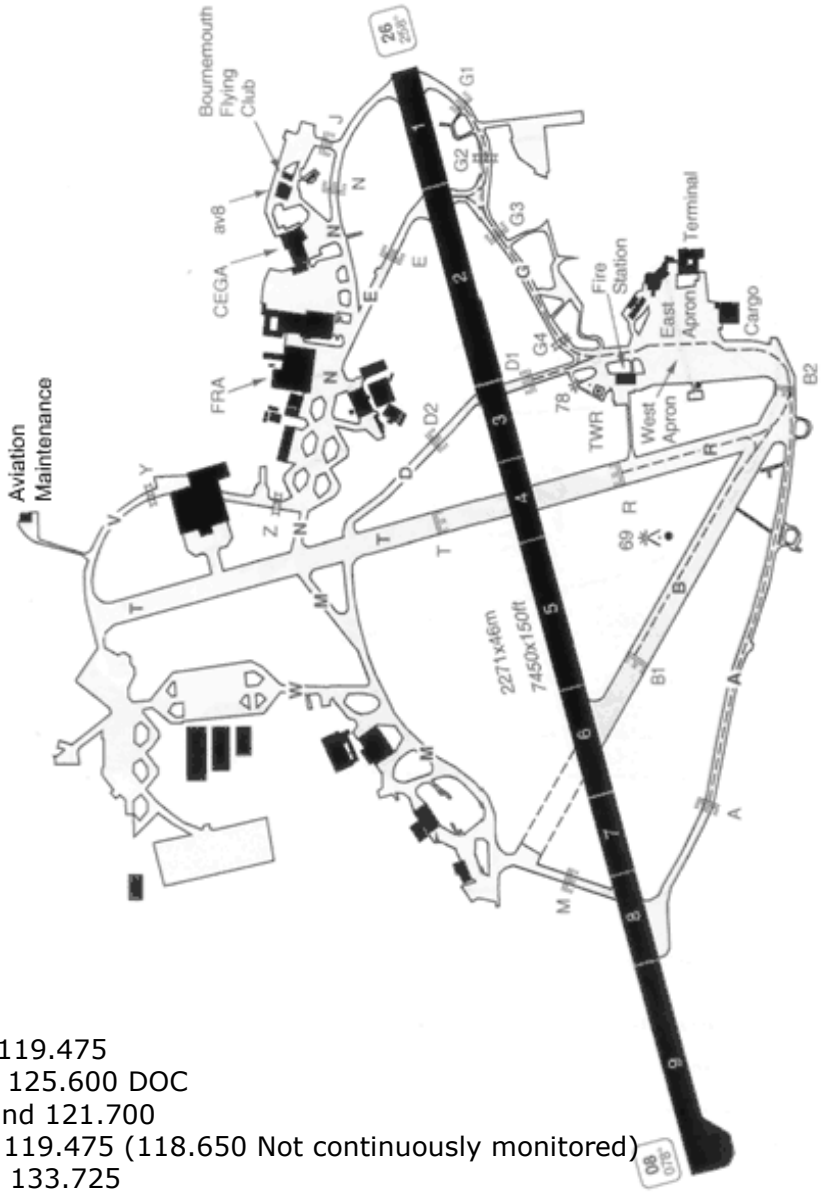
*G-BFNK, 1649lbs, 86.05in, 141924lb.in, 23/12/2004
G-BSPM, 1643, 86.62, 142316.66, 25/10/06
G-CEJF, 1623.6lbs, 86.2in, 139950.4, 10/06/2008
G-BPJP, 1664.69lbs, 87.39in, 145477.26lb.in, 06/07/2009
G-SLYN, 1654.6lbs, 86.33in, 142847.6lb.in, 5/12/2008

Performance Factors, etc.

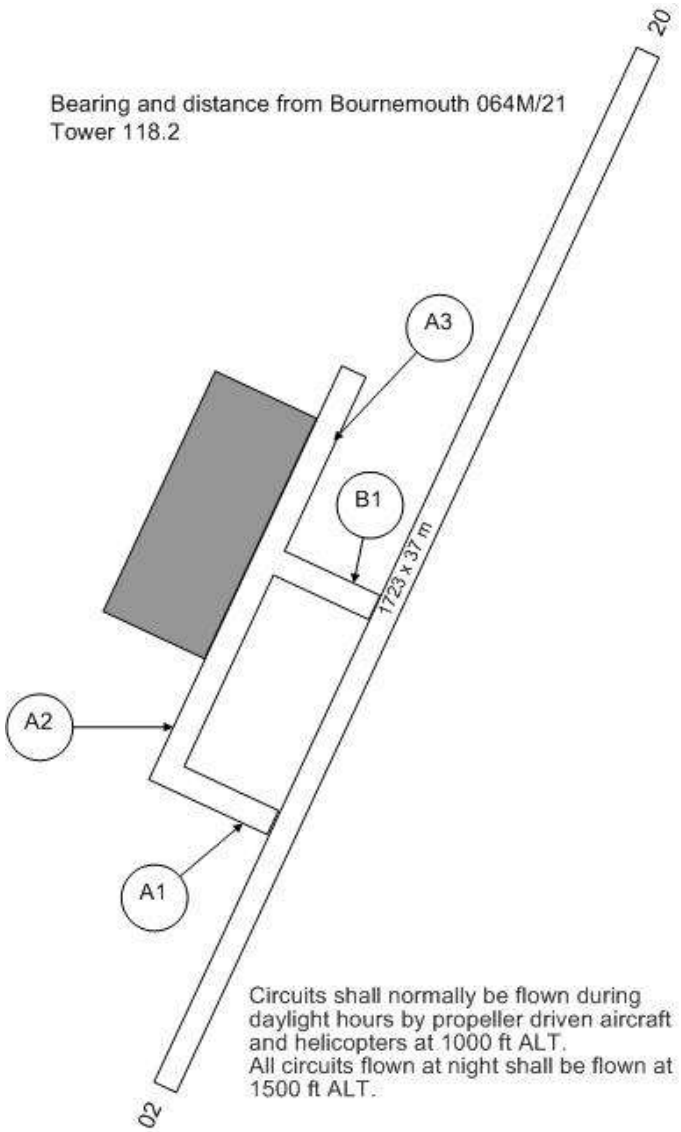
CAA Performance Factors		
Condition	**Factor**	
	Take-off	**Landing**
Weight +10%	1.2	1.1
Elevation +1000ft	1.1	1.05
Temperature +10º	1.1	1.05
Grass: dry <20cm	1.2	1.15
Grass: wet <20cm	1.3	1.35
Wet paved	1.0	1.15
Slope 2%	1.1 (up)	1.1 (down)
Tailwind (10% of Vr)	1.2	1.2
Soft ground or snow	>1.25	>1.25
Public Transport	1.33	1.44

Conversion			
Litres	**USG**	**SG=0.82**	
		kg	**lbs**
-	-	**1**	2
5	1	4	8
6	-	5	**10**
10	3	8	18
12	3	**10**	22
20	5	16	36
30	8	25	54
40	11	33	73
50	13	41	90
55	15	45	**100**
61	16	**50**	110
78	21	64	**140**
100	26	82	180
116	31	95	**210**
170	**45**	139	307

Bournemouth



APP 119.475
TWR 125.600 DOC
Ground 121.700
RAD 119.475 (118.650 Not continuously monitored)
ATIS 133.725


20
Bearing and distance from Bournemouth 064M/21
Tower 118.2
A3
B1
1723 x 37 m
A2
A1
Circuits shall normally be flown during daylight hours by propeller driven aircraft and helicopters at 1000 ft ALT.
All circuits flown at night shall be flown at 1500 ft ALT.
02

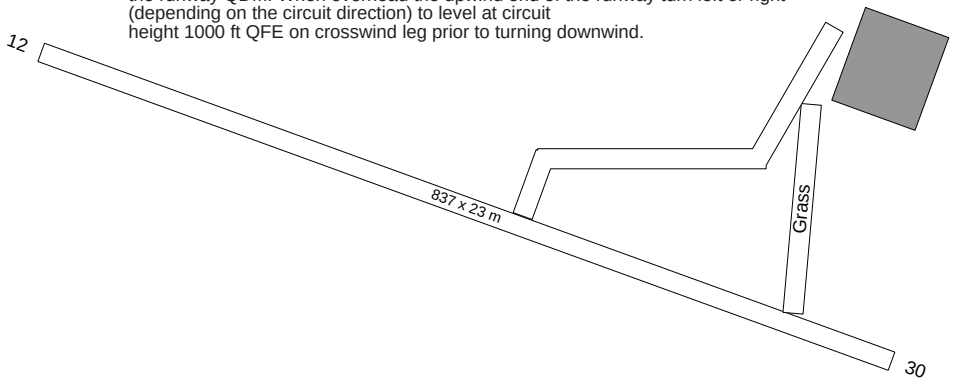
Bembridge

Bearing and distance from Bournemouth 105M/29

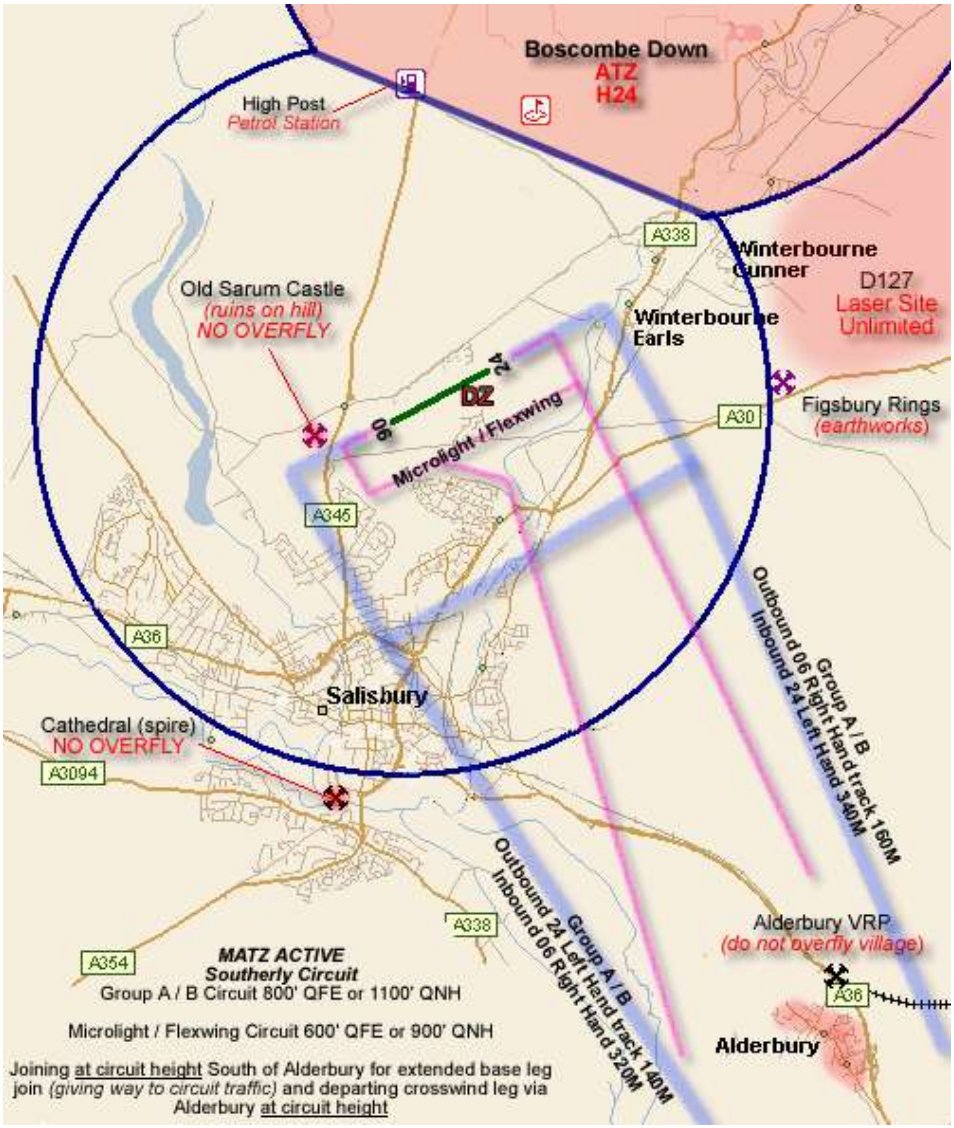
Tower 123.25

(a) Circuit directions for powered aircraft: Runway 12 - LH; Runway 30 - RH. Gliders will be flying a circuit opposite to that in use by powered aircraft.

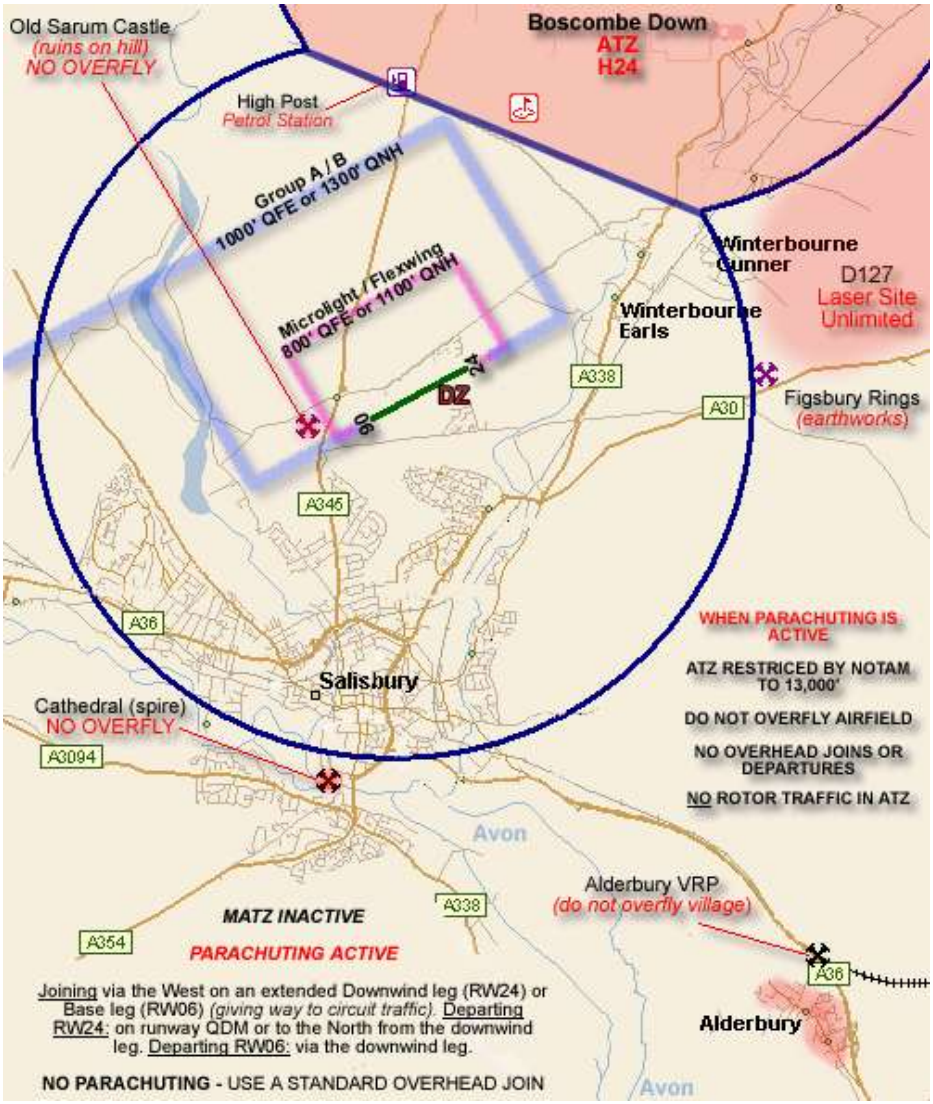
(b) When gliders are operating there is no dead side join available. Joining aircraft are to position to overfly the aerodrome at 1500 ft QFE on the runway QDM. When overhead the upwind end of the runway turn left or right (depending on the circuit direction) to level at circuit height 1000 ft QFE on crosswind leg prior to turning downwind.



Old Sarum - MATZ active



Old Sarum - MATZ inactive



Personal Notes