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Airport Information For EGCC

Terminal Charts For EGCC

Revision Letter For Cycle 13-2016

Change Notices

Notebook

General Information

Location: MANCHESTER GBR
ICAO/IATA: EGCC / MAN
Lat/Long: N53° 21.23', W002° 16.50'
Elevation: 257 ft

Airport Use: Public
Daylight Savings: Observed
UTC Conversion: +0:00 = UTC
Magnetic Variation: 2.0° W

Fuel Types: Jet A-1
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: No

Sunrise: 0340 Z
Sunset: 2040 Z

Runway Information

Runway: 05L
Length x Width: 10000 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 231 ft
Lighting: Edge, ALS, Centerline, TDZ
Displaced Threshold: 1401 ft

Runway: 05R
Length x Width: 10007 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 189 ft
Lighting: Edge, ALS, Centerline

Runway: 23L
Length x Width: 10007 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 227 ft
Lighting: Edge, ALS, Centerline
Displaced Threshold: 611 ft

Runway: 23R
Length x Width: 10000 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 256 ft
Lighting: Edge, ALS, Centerline, TDZ
Displaced Threshold: 600 ft

Communication Information

ATIS: 113.550 Arrival Service
ATIS: 121.975 Departure Service
ATIS: 128.175 Arrival Service
Manchester Ground Tower: 121.700
Manchester Tower: 119.400
Manchester Tower: 118.625
Manchester Ground Tower: 121.850
Manchester Ground Ground: 121.700
Manchester Ground Ground: 121.850
Manchester Delivery Clearance Delivery: 121.700
Manchester Radar Approach: 135.000
Manchester Director Approach: 121.350
Manchester Radar Approach: 118.575
Scottish Control ACC: 128.050
Scottish Control ACC: 134.425
Scottish Control ACC: 136.575

EGCC/MAN
MANCHESTER

JEPPESEN
27 MAY 16 10-1P

MANCHESTER, UK
AIRPORT BRIEFING

1. GENERAL

1.1. ATIS

D-ATIS Arrival 128.175 113.550

D-ATIS Departure 121.975

1.2. NOISE ABATEMENT PROCEDURES

1.2.1. GENERAL

The following procedures may at any time be departed from to the extent necessary for avoiding immediate danger. Every operator of ACFT using the APT shall ensure at all times that ACFT are operated in a manner calculated to cause the least disturbance practicable in areas surrounding the APT.

1.2.2. PREFERENTIAL RWY

RWY 23R/L shall be used for all movements when tailwind component is not greater than 5 KT on RWY or at 2000'.

1.2.3. NIGHTTIME RESTRICTIONS

Restrictions are imposed on jets, details to be obtained from the Airfield Duty Manager.

RWYs 23L/05R will not normally be used between 2200-0600LT, except when RWYs 23R/05L closed for maintenance.

Between 2330-0559LT ACFT in group QC 4 will not be scheduled to depart.

OPERATIONAL RESTRICTIONS:

Between 2300-0659LT ACFT in groups QC 8 and QC 16 will not be scheduled to take-off and land except in emergency or if exempt.

Jet and turbo-prop ACFT approaching Manchester APT are expected to minimize noise disturbance by use of low power, low drag and between 2200-0559LT continuous descent approach procedures.

Noise Level Band (EPNdB)	QUOTA Count	Noise Level Band (EPNdB)	QUOTA Count
84 - 86.9	0.25	96 - 98.9	4
87 - 89.9	0.5	99 - 101.9	8
90 - 92.9	1	more than 101.9	16
93 - 95.9	2		

1.2.4. RUN-UP TESTS

ATC will approve idle ground engine runs. A safety man must be positioned behind the ACFT to warn road traffic.

Permission for ground testing in excess of idle must be requested through the Airfield Duty Manager, Ext 3331. Engine test above idle must commence in the Engine Test Bay.

Times of operation are 0600-2300LT.

Engine testing on the open airfield will only be allowed for Chapter 2 ACFT between 0900-1700LT and for Chapter 3 ACFT between 0600-2200LT (Monday to Friday) and between 0730-2200LT (Saturday and Sunday).

Propeller-driven ACFT are to be classified as Chapter 3.

1.2.5. AUXILIARY POWER UNITS (APUs)

Fixed Electrical Ground Power Units (GPUs) must be used where available, use of GPUs and APUs should be limited.

1.3. LOW VISIBILITY PROCEDURES (LVP) DURING CAT II/III OPERATIONS

1.3.1. GENERAL

APT operates two stages of LVP in CAT II/III operations:
ATC LVP and ATC LVP due to ceiling.

1. GENERAL

1.3.1.1. ATC LVP (RVR less than 600m)

- Reversion to a single RWY operation 23R or 05L. For any residual departures from 23L/05R, the centerline lights are spaced at 30m intervals which requires that, except where an AOC (air operator certificate) holder has less restrictive state authorised take-off minima, departures in RVR of less than 400m are not permitted.
- Departing ACFT: ATC will require departing ACFT to use the following CAT III holding points:
RWY 23R: J1.
RWY 05L: A1.
- Arriving ACFT: Only the following designated exits will be illuminated for ACFT to vacate:
RWY 23R via HST BD, AE or link A,
RWY 05L via link J.

1.3.1.2. ATC LVP DUE TO CEILING (RVR 600m or greater and ceiling of 200' or less)

- RWY 23L/23R dual RWY operation or RWY 05L single RWY operation.
All available RWY exits associated with either RWY 23R or RWY 05L will be illuminated.
ACFT may vacate at any of these exits.
23L/23R dual RWY operation will require departing ACFT to "hold short" of RWY 23R at the following CAT III holding points as instructed: H1, F1 or D1. Pilots are required to read back all ATC "hold short" instructions.
- Ground Movement Radar (GMR) is normally available to monitor pilot "RWY vacated" reports. When GMR is not available, RWY LOC Sensitive Area (LSA) vacation will be assessed by receipt of a pilot report that the ACFT has passed the last alternate yellow and green centerline lights.
These lights denote the extent of the ILS LSA.
- Pilots will be informed of the relevant procedure that is in operation by Arrival and Departure ATIS or by RTF.
- When LVP are in force, the appropriate landing rates that can be expected are:

RVR(m)	Expected Landing Rate
Between 1000m and 600m	20
Between 600m and 400m	12
Less than 400m	10

1.4. RWY OPERATIONS

General operating principles for two RWY segregated operations. The two RWYs are 1280'/390m apart and staggered by 6070'/1850m in order to comply with ICAO rules for simultaneous operations on parallel or near-parallel instrument RWYs (SOIR). Therefore in normal operations arrivals can operate independently on one RWY whilst departures use the other.

Dual RWY segregated operations are normally in force between: Summer: Mon-Fri 0630-1030LT and 1300-2000LT, Sat 0630-1030LT and 1300-1600LT, Sun 1300-1700LT. Winter: Mon-Fri 0630-1030LT and 1600-2000LT, Sat 0630-1030LT and Sun 1600-2000LT. At other times, single RWY, mixed-mode operations are in force using RWY 05L/23R.

Pilots requiring use of RWY 05R/23L for ACFT performance reasons outside dual RWY segregated hours should advise ATC at the earliest opportunity. Efforts will be made to make RWY 05R/23L available, however, some delay may be experienced.

Returning this RWY to service may take in excess of 30 minutes, and it should not be assumed to be available as a diversion alternate to RWY 05L/23R.

Due to local planning constraints, RWY 05R/23L is not normally available between 2200-0600LT.

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19 JUN 15 10-1P2

MANCHESTER, UK
AIRPORT BRIEFING

1. GENERAL

1.5. TAXI PROCEDURES

RWY 05L/23R has a turning circle at the Northeastern end, ABEAM Link J, for use by ACFT up to A380.

RWY 05R/23L has a turning circle at 5971' (1820m) from RWY 23L threshold for use by ACFT up to B767.

All turning circles have unlit painted centerline and blue edge lighting beyond RWY edges.

ACFT should follow the painted centerline in a clockwise direction, unless directed otherwise by ATC.

Jet ACFT are to engage minimum power when using TWYs A, B and C due to the proximity of light ACFT OPS in this area.

A380 ACFT: Reduced TWY centerline to object clearance of 161' (49m) applies along TWYs A and J (between J1 and J5).

Pilots of long-wheelbase ACFT such as B777-300 and A340-600 should exercise caution when negotiating TWY curves and intersections as main-gear to pavement edge clearance may be limited.

AN-124 ACFT will be provided with wing-tip escort vehicles on TWYs north side of RWY 05L/23R.

Pilots are reminded of the need to exercise caution on wingtip clearances from other ACFT when manoeuvring in close proximity on the ground. Particular care should be taken in the RWY holding areas and at RWY crossing points.

Do not cross red stop bars unless authorized to do so by ATC.

RWY 05L/23R: The hard shoulders outboard of the RWY side stripes have only 25% of the RWY bearing strengths and should not be used by ACFT turning on the RWY or when backtracking. The grass verges are unstrengthened and when wet unlikely to sustain loads.

ACFT using TWY L are to use minimum power. B777, A340-600 and A380 ACFT are prohibited from using this TWY.

MIM power to be used by outbound ACFT using TWY D between holding point D7 and ABEAM stand 32 (Pier C).

1.6. PARKING INFORMATION

Stands 100 and 101 have downward slopes of 1.5% from center of stand towards TWY D.

TWYs P and Q may be used for ACFT parking. In darkness or if Low Visibility Procedures are in force, a Follow-me car will be provided.

All Terminal 1 and 2 stands (except stands 12L, 21 and 201), all Terminal 3 pier-served stands (except stands 44 and 56 thru 58) equipped with SAFEDOCK.

On all remote stands and stands 12L, 21, 44, 56 thru 58, 100, 101 and 201 marshaller required.

Pilots must not enter a stand unless the Stand Entry Guidance has been activated and the correct ACFT type is displayed, or a marshaller has signalled clearance to proceed. If SEG is not activated upon approach to a stand, flight crews must hold position on the TWY and advise GMC. Flight crews must not attempt to self-park.

1.7. OTHER INFORMATION

1.7.1. GENERAL

Pilots should note that RWY 05L/23R has a convex profile, the highest point is ABEAM TWY HZ.

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1. GENERAL

1.7.2. WARNING

Pilots are warned, when landing on RWY 23R in strong Northwesterly winds, of the possibility of turbulence and large wind shear effects.

Flocks of up to 100 racing pigeons may be encountered flying across the APT below 100' during the racing season, April-September.

Four high visibility bright lights from golf driving range 1500m/0.8NM LEFT of THR 23R.

2. ARRIVAL

2.1. NOISE ABATEMENT PROCEDURES

2.1.1. GENERAL

Unless otherwise authorized by ATC, ACFT using the ILS shall not descend below 2000' before intercepting GS, nor thereafter fly below it. ACFT approaching without ILS or radar assistance follow a descent path which will not result in its being at any time lower than the approach path which would be followed by an ACFT using the ILS GS.

For visual approaches, or following a visual circuit, to RWY 23R/L the following additional limitations apply:

- Jet ACFT shall not join the final approach at a height of less than 1760'.
- Propeller-driven ACFT whose MTWA exceeds 5700kg shall not join the final approach at a distance of less than 3NM from the landing THR and at a height of less than 1260'.

2.1.2. NIGHTTIME RESTRICTIONS

Between 2300-0700LT, visual approaches are not permitted. ACFT shall be positioned, by RADAR, to join the final APP at a distance of not less than 7NM from touchdown. This restriction does not apply to non-jet ACFT whose MTWA is 5700kg or less.

2.1.3. REVERSE THRUST

Avoid use of reverse thrust consistent with the safe operation of the ACFT, especially between 2300-0700LT.

2.2. CAT II/III OPERATIONS

RWY 05L is available for CAT II/III operations, however due to terrain profile CAT II approaches may only be made by ACFT CAT A & B (Vat no greater than 120 KT), and when the ILS status is CAT III.

RWY 23R is available for CAT II/III operations, CAT II approaches may only be made when ILS status is CAT III.

2.3. RWY OPERATIONS

2.3.1. MINIMUM RWY OCCUPANCY TIME

Pilots are reminded that rapid exits from the landing RWY enable ATC to apply minimum spacing on final approach that will achieve maximum RWY utilisation and will minimise the occurrence of "go-arounds".

RWY 05R arrivals:

All ACFT must vacate the RWY no later than VB and proceed direct to TWY V. ACFT remaining on the RWY to vacate at VA or T will infringe the ILS LOC critical area.

Similarly TWY S is not to be used.

RWY 05L arrivals:

TWY F available as exit during daylight hours only. TWY D is not available as RWY exit.

RWY 23R arrivals:

TWYs D and F are not available as exits.

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2. ARRIVAL

2.4. OTHER INFORMATION

2.4.1. GENERAL

When landing on RWY 23R, the apex lies 2300'/700m into the TDZ. Should the ACFT still be flared beyond this point, the RWY surface will be falling away at a significant rate, with the risk of a late touchdown.

2.4.2. LOW POWER/LOW DRAG PROCEDURES

ACFT should descend at a rate of at least 500' per minute, ATC will advise an estimate of track distance to touchdown when clearance to descend below the transition altitude is given. Further distance information will be given between descent clearance and the instruction to turn onto the intercept heading to the ILS localizer.

Due to high ground East of the APT, descent below 3000' will be in accordance with chart Manchester 10-1R.

Recommended speeds:

210 KT-240 KT intermediate approach;

160 KT-180 KT at a range of 12NM from touchdown;

160 KT from 8NM to 4NM from touchdown.

ATC may request specific speeds for accurate spacing and pilots are requested to comply with any speed adjustments as promptly as feasible within operational constraints. If a speed change for ACFT performance reasons is necessary, advise ATC.

3. DEPARTURE

3.1. START-UP, PUSH-BACK & TAXI PROCEDURES

Pilots are required to inform MANCHESTER Delivery when ready to start.

Start-up and push-back clearance is given by MANCHESTER Ground.

Start-up approval does not imply approval to push-back.

When requesting start-up or push-back, pilots should give the full call sign, type and stand number.

ACFT must be ready in all respects to start before calling on the appropriate frequency. Pilots should only request push-back when they are actually ready to do so.

When requesting push-back clearance, pilots are to inform ATC if headset communication with ground crew is not established.

Push-back clearance must not be requested until ground crew has confirmed to flight deck, that ACFT is closed up and tug is manned and fully ready to move.

Pilots are advised that delays in excess of 10 min can be expected at the holding point during busy morning and evening periods. Sufficient time should be allowed for start, push-back and taxi to take account of such delay especially if to comply with a Calculated Take-off Time (CTOT).

ACFT will not be permitted to reverse off pier-served stands under own power.

ACFT requesting push-back must be in direct communication with the tug crew, via headset person. ACFT must inform ATC if they have no direct communication with a headset person.

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10-1P5

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3. DEPARTURE

Flights subject to en-route ATC delays may request, or may be required to push off stand and reposition at a remote location awaiting CTOT. Airlines must co-ordinate push and park requests via Handling Agent, who must liaise with Airfield Control. Requests to push and park are to be made to Delivery. Clearance for push and park manoeuvre will be given on the GND frequency to the tug crew and not to the flight crew. Flight crew should monitor MANCHESTER Ground frequency and note instructions given. Remote locations for push and park are limited and subject to the conditions stated in the Manchester Airport Aerodrome Manual. At remote location flight crew must monitor Delivery frequency. ACFT may taxi away from a remote parking location with CAUTION and using MIM power.

3.2. NOISE ABATEMENT PROCEDURES

Link Alpha should be used for all jet ACFT and all large propeller-driven ACFT departing from RWY 05L.

Between 0600-2330LT any ACFT may depart from links AG, AF and B subject to operational requirements by ATC/pilots.

Between 2330-0600LT all jet ACFT and large propeller-driven ACFT shall depart from the most westerly link available.

After take-off operate every jet ACFT so that it is at or above 1260' at the point nearest to the noise monitoring terminal for the relevant departure.

ACFT are to be operated in the quietest possible manner, ACFT exceeding the following noise levels will be subject to an initial penalty of 750 GBP, plus an additional 150 GBP for each decibel thereafter:

Period (LT)	MAX Level dB(A)
0600-0700	82
0700-2300	90
2300-2330	82
2330-0600	81

Details of noise monitoring locations and performance are obtainable from:

Environment Department

(Tel.: + 44 161 489 3504, email: environment@manairport.co.uk).

Jet ACFT maintain a minimum climb gradient of at least 500' per minute at power settings to ensure progressively decreasing noise levels at points on the ground under the flight path beyond the monitoring terminal.

3. DEPARTURE

The noise preferential routes and procedures depicted on chart 10-4 and on Manchester SID charts are to be flown by all departing ACFT until the level defined stated below is reached:

Via	Termination preferential route
- LISTO from RWYs 05L/R, 23R/L	.5000'
- ASMIM, DESIG or MONTY from RWYs 05L/R.	4000'
- EKLAD, KUXEM or MONTY from RWYs 23R/L.	3000'
- POL, SONEX from RWYs 05L/R, 23R/L	4000'
- SANBA from RWYs 23R/L	5000'

Exempted are:

- ACFT of 5700kg MTWA or less;
- Those ACFT instructed by ATC to make early turns in order to expedite traffic flow, such instructions may be issued between 0700-2300LT, to propeller ACFT of 23000kg MTWA or less and the following jet ACFT:
BAe 146 (Avro RJ series), Canadair Regional Jet, Embraer EMB-135/145;
- And unless otherwise instructed by ATC or deviations are required in the interests of safety.

The use of these routes is supplementary to noise abatement take-off techniques. After take-off, pilots should ensure that they are at a minimum altitude of 760' before commencing any turn.

Non-standard departure instructions will not normally be issued between 2300-0700LT.

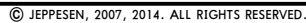
3.3. RWY OPERATIONS

3.3.1. MINIMUM RWY OCCUPANCY TIME

Whenever possible, cockpit checks should be completed prior to line-up, and any checks requiring completion whilst on the RWY should be kept to the minimum required. Pilots should ensure that they are able to commence the take-off roll immediately after take-off clearance is issued.

3.4. OTHER INFORMATION

When lined up for take-off from RWY 05L/23R, the full length of the RWY surface may not be visible from the flight deck.



Aircraft joining controlled airspace from NORTHEAST
will route via SETEL.

Direct distance from DALEY to:
Manchester Apt 19 NM

STAR	ROUTING
DALEY 2A	At LAKEY turn LEFT, intercept TNT R-329 inbound to DALEY.
DALEY 2B	At SETEL turn RIGHT, 173° track to DALEY.
DALEY 4D	At TILNI, intercept POL R-012 inbound to GASKO, turn RIGHT, 237° track to BEGAM, turn LEFT, 234° track to SETEL, turn LEFT, 173° track to DALEY.

D-ATIS 128.175 113.55	Apt Elev 257'	Alt Set: hPa Trans level: By ATC	Trans alt: 5000'
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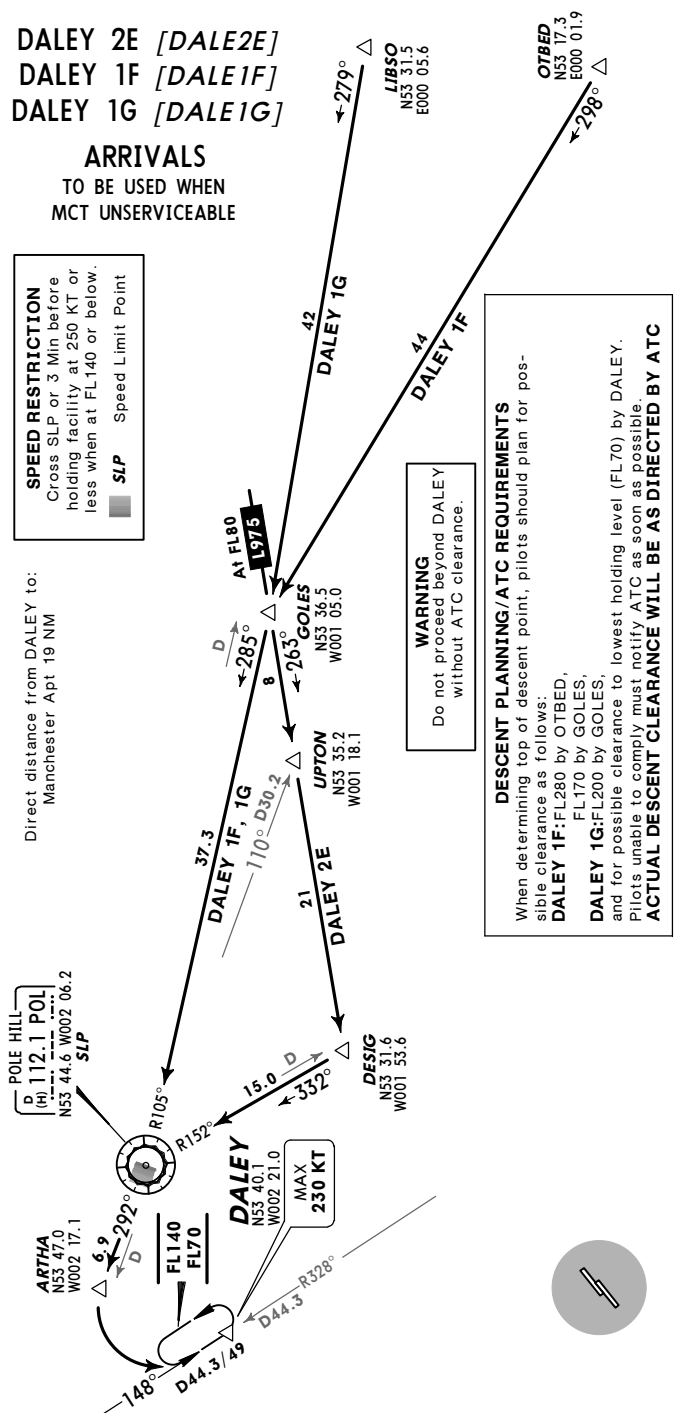
DALEY 2E [DALE2E]
DALEY 1F [DALE1F]
DALEY 1G [DALE1G]

ARRIVALS
TO BE USED WHEN
MCT UNSERVICEABLE

SPEED RESTRICTION
Cross SLP or 3 Min before
holding facility at 250 KT or
less when at FL140 or below.

SLP Speed Limit Point

Direct distance from DALEY to:
Manchester Apt 19 NM



ROUTING

STAR	ROUTING
DALEY 2E	At GOLES, 263° track via UPTON to DESIG, turn RIGHT, intercept POL R-152 inbound to POL, turn LEFT, POL R-292 to ARTHA, turn LEFT, intercept TNT R-328 inbound to DALEY.
DALEY 1F	At OTBED, 298° track to GOLES, turn LEFT, intercept POL R-105 inbound to POL, turn RIGHT, POL R-292 to ARTHA, turn LEFT, intercept POL R-105 inbound to POL.
DALEY 1G	At LIBSO, 279° track to GOLES, turn RIGHT, intercept POL R-105 inbound to POL, turn RIGHT, POL R-292 to ARTHA, turn LEFT, intercept TNT R-328 inbound to DALEY.

NOT TO SCALE

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JEPPESSEN
9 OCT 15 (10-2B)

MANCHESTER, UK
STAR

D-ATIS
128.175 113.55

Apt Elev
257'

Alt Set: hPa
Trans level: By ATC Trans alt: 5000'

DAYNE 2A [DAYN2A]
DAYNE 1B [DAYN1B]
ARRIVALS



MANCHESTER
D (H) 113.55 MCT
N53 21.4 W002 15.7

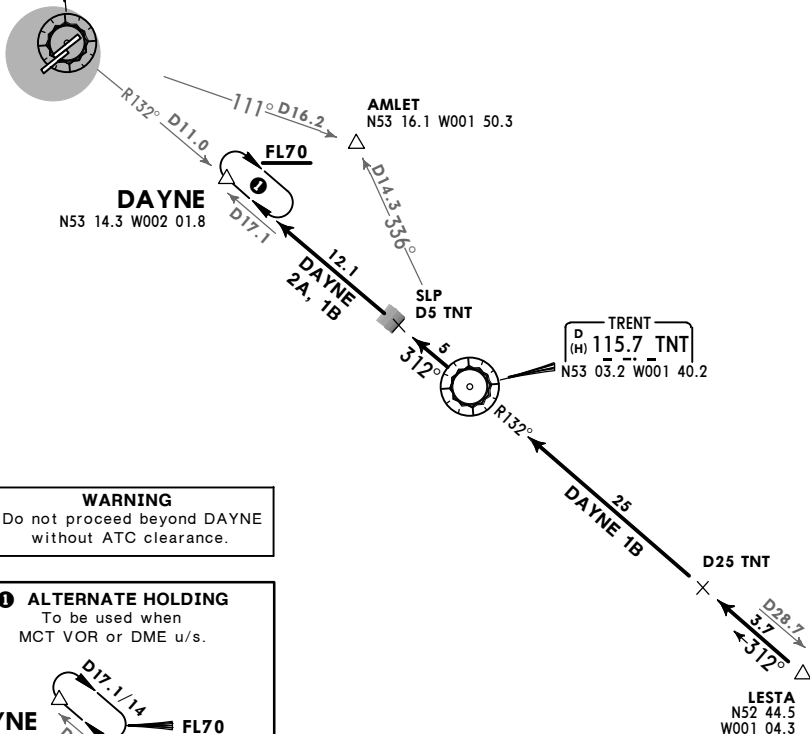
DESCENT PLANNING/ATC REQUIREMENTS
When determining top of descent point, pilots should plan for possible clearance as follows:

DAYNE 2A: FL200 by 25 NM before TNT (N-57, Q-4),
FL200 by ELVOS ((U)T-420),

DAYNE 1B: FL200 by D25 TNT,
and for possible clearance to lowest holding level (FL70) by DAYNE.

Pilots unable to comply must notify ATC as soon as possible.

ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED BY ATC

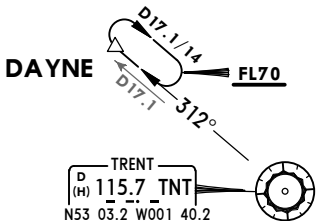


WARNING

Do not proceed beyond DAYNE without ATC clearance.

1 ALTERNATE HOLDING

To be used when
MCT VOR or DME u/s.



SPEED RESTRICTION

Cross SLP or 3 Min before
holding facility at 250 KT or
less when at FL140 or below.

SLP Speed Limit Point

STAR

ROUTING

DAYNE 2A

At TNT, intercept TNT R-312 to DAYNE.

DAYNE 1B

At LESTA, intercept TNT R-132 inbound to TNT, TNT R-312 to DAYNE.

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9 OCT 15 (10-2C)

MANCHESTER, UK
STAR

D-ATIS
128.175 113.55

Apt Elev
257'

Alt Set: hPa
Trans level: By ATC Trans alt: 5000'

MIRSI 1A [MIRS1A] MIRSI 1B [MIRS1B] ARRIVALS

WARNING

Do not proceed beyond MIRSI
without ATC clearance.

Clearance limit is MIRSI
unless otherwise instructed
by ATC.



POLE HILL
D (H) 112.1 POL
N53 44.6 W002 06.2

WALLASEY
D (H) 114.1 WAL
N53 23.5 W003 08.1
SLP

D25.0/30 POL
MHA 6000 or
equivalent FL
MAX FL140

MIRSI
N53 32.3 W002 42.7
MAX
230 KT

LYNAS
N53 26.6
W004 20.0

D43.1 26.0
097° MIRSI 1B

MALUD
N53 24.8
W003 36.5

17.1

R277°

D17.5 063° D

243°

R185°

D19.6

D30.0

MIRSI 1A

005°

REXAM

N53 04.0 W003 09.6

MONTY

N52 53.6 W003 10.4

SPEED RESTRICTION

Cross SLP or 3 Min before
holding facility at 250 KT or
less when at FL140 or below.



SLP Speed Limit Point

Direct distance
from MIRSI to:
Manchester Apt 19NM

1 ALTERNATE HOLDING

To be used when
POL VOR or DME u/s.

MIRSI

MAX
230 KT

WALLASEY
D (H) 114.1 WAL
N53 23.5 W003 08.1



D17.5/12
MHA 6000 or
equivalent FL
MAX FL140

DESCENT PLANNING/ ATC REQUIREMENTS

When determining top of descent point,
pilots should plan for possible clearance
as follows:

MIRSI 1A: FL200 by OKTEM,

MIRSI 1B: FL270 by LIFFY between
0630-2300 LT,
FL170 by MALUD,

All STARS: Lowest holding level (6000'
or equivalent FL) by MIRSI.

Pilots unable to comply must notify ATC
as soon as possible.

**ACTUAL DESCENT CLEARANCE WILL
BE AS DIRECTED BY ATC**

STAR

ROUTING

MIRSI 1A

At MONTY intercept WAL R-185 inbound via REXAM to WAL, turn RIGHT, WAL
R-062 to MIRSI.

MIRSI 1B

At LYNAS intercept WAL R-277 inbound via MALUD to WAL, turn LEFT, WAL
R-062 to MIRSI.

EGCC/MAN
MANCHESTER

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28 NOV 14

(10-2D)

Eff 11 Dec

MANCHESTER, UK

STAR

D-ATIS

128.175 113.55

Apt Elev

257'

Alt Set: hPa

Trans level: By ATC

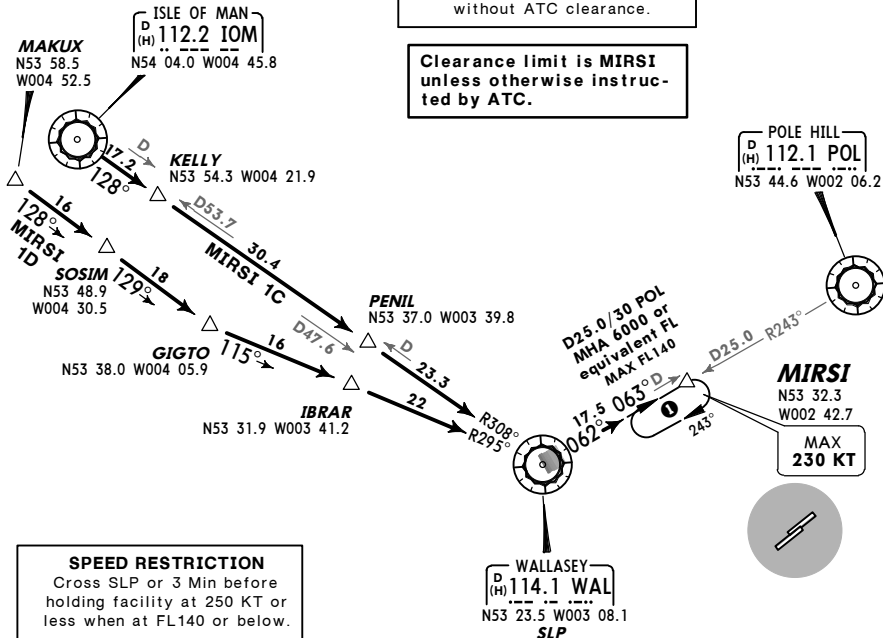
Trans alt: 5000'

MIRSI 1C [MIRSIC] MIRSI 1D [MIRSID] ARRIVALS

WARNING

Do not proceed beyond MIRSI
without ATC clearance.

Clearance limit is MIRSI
unless otherwise instructed
by ATC.



SPEED RESTRICTION

Cross SLP or 3 Min before
holding facility at 250 KT or
less when at FL140 or below.

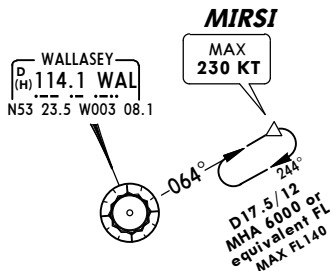


SLP Speed Limit Point

Direct distance
from MIRSI to:
Manchester Apt 19NM

1 ALTERNATE HOLDING

To be used when
POL VOR or DME u/s.



NOT TO SCALE

DESCENT PLANNING/ ATC REQUIREMENTS

When determining top of descent point,
pilots should plan for possible clearance
as follows:

MIRSI 1C: FL170 by PENIL,
MIRSI 1D: FL270 by MAKUX,
FL170 by IBRAR.

All STARS: Lowest holding level (6000'
or equivalent FL) by MIRSI.
Pilots unable to comply must notify ATC
as soon as possible.

**ACTUAL DESCENT CLEARANCE WILL
BE AS DIRECTED BY ATC**

STAR

ROUTING

MIRSI 1C

Intercept WAL R-308 inbound via KELLY and PENIL to WAL, turn LEFT, WAL
R-062 to MIRSI.

MIRSI 1D

At MAKUX via SOSIM to GIGTO, then via IBRAR to WAL, turn LEFT, WAL
R-062 to MIRSI.

EGCC/MAN
MANCHESTER

JEPPESSEN
28 NOV 14 (10-2E) Eff 11 Dec

MANCHESTER, UK
STAR

D-ATIS
128.175 113.55

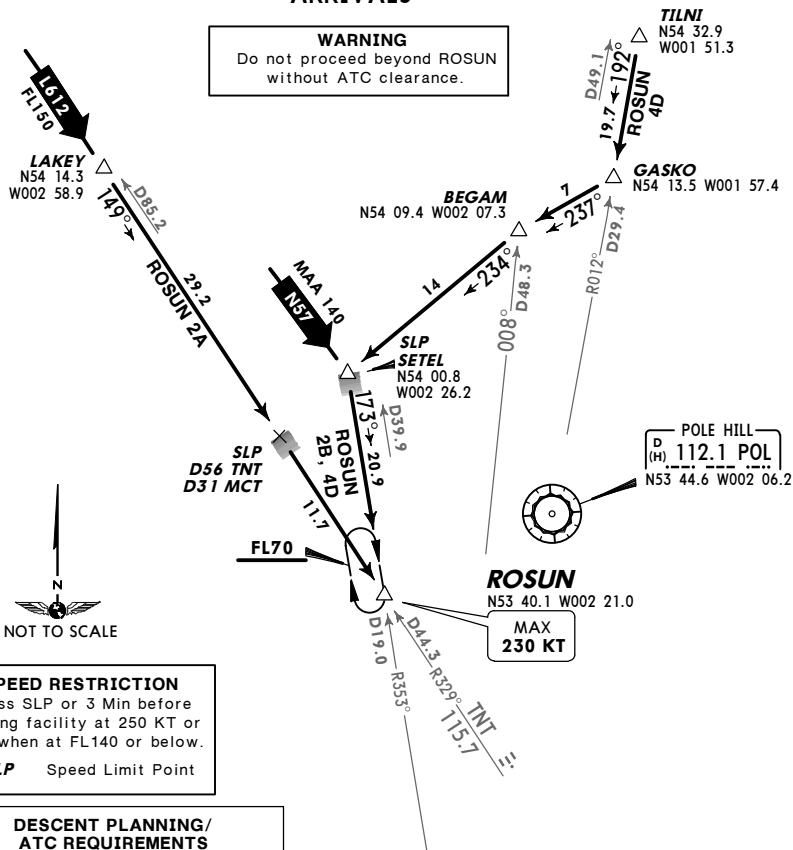
Apt Elev
257'

Alt Set: hPa
Trans level: By ATC Trans alt: 5000'
Aircraft joining controlled airspace from NORTHEAST
will route via SETEL.

ROSUN 2A [ROSU2A]
ROSUN 2B [ROSU2B]
ROSUN 4D [ROSU4D]
ARRIVALS

WARNING

Do not proceed beyond ROSUN
without ATC clearance.



SPEED RESTRICTION

Cross SLP or 3 Min before
holding facility at 250 KT or
less when at FL140 or below.

■ SLP Speed Limit Point

DESCENT PLANNING/
ATC REQUIREMENTS

When determining top of descent
point, pilots should plan for possible
clearance as follows:

ROSUN 2A: FL200 by 10 NM before
LAKEY,

ROSUN 4D: FL230 by TILNI, and for
possible clearance to lowest
holding level (FL70) by ROSUN.

Pilots unable to comply must notify
ATC as soon as possible.

**ACTUAL DESCENT CLEARANCE
WILL BE AS DIRECTED BY ATC**

**If MCT VOR u/s
refer to DALEY STARS**

STAR	ROUTING
ROSUN 2A	At LAKEY turn LEFT, intercept TNT R-329 inbound to ROSUN.
ROSUN 2B	At SETEL turn RIGHT, intercept MCT R-353 inbound to ROSUN.
ROSUN 4D	At TILNI, intercept POL R-012 inbound to GASKO, turn RIGHT, 237° track to BEGAM, turn LEFT, 234° track to SETEL, turn LEFT, intercept MCT R-353 inbound to ROSUN.

EGCC/MAN
MANCHESTER

JEPPESSEN
20 MAR 15 (10-2F) Eff 2 Apr

MANCHESTER, UK
STAR

D-ATIS 128.175 113.55	Ap1 Elev 257'	Alt Set: hPa Trans level: By ATC	Trans alt: 5000'
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ROSUN 2E [ROSU2E]
ROSUN 1F [ROSU1F]
ROSUN 1G [ROSU1G]
ARRIVALS

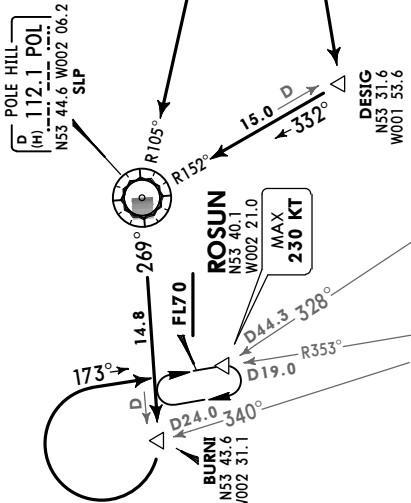
SPEED RESTRICTION
Gross SLP or 3 Min before
holding facility at 250 KT or
less when at FL140 or below.
■ SLP Speed Limit Point

**If MCT VOR u/s
refer to DALEY STARS**

WARNING
Do not proceed beyond ROSUN
without ATC clearance.

DESCENT PLANNING/ATC REQUIREMENTS
When determining top of descent point, pilots should plan for pos-
sible clearance as follows:
ROSUN 1F: FL290 by OTBED,
FL170 by GOLES,
ROSUN 1G: FL200 by GOLES,
and for possible clearance to lowest holding level (FL70) by ROSUN.
SLP. Pilots unable to comply must notify ATC as soon as possible.
ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED BY ATC

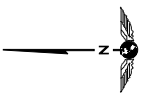
STAR	ROUTING
ROSUN 2E	At GOLES, 263° track via UPTON to DESIG, intercept POL R-152 inbound to POL, turn LEFT, POL R-269 to BURNI, turn RIGHT, intercept MCT R-353 inbound to ROSUN.
ROSUN 1F	At OTBED, 298° track to GOLES, turn LEFT, intercept POL R-105 inbound to POL, turn LEFT, POL R-269 to BURNI, intercept MCT R-353 inbound to ROSUN.
ROSUN 1G	At LIBSO, 279° track to GOLES, turn RIGHT, intercept POL R-105 inbound to POL, turn LEFT, POL R-269 to BURNI, turn RIGHT, intercept MCT R-353 inbound to ROSUN.



TRNT
D 115.7 INT
N53 03.2 W001 40.2



MANCHESTER
D 113.55 MCT
N53 21.4 W002 15.7



EGCC/MAN
MANCHESTER

JEPPESSEN
28 NOV 14 (10-3) Eff 11 Dec

MANCHESTER, UK
SID

SCOTTISH
Control
128.050

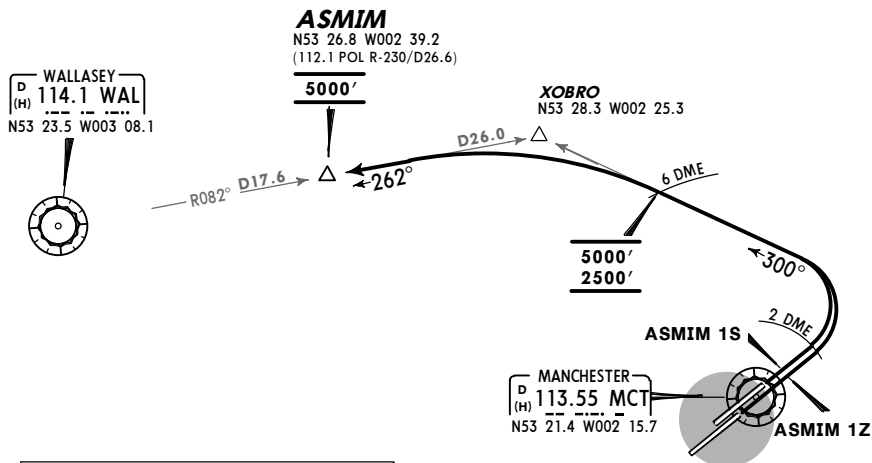
Apt Elev
257'

- Trans level: By ATC Trans alt: 5000'
1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
 2. SIDs include noise preferential routes (refer to 10-4).
 3. EXPECT first CPDLC Data Link Authority to be airway L-10 EGPX, airway L-70 EISN.
 4. Cruising levels will be allocated enroute by SCOTTISH Control.
 5. Do not climb above SID level until cleared by ATC.
 6. Rwy 05L: EXPECT close-in obstacles.

ASMIM 1S [ASM11S]
ASMIM 1Z [ASM11Z]
RWYS 05L/R DEPARTURES
~~SPEED~~ MAX 250 KT BELOW FL100
UNLESS OTHERWISE AUTHORIZED

WARNING: Do not climb above
5000' until instructed by ATC.

WARNING
No turns below 760'



WARNING RWY 05L: In the event of a missed approach on runway 05R ATC may instruct aircraft which have departed from runway 05L to make a LEFT turn in order to establish separation.

These SIDs require minimum climb gradients of
5.24% until MCT 2 DME, then
4.0% up to 2500', then
3.55% to ASMIM for ATC or airspace purposes.

Gnd speed-KT	75	100	150	200	250	300
3.55% V/V (fpm)	270	360	539	719	899	1079
4.0% V/V (fpm)	304	405	608	810	1013	1215
5.24% V/V (fpm)	398	531	796	1061	1327	1592



AVERAGE TRACK MILEAGE
ASMIM 1S: 20 NM to ASMIM
ASMIM 1Z: 21 NM to ASMIM

SID	RWY	ROUTING/ALTITUDE
ASMIM 1S	05L	Climb straight ahead, at MCT 2 DME turn LEFT, 300° track towards
ASMIM 1Z	05R	XOBRO, cross MCT 6 DME at or above 2500' (MAX 5000'), intercept WAL R-082 inbound, to ASMIM, cross at 5000'.

EGCC/MAN
MANCHESTER

 **JEPPESSEN**
28 NOV 14 **(10-3A)** **Eff 11 Dec**

MANCHESTER, UK
SID

SCOTTISH
Control
136.575

Apt Elev
257'

- Trans level: By ATC Trans alt: 5000'
1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
 2. SIDs include noise preferential routes (refer to 10-4).
 3. EXPECT first CPDLC Data Link Authority to be EGTG.
 4. Cruising levels will be allocated enroute by SCOTTISH Control.
 5. Rwy 05L: EXPECT close-in obstacles.
 6. Do not climb above SID level until cleared by ATC.

**DESIG 1S [DES11S]
DESIG 1Z [DES11Z]
RWYS 05L/R DEPARTURES
~~SPEED~~ **MAX 250 KT BELOW FL100**
UNLESS OTHERWISE AUTHORIZED**

WARNING
No turns below **760'**

WARNING: Do not climb above **5000'** until instructed by ATC.

WARNING RWY 05L: In the event of a missed approach on runway 05R ATC may instruct aircraft which have departed from runway 05L to make a LEFT turn in order to establish separation.

 **WALLASEY**
D (H) **114.1 WAL**
N53 23.5 W003 08.1

 **POLE HILL**
D (H) **112.1 POL**
N53 44.6 W002 06.2

DESIG
N53 31.6 W001 53.6
5000'
DESIG
N53 30.2 W001 57.5
D14 MCT
N53 30.2 W001 57.5

D12 MCT
5000'
4000'

At or above **760'**
but not before **DER**

DESIG 1S

 **MANCHESTER**
D (H) **113.55 MCT**
N53 21.4 W002 15.7

DESIG 1Z



These SIDs require a minimum climb gradient of 5.7% up to 4000' for ATC or airspace purposes.

Gnd speed-KT	75	100	150	200	250	300
5.7% V/V (fpm)	433	577	866	1154	1443	1732

AVERAGE TRACK MILEAGE
DESIG 1S: 17 NM to DESIG
DESIG 1Z: 16 NM to DESIG

SID	RWY	ROUTING/ALTITUDE
DESIG 1S	05L	Climb straight ahead, at or above 760', but not before DER intercept MCT R-053, cross D12 MCT at or above 4000' (MAX 5000'), at D14 MCT turn RIGHT, intercept WAL R-082, to DESIG at 5000'.
DESIG 1Z	05R	Climb straight ahead on MCT R-053, cross D12 MCT at or above 4000' (MAX 5000'), at D14 MCT turn RIGHT, intercept WAL R-082, to DESIG at 5000'.

EGCC/MAN
MANCHESTER

JEPPESSEN
15 MAY 15 (10-3B) Eff 28 May

MANCHESTER, UK
SID

SCOTTISH
Control
128.050

Apt Elev
257'

- Trans level: By ATC Trans alt: 5000'
1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
 2. SIDs include noise preferential routes (refer to 10-4).
 3. EXPECT first CPDLC Data Link Authority to be airway L10 EGPX, airway L70 EISN.
 4. Cruising levels will be allocated after departure by SCOTTISH Control.
 5. Do not climb above SID level until cleared by ATC.
 6. Rwy 23R: EXPECT close-in obstacles.

EKLAD 1R [EKLA1R]

EKLAD 1Y [EKLA1Y]

RWYS 23R/L DEPARTURES

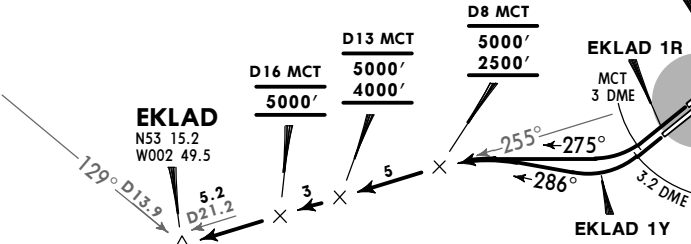
**SPEED: MAX 250 KT BELOW FL100
UNLESS OTHERWISE AUTHORIZED**

**WARNING: Do not climb above
5000' until instructed by ATC.**

**WARNING
No turns below 760'**

WALLASEY
D(H) 114.1 WAL
N53 23.5 W003 08.1

MANCHESTER
D(H) 113.55 MCT
N53 21.4 W002 15.7



These SIDs require minimum climb gradients of

- EKLAD 1R:** 5.55% until MCT 3 DME, then 5.21% up to 2500', then 3.43% up to 5000' for ATC or airspace purposes.
- EKLAD 1Y:** 12.33% until MCT 3.2 DME, then 5.21% up to 2500', then 3.43% up to 5000' for ATC or airspace purposes.

Gnd speed-KT	75	100	150	200	250	300
3.43% V/V (fpm)	261	347	521	695	868	1042
5.21% V/V (fpm)	396	528	791	1055	1319	1583
5.55% V/V (fpm)	422	562	843	1124	1405	1686
12.33% V/V (fpm)	936	1249	1873	2497	3122	3746



WARNING RWY 23L: In the event of a missed approach on runway 23R ATC may instruct aircraft which have departed from runway 23L to make a LEFT turn in order to establish separation.

**AVERAGE TRACK MILEAGE
EKLAD 1R: 21 NM to EKLAD
EKLAD 1Y: 20 NM to EKLAD**

SID	RWY	ROUTING/ALTITUDE
EKLAD 1R	23R	Climb straight ahead, at MCT 3 DME turn RIGHT, 275° track, intercept MCT R-255, cross D8 MCT at or above 2500' (MAX 5000'), D13 MCT at or above 4000' (MAX 5000'), D16 MCT at 5000', to EKLAD.
EKLAD 1Y	23L	Climb straight ahead, at MCT 3.2 DME turn RIGHT, 286° track, intercept MCT R-255, cross D8 MCT at or above 2500' (MAX 5000'), D13 MCT at or above 4000' (MAX 5000'), D16 MCT at 5000', to EKLAD.

EGCC/MAN
MANCHESTER

JEPPESSEN
15 MAY 15 10-3C Eff 28 May

MANCHESTER, UK
SID

SCOTTISH
Control
128.050

Apt Elev
257'

- Trans level: By ATC Trans alt: 5000'
1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
 2. SIDs include noise preferential routes (refer to 10-4).
 3. EXPECT first CPDLC Data Link Authority to be airway L10 EGPX, airway L70 EISN.
 4. Cruising levels will be allocated after departure by SCOTTISH Control.
 5. Rwy 23R: EXPECT close-in obstacles.
 6. Do not climb above SID level until cleared by ATC.

KUXEM 1R [KUXE1R]

KUXEM 1Y [KUXE1Y]

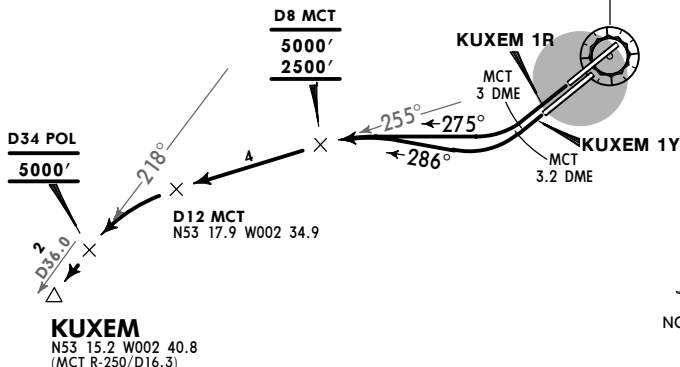
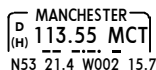
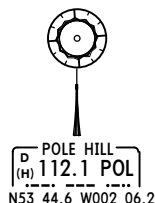
RWYS 23R/L DEPARTURES

**SPEED: MAX 250 KT BELOW FL100
UNLESS OTHERWISE AUTHORIZED**

WARNING
No turns below 760'

WARNING: Do not climb above
5000' until instructed by ATC.

WARNING RWY 23L: In the event of
a missed approach on runway 23R ATC
may instruct aircraft which have depar-
ted from runway 23L to make a LEFT
turn in order to establish separation.



These SIDs require minimum climb gradients
of

KUXEM 1R: 5.55% until MCT 3 DME, then
5.21% up to 2500', then
4.51% up to 5000' for ATC or
airspace purposes.

KUXEM 1Y: 12.33% until MCT 3.2 DME, then
5.21% up to 2500', then
4.51% up to 5000' for ATC or
airspace purposes.

AVERAGE TRACK MILEAGE
KUXEM 1R: 15 NM to KUXEM
KUXEM 1Y: 16 NM to KUXEM

Gnd speed-KT	75	100	150	200	250	300
4.51% V/V (fpm)	343	457	685	913	1142	1370
5.21% V/V (fpm)	396	528	791	1055	1319	1583
5.55% V/V (fpm)	422	562	843	1124	1405	1686
12.33% V/V (fpm)	936	1249	1873	2497	3122	3746

SID	RWY	ROUTING/ALTITUDE
KUXEM 1R	23R	Climb straight ahead, at MCT 3 DME turn RIGHT, 275° track, intercept MCT R-255, cross D8 MCT at or above 2500' (MAX 5000'), at D12 MCT turn LEFT, intercept POL R-218, cross D34 POL at 5000' to KUXEM.
KUXEM 1Y	23L	Climb straight ahead, at MCT 3.2 DME turn RIGHT, 286° track, intercept MCT R-255, cross D8 MCT at or above 2500' (MAX 5000'), at D12 MCT turn LEFT, intercept POL R-218, cross D34 POL at 5000' to KUXEM.

EGCC/MAN
MANCHESTER

JEYPESEN
15 MAY 15 **(10-3D)** Eff 28 May

MANCHESTER, UK
SID

SCOTTISH
Control
134.425

Apt Elev
257'

Trans level: By ATC Trans alt: 5000'

1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
 2. SIDs include noise preferential routes (refer to 10-4).
 3. EXPECT first CPDLC Data Link Authority to be EGTT.
 4. Cruising levels will be allocated enroute by SCOTTISH Control (at or below FL190) or LONDON Control (above FL190).
 5. In order to alleviate airspace congestion and improve ATC flexibility, pilots of jet aircraft allowed to fly the LISTO SID may be offered SANBA 1R/1Y SID at a late stage prior to departure. Pilots unable to accept a SANBA SID when offered must inform ATC.
6. Rwy 23R: EXPECT close-in obstacles.

LISTO 2R [LIST2R], LISTO 2Y [LIST2Y]

RWYS 23R/L DEPARTURES

RESTRICTED USE **①**

VIA AIRWAYS AND FOR LEAVING CONTROLLED AIRSPACE VIA TNT

SPEED: MAX 250 KT BELOW FL100

UNLESS OTHERWISE AUTHORIZED

- ①** Available to non-jet acft and the following jet acft: acft up to 35000 KG MTOW, BAe 146 (Avro RJ series); Embraer E135, E145; Bombardier CRJ1/2/7/9; BD-700 Global Express; Gulfstream 5. **Pilots must ensure adherence to clearance as issued by ATC.**

AVERAGE TRACK MILEAGE
LISTO 2R: 15 NM to LISTO
LISTO 2Y: 14 NM to LISTO

SPEED PROFILE

Speed profile applies to all acft following these SIDs unless cancelled by ATC.

Jet traffic MTOW above 35000 KG:
250 KT until FL100.

280-290 KT between FL100 & FL260.

Jet traffic MTOW below 35000 KG & all non-jet traffic:
210-250 KT until FL260.

If unable to comply, inform ATC before obtaining departure clearance.

WARNING: Do not climb above 5000' until instructed by ATC.

- ②** Aircraft requesting cruising levels at or below FL70 will be routed via PEDIG.

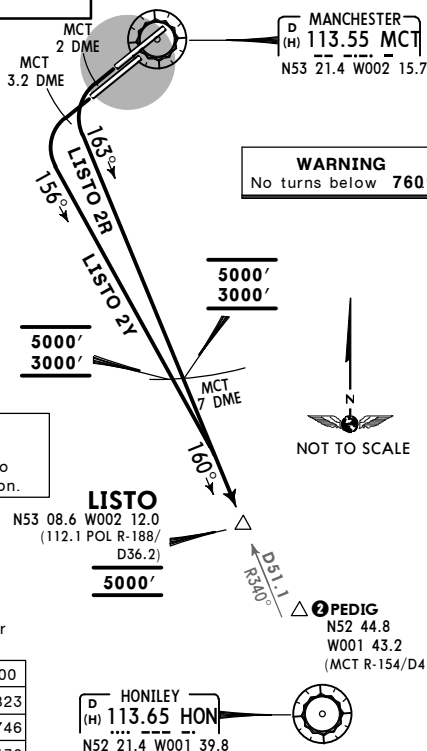
WARNING RWY 23L: In the event of a missed approach on runway 23R ATC may instruct aircraft which have departed from runway 23L to make a LEFT turn in order to establish separation.

These SIDs require minimum climb gradients of

LISTO 2R: 14.6% until MCT 2 DME, then 6% up to 5000' for ATC or airspace purposes.

LISTO 2Y: 12.33% until MCT 3.2 DME for ATC or airspace purposes.

Gnd speed-KT	75	100	150	200	250	300
6.0% V/V (fpm)	456	608	911	1215	1519	1823
12.33% V/V (fpm)	936	1249	1873	2497	3122	3746
14.6% V/V (fpm)	1109	1479	2218	2957	3696	4436



SID

RWY

ROUTING/ALTITUDE

LISTO 2R

23R

Climb straight ahead, at MCT 2 DME turn LEFT, 163° track, cross MCT 7 DME at or above 3000' (MAX 5000'), intercept HON R-340 inbound to LISTO at 5000'.

LISTO 2Y

23L

Climb straight ahead, at MCT 3.2 DME turn LEFT, 156° track, cross MCT 7 DME at or above 3000' (MAX 5000'), intercept HON R-340 inbound to LISTO at 5000'.

EGCC/MAN
MANCHESTER



JEPPESSEN

15 MAY 15

(10-3E)

Eff 28 May

MANCHESTER, UK

SID

SCOTTISH
Control
134.425

Apt Elev
257'

Trans level: By ATC Trans alt: 5000'

1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
2. SIDs include noise preferential routes (refer to 10-4).
3. EXPECT first CPDLC Data Link Authority to be EGTG.
4. Cruising levels will be allocated enroute by SCOTTISH Control (at or below FL190) or LONDON Control (above FL190).
5. Rwy 05L: EXPECT close-in obstacles.

LISTO 2S [LIST2S], LISTO 2Z [LIST2Z]
RWYS 05L/R DEPARTURES
VIA AIRWAYS AND FOR LEAVING CONTROLLED AIRSPACE VIA TNT
SPEED: MAX 250 KT BELOW FL100
UNLESS OTHERWISE AUTHORIZED

WARNING

No turns below 760'

WARNING: Do not climb above 5000' until instructed by ATC.

1 Aircraft requesting cruising levels at or below FL70 will be routed via PEDIG.

SPEED PROFILE

Speed profile applies to all acft following these SIDs unless cancelled by ATC.

Jet acft above 35000 KG MTOW:

250 KT until FL100,

280-290 KT between FL100 & FL260.

Jet acft below 35000 KG MTOW & all non-jet acft:

210-250 KT until FL260.

If unable to comply, inform ATC before obtaining departure clearance.

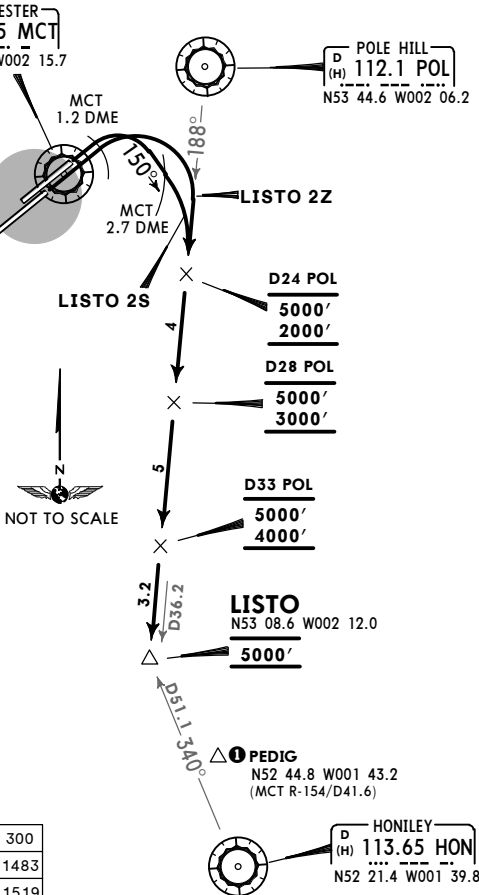
WARNING RWY 05L: In the event of a missed approach on runway 05R ATC may instruct aircraft which have departed from runway 05L to make a LEFT turn in order to establish separation.

These SIDs require minimum climb gradients of

LISTO 2S: 10.86% until MCT 1.2 DME, then 6.86% up to 2000', then 5% up to 5000' for ATC or airspace purposes.

LISTO 2Z: 4.88% until MCT 1.2 DME, then 6.86% up to 2000', then 5% up to 5000' for ATC or airspace purposes.

Gnd speed-KT	75	100	150	200	250	300
4.88% V/V (fpm)	371	494	741	988	1235	1483
5.0% V/V (fpm)	380	506	760	1013	1266	1519
6.86% V/V (fpm)	521	695	1042	1389	1737	2084
10.86% V/V (fpm)	825	1100	1650	2200	2749	3299



AVERAGE TRACK MILEAGE
18 NM to LISTO

SID	RWY	ROUTING/ALTITUDE
LISTO 2S	05L	Climb straight ahead, at MCT 1.2 DME turn RIGHT, 150° track, at MCT 2.7 DME turn RIGHT, intercept POL R-188, cross D24 POL at or above 2000' (MAX 5000'), D28 POL at or above 3000' (MAX 5000'), D33 POL at or above 4000' (MAX 5000'), to LISTO at 5000'.
LISTO 2Z	05R	Climb straight ahead, at MCT 1.2 DME turn RIGHT, intercept POL R-188, cross D24 POL at or above 2000' (MAX 5000'), D28 POL at or above 3000' (MAX 5000'), D33 POL at or above 4000' (MAX 5000'), to LISTO at 5000'.

EGCC/MAN
MANCHESTER

JEPPESSEN
28 NOV 14 (10-3G) Eff 11 Dec

MANCHESTER, UK
SID

SCOTTISH
Control
128.050

Apt Elev
257'

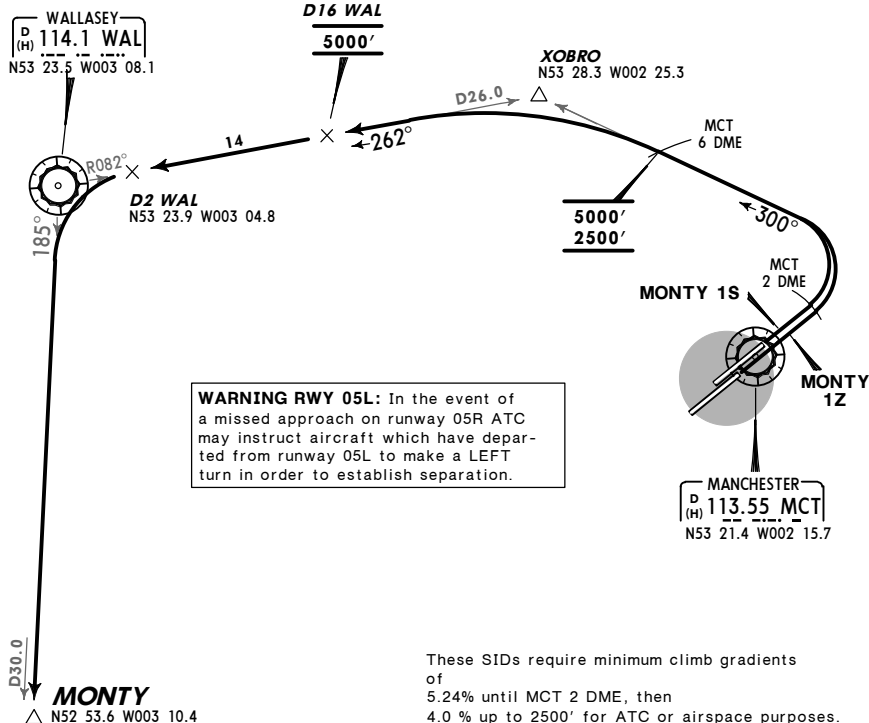
- Trans level: By ATC Trans alt: 5000'
1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
 2. SIDs include noise preferential routes (refer to 10-4).
 3. EXPECT first CPDLC Data Link Authority to be EGT.
 4. Cruising levels will be allocated enroute by SCOTTISH Control (at or below FL190) or LONDON Control (above FL190).
 5. Rwy 05L: EXPECT close-in obstacles.
 6. Do not climb above SID upper limit (5000') until cleared by ATC.
- Actual cleared levels will be allocated by ATC.

**MONTY 1S [MONT1S]
MONTY 1Z [MONT1Z]
RWYS 05L/R DEPARTURES**
FOR AIRCRAFT LEAVING CONTROLLED AIRSPACE AT MONTY

**~~SPEED~~ MAX 250 KT BELOW FL100
UNLESS OTHERWISE AUTHORIZED**

WARNING
No turns below **760'**

WARNING: Do not climb above
5000' until instructed by ATC.



WARNING RWY 05L: In the event of a missed approach on runway 05R ATC may instruct aircraft which have departed from runway 05L to make a LEFT turn in order to establish separation.

AVERAGE TRACK MILEAGE
MONTY 1S: 67 NM to MONTY
MONTY 1Z: 68 NM to MONTY

These SIDs require minimum climb gradients of
5.24% until MCT 2 DME, then
4.0 % up to 2500' for ATC or airspace purposes.

Gnd speed-KT	75	100	150	200	250	300
4.0% V/V (fpm)	304	405	608	810	1013	1215
5.24% V/V (fpm)	398	531	796	1061	1327	1592

SID	RWY	ROUTING/ALTITUDE
MONTY 1S	05L	Climb straight ahead, at MCT 2 DME turn LEFT, 300° track towards XOBRO, cross MCT 6 DME at or above 2500' (MAX 5000'), intercept WAL R-082 inbound, cross D16 WAL at 5000' to D2 WAL, turn LEFT, intercept WAL R-185 to MONTY.
MONTY 1Z	05R	

EGCC/MAN
MANCHESTER

JEPPESEN
28 NOV 14 (10-3H) Eff 11 Dec

MANCHESTER, UK
SID

SCOTTISH
Control
136.575

Apt Elev
257'

- Trans level: By ATC Trans alt: 5000'
1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
 2. SIDs include noise preferential routes (refer to 10-4).
 3. EXPECT first CPDLC Data Link Authority to be EGPX.
 4. Cruising levels will be allocated enroute by SCOTTISH Control.
 5. Rwy 23R: EXPECT close-in obstacles.
 6. Do not climb above SID level until cleared by ATC.

POL 5R, POL 1Y
RWYS 23R/L DEPARTURES
VIA AIRWAYS AND FOR LEAVING
CONTROLLED AIRSPACE
~~SPEED~~ MAX 250 KT BELOW FL100
UNLESS OTHERWISE AUTHORIZED

WARNING
No turns below **760'**

POLE HILL
D (H) 112.1 POL
N53 44.6 W002 06.2



WARNING: Do not climb above
5000' until instructed by ATC.

WARNING RWY 23L: In the event of
a missed approach on runway 23R ATC
may instruct aircraft which have depart-
ed from runway 23L to make a LEFT
turn in order to establish separation.

AVERAGE TRACK MILEAGE
34 NM to POL

XUMAT
N53 28.0 W002 28.4

D16 POL
5000'
4000'

MANCHESTER
D (H) 113.55 MCT
N53 21.4 W002 15.7

These SIDs require minimum climb gradients
of

POL 5R: 5.55% until MCT 3 DME, then
4.8% up to 2500' for ATC or
airspace purposes.

POL 1Y: 12.33% until MCT 3.2 DME, then
4.8% up to 2500' for ATC or
airspace purposes.

Gnd speed-KT	75	100	150	200	250	300
4.8% V/V (fpm)	365	486	729	972	1215	1458
5.55% V/V (fpm)	422	562	843	1124	1405	1686
12.33% V/V (fpm)	936	1249	1873	2497	3122	3746

SID	RWY	ROUTING/ALTITUDE
POL 5R	23R	Climb straight ahead, at MCT 3 DME turn RIGHT, 345° track towards XUMAT, cross MCT 7 DME at or above 2500' (MAX 5000'), at MCT 8 DME turn RIGHT, intercept POL R-221 inbound, cross D16 POL at or above 4000' (MAX 5000'), D9 POL at 5000', to POL at 5000'.
POL 1Y	23L	Climb straight ahead, at MCT 3.2 DME turn RIGHT, 345° track towards XUMAT, cross MCT 7 DME at or above 2500' (MAX 5000'), at MCT 8 DME turn RIGHT, intercept POL R-221 inbound, cross D16 POL at or above 4000' (MAX 5000'), D9 POL at 5000', to POL at 5000'.

EGCC/MAN
MANCHESTER

 **JEPPESSEN**
28 NOV 14 **(10-3J)** **Eff 11 Dec**

MANCHESTER, UK
SID

SCOTTISH
Control
136.575

Apt Elev
257'

- Trans level: By ATC Trans alt: 5000'
1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
 2. SIDs include noise preferential routes (refer to 10-4).
 3. EXPECT first CPDLC Data Link Authority to be EGPX.
 4. Cruising levels will be allocated enroute by SCHOTTISH Control.
 5. Do not climb above SID level until cleared by ATC.
 6. Rwy 05L: EXPECT close-in obstacles.

POL 4S, POL 1Z
RWYS 05L/R DEPARTURES
VIA AIRWAYS AND FOR LEAVING CONTROLLED AIRSPACE
***SPEED* MAX 250 KT BELOW FL100**
UNLESS OTHERWISE AUTHORIZED

WARNING
No turns below **760'**



WARNING: Do not climb above **5000'** until instructed by ATC.

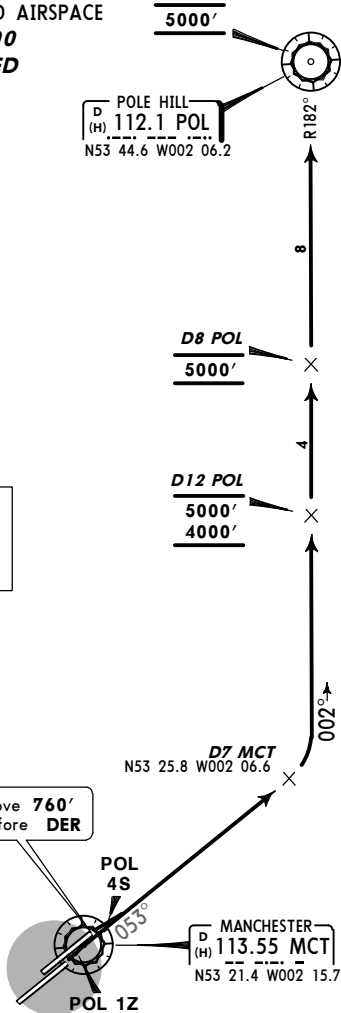
WARNING RWY 05L: In the event of a missed approach on runway 05R ATC may instruct aircraft which have departed from runway 05L to make a **LEFT** turn in order to establish separation.

AVERAGE TRACK MILEAGE
POL 4S: 25 NM to POL
POL 1Z: 26 NM to POL

These SIDs require a minimum climb gradient of
4.27% up to 4000' for ATC or airspace purposes.

Gnd speed-KT	75	100	150	200	250	300
4.27% V/V (fpm)	324	432	649	865	1081	1297

At or above **760'**
but not before **DER**



SID	RWY	ROUTING/ALTITUDE
POL 4S	05L	Climb straight ahead, at or above 760', but not before DER, intercept MCT R-053, at D7 MCT turn LEFT, intercept POL R-182 inbound, cross D12 POL at or above 4000' (MAX 5000'), D8 POL at 5000', to POL at 5000'.
POL 1Z	05R	Climb straight ahead, intercept MCT R-053, at D7 MCT turn LEFT, intercept POL R-182 inbound, cross D12 POL at or above 4000' (MAX 5000'), D8 POL at 5000', to POL at 5000'.

EGCC/MAN
MANCHESTER

JEPPESSEN
28 NOV 14 (10-3K) Eff 11 Dec

MANCHESTER, UK
SID

SCOTTISH
Control
134.425

Apt Elev
257'

- Trans level: By ATC Trans alt: 5000'
1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
 2. SIDs include noise preferential routes (refer to 10-4).
 3. EXPECT first CPDLC Data Link Authority to be EGTT.
 4. Cruising levels will be allocated enroute by SCOTTISH Control (at or below FL190) or LONDON Control (above FL190).
 5. Rwy 23R: EXPECT close-in obstacles.

**SANBA 1R [SANB1R], SANBA 1Y [SANB1Y]
RWYS 23R/L DEPARTURES
JET-AIRCRAFT ONLY**

**~~SPEED~~ MAX 250 KT BELOW FL100
UNLESS OTHERWISE AUTHORIZED**

WARNING: Do not climb above
5000' until instructed by ATC.

WARNING
No turns below 760'

SPEED PROFILE
Speed profile applies to all acft following these SIDs unless cancelled by ATC.
Jet traffic MTOW above 35000 KG:
250 KT until FL100.
280-290 KT between FL100 & FL260.
Jet traffic MTOW below 35000 KG:
240-250 KT until FL260.
If unable to comply, inform ATC before obtaining departure clearance.

WARNING RWY 23L: In the event of a missed approach on runway 23R ATC may instruct aircraft which have departed from runway 23L to make a LEFT turn in order to establish separation.

AVERAGE TRACK MILEAGE
SANBA 1R: 18 NM to SANBA
SANBA 1Y: 16 NM to SANBA

These SIDs require minimum climb gradients of

SANBA 1R: 5.55% until MCT 3 DME, then 4.6% up to 5000' for ATC or airspace purposes.

SANBA 1Y: 12.33% until MCT 3.2 DME, then 4.9% up to 5000' for ATC or airspace purposes.

Gnd speed-KT	75	100	150	200	250	300
4.6% V/V (fpm)	349	466	699	932	1165	1397
4.9% V/V (fpm)	372	496	744	992	1241	1489
5.55% V/V (fpm)	422	562	843	1124	1405	1686
12.33% V/V (fpm)	936	1249	1873	2497	3122	3746

SID	RWY	ROUTING/ALTITUDE
SANBA 1R	23R	Climb straight ahead, at MCT 3 DME turn RIGHT, 275° track, at MCT 5 DME turn LEFT to TABLY, intercept HON R-335 inbound, cross D58 HON/D10 MCT at or above 3000' (MAX 5000'), to SANBA at 5000'.
SANBA 1Y	23L	Climb straight ahead, at MCT 3.2 DME turn RIGHT, 285° track, at MCT 5 DME turn LEFT to TABLY, intercept HON R-335 inbound, cross D58 HON/D10 MCT at or above 3000' (MAX 5000'), to SANBA at 5000'.

EGCC/MAN
MANCHESTER

JEPPESSEN
28 NOV 14 (10-3L) Eff 11 Dec

MANCHESTER, UK
SID

SCOTTISH
Control
136.575

Apt Elev
257'

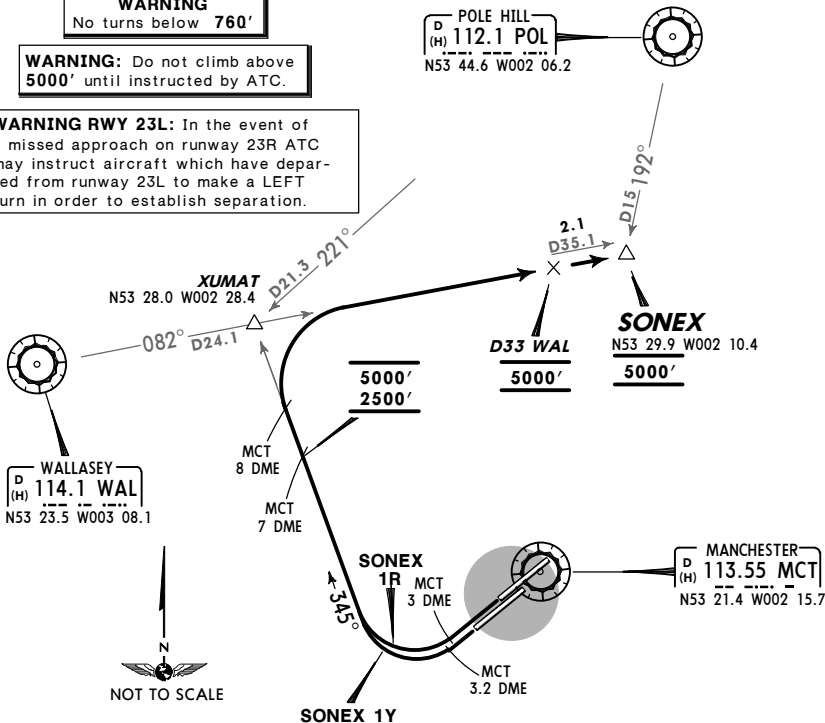
- Trans level: By ATC Trans alt: 5000'
1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
 2. SIDs include noise preferential routes (refer to 10-4).
 3. EXPECT first CPDLC Data Link Authority to be EGT.
 4. Cruising levels will be allocated enroute by SCOTTISH Control.
 5. Rwy 23R: EXPECT close-in obstacles.
 6. Do not climb above SID level until cleared by ATC.

SONEX 1R [SONE1R], SONEX 1Y [SONE1Y]
RWYS 23R/L DEPARTURES
~~SPEED~~ MAX 250 KT BELOW FL100
UNLESS OTHERWISE AUTHORIZED

WARNING
No turns below 760'

WARNING: Do not climb above
5000' until instructed by ATC.

WARNING RWY 23L: In the event of
a missed approach on runway 23R ATC
may instruct aircraft which have departed
from runway 23L to make a LEFT
turn in order to establish separation.



These SIDs require minimum climb gradients
of

SONEX 1R: 5.55% until MCT 3 DME, then
4.8% up to 2500' for ATC or
airspace purposes.

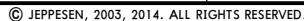
SONEX 1Y: 12.33% until MCT 3.2 DME, then
4.8% up to 2500' for ATC or
airspace purposes.

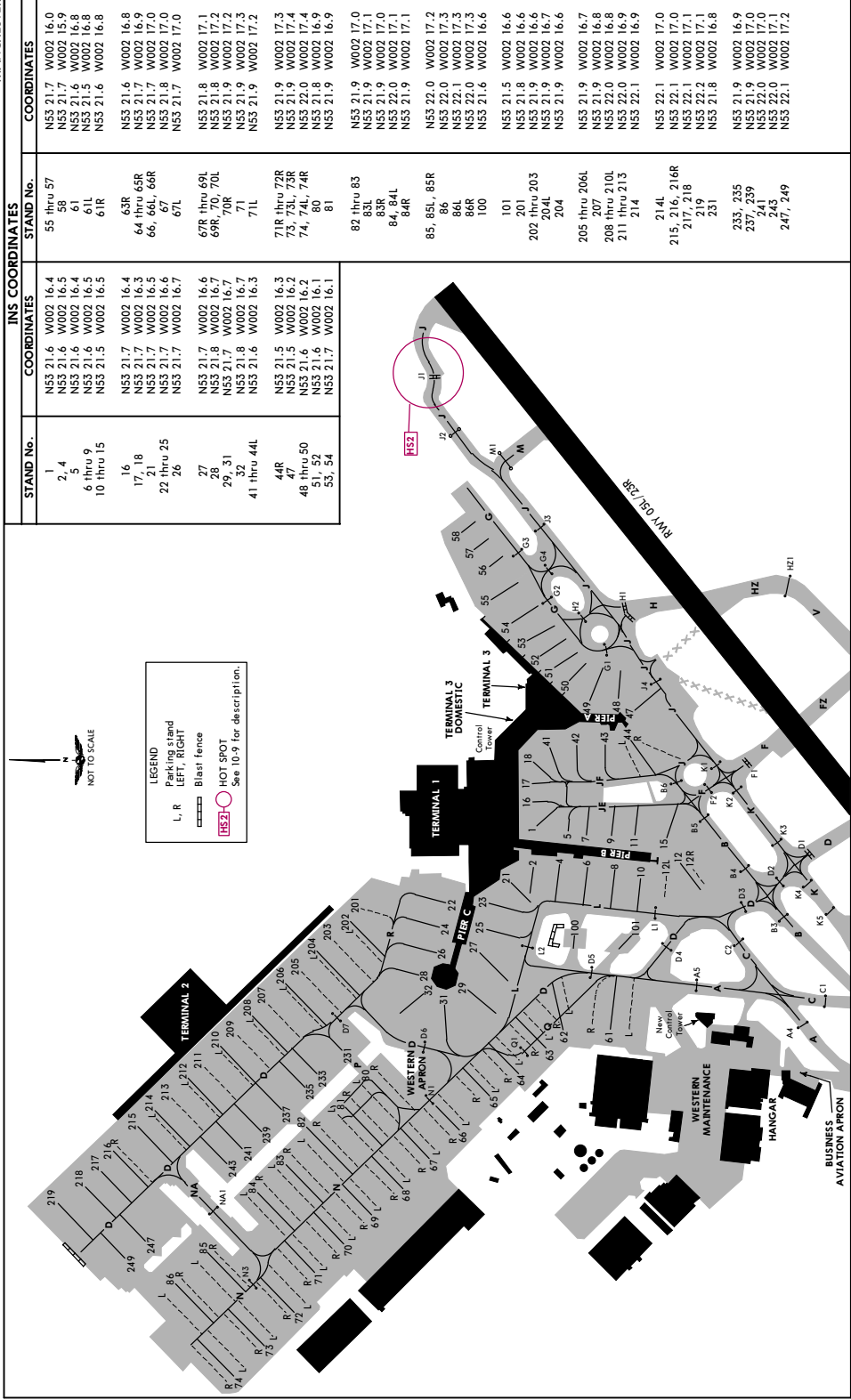
AVERAGE TRACK MILEAGE
21 NM to SONEX

Gnd speed-KT	75	100	150	200	250	300
4.8% V/V (fpm)	365	486	729	972	1215	1458
5.55% V/V (fpm)	422	562	843	1124	1405	1686
12.33% V/V (fpm)	936	1249	1873	2497	3122	3746

SID	RWY	ROUTING/ALTITUDE
SONEX 1R	23R	Climb straight ahead, at MCT 3 DME turn RIGHT, 345° track towards XUMAT, cross MCT 7 DME at or above 2500' (MAX 5000'), at MCT 8 DME turn RIGHT, intercept WAL R-082, cross D33 WAL at 5000', to SONEX at 5000'.
SONEX 1Y	23L	Climb straight ahead, at MCT 3.2 DME turn RIGHT, 345° track towards XUMAT, cross MCT 7 DME at or above 2500' (MAX 5000'), at MCT 8 DME turn RIGHT, intercept WAL R-082, cross D33 WAL at 5000', to SONEX at 5000'.

Rwy	NMT	NM
05R	26	3.5





EGCC/MAN



MANCHESTER, UK
MANCHESTER

ADDITIONAL RUNWAY INFORMATION						USABLE LENGTHS		TAKE-OFF	WIDTH	
RWY						LANDING BEYOND				
						Threshold	Glide Slope			
05L	HIRL (60m)	CL (15m)	HIALS-II	TDZ ①	RVR	8488' 2587m	7577' 2309m	④	148' 45m	
23R	HIRL (60m)	CL (15m)	HIALS-II	TDZ ② ③	RVR	8904' 2714m	7871' 2399m			
① PAPI-R (3.0°) ② PAPI-L (3.0°) ③ HST-BD & AE ④ TAKE-OFF RUN AVAILABLE RWY 05L: From rwy head 9888' (3014m) twy AG int 9091' (2771m) twy AF int 7979' (2432m) twy B int 6680' (2036m) RWY 23R: From rwy head 9505' (2897m) twy M int 8422' (2567m) twy H int 6959' (2121m)										
05R	⑤ 23L	HIRL (61m)	CL (30m)	HIALS	PAPI-L (3.0°)	RVR	9396' 2864m	8363' 2549m	9997' 3047m	148' 45m
⑤ Rwy grooved. ⑥ TAKE-OFF RUN AVAILABLE RWY 23L: From twy T int 10,499' (3200m), includes starter extension of 492'/150m twy VA int 10,240' (3121m) rwy head 10,007' (3050m) twy VB int 9695' (2955m) twy U int 9347' (2849m) twy VC int 8215' (2504m)										

Standard		TAKE-OFF 1					
		LVP must be in Force					
		Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A							
B	125m	150m	200m	250m	400m	500m	
C							
D	150m	200m	250m	300m			
1 Operators applying U.S. Ops Specs: CL required below 300m; approved HUD required below 150m.							

EGCC/MAN



22 JUN 12

10-9Y

Eff 28 Jun

JAA COPTER MINIMUMS

MANCHESTER, UK
MANCHESTER

STRAIGHT-IN RWY		DA(H) / MDA(H)	RVR (ALS/ALS out)
05L	CAT 2 ILS DME	312' (100')	RA 107' - 300m
	ILS DME	412' (200')	500m / 1000m
	LOC	640' (428')	800m / 1000m
	VOR DME	690' (478')	1000m / 1000m
05R	ILS DME	386' (200')	500m / 1000m
	LOC	530' (344')	800m / 1000m
	VOR DME	630' (444')	800m / 1000m
23L	RNAV	680' (453')	1000m / 1000m
	VOR DME	690' (463')	1000m / 1000m
23R	CAT 2 ILS DME	349' (100')	RA 102' - 300m
	ILS DME	449' (200')	500m / 1000m
	LOC	640' (391')	800m / 1000m
	VOR DME	690' (441')	800m / 1000m

CIRCLE-TO-LAND	MDA(H)	VIS
	750' (493')	1000m

TAKE-OFF RWY 05L/R, 23L/R

LVP must be in Force ❶				
RL, FATO LTS, CL & RVR info	RL, FATO LTS & RCLM	Unlit/unmarked defined RWY/FATO	Nil Facilities DAY	Nil Facilities NIGHT
150m	200m	200m	250m ❷	800m

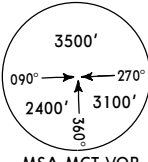
- ❶ Without LVP 400m are stipulated.
❷ Or rejected take-off distance whichever is the greater.

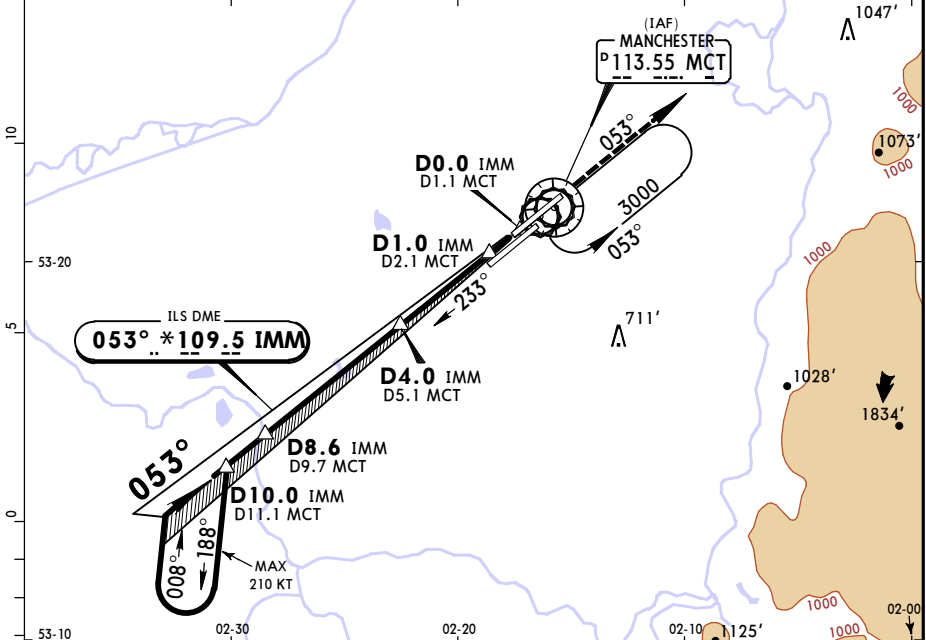
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MANCHESTER

JEPPesen
25 SEP 15 (11-1)

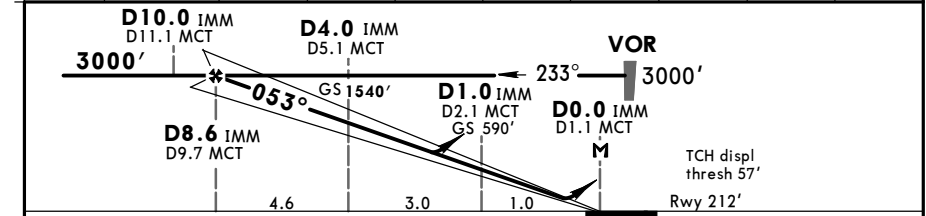
MANCHESTER, UK
ILS DME Rwy 05L

BRIEFING STRIP™

D-ATIS Arrival		MANCHESTER Radar (APP)		MANCHESTER Tower		*Ground		
128.175 113.550		118.575		118.625 119.4		121.850 121.7		
LOC IMM *109.5	Final Aptch Crs 053°	GS D4.0 IMM 1540' (1328')	ILS DA(H) 412' (200')	Apt Elev 257' Rwy 212'				
MISSED APCH: Climb STRAIGHT AHEAD to 3500', then as directed. In case of complete radio failure see 11-01.								
Alt Set: hPa Rwy Elev: 8 hPa Trans level: By ATC Trans alt: 5000' 1. ILS DME reads zero at rwy 05L displaced threshold. 2. WARNING: RA fluctuations may occur due to Bollin Valley.								



LOC (GS out)	IMM DME	8.0	7.0	6.0	5.0	4.0	3.0	2.0	1.0
	MCT DME	9.1	8.1	7.1	6.1	5.1	4.1	3.1	2.1
	ALTITUDE	2810'	2490'	2170'	1860'	1540'	1220'	900'	590'



Gnd speed-Kts	70	90	100	120	140	160		3500'
ILS GS or LOC Descent Angle 3.00°	372	478	531	637	743	849		
MAP at D0.0 IMM/D1.1 MCT								

STRAIGHT-IN LANDING RWY 05L				CIRCLE-TO-LAND			
ILS			LOC (GS out)		CDFA		
DA(H) 412' (200')			DA/MDA(H) 640' (428')		MDA(H)		
FULL	Limited	ALS out	ALS out		Max Kts	MDA(H)	VIS
A					100	750' (493')	1500m
B	RVR 550m	RVR 750m	RVR 1300m		135	820' (563')	1600m
C					180	1110' (853')	2400m
D					205	1110' (853')	3600m

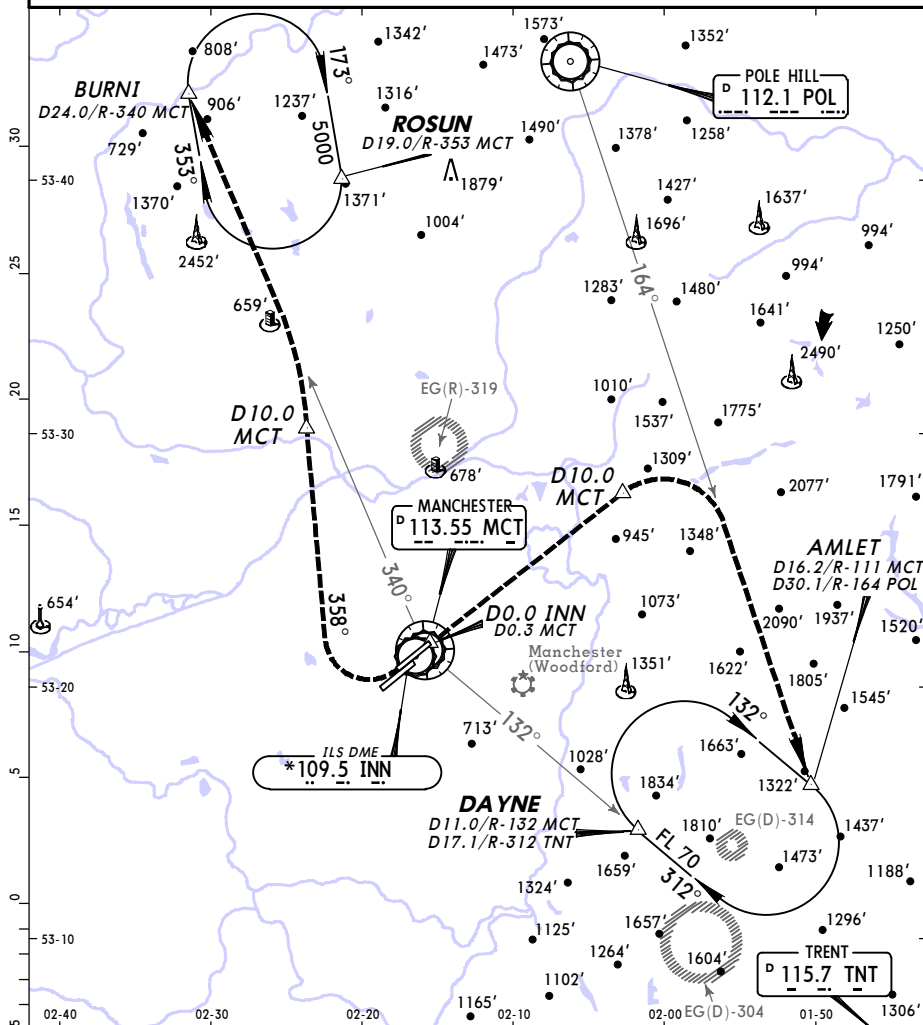
PANS OPS

EGCC/MAN
MANCHESTER

JEPPesen
22 JUN 12 (11-01) Eff 28 Jun

MANCHESTER, UK
Rwy 05L/23R

PROCEDURES TO BE USED IN THE EVENT OF RADIO
FAILURE FOLLOWING A MISSED APPROACH



MISSED APCH:

Rwy 05L: Climb STRAIGHT AHEAD to 3500'. At D10.0 MCT turn RIGHT climbing to FL 70 to intercept and follow R-164 POL to AMLET to enter DAYNE holding.

Ackt unable to reach 3500' at D10.0 MCT, climbing turn LEFT at D10.0 MCT until reaching 3500', before proceeding to DAYNE holding as detailed above.

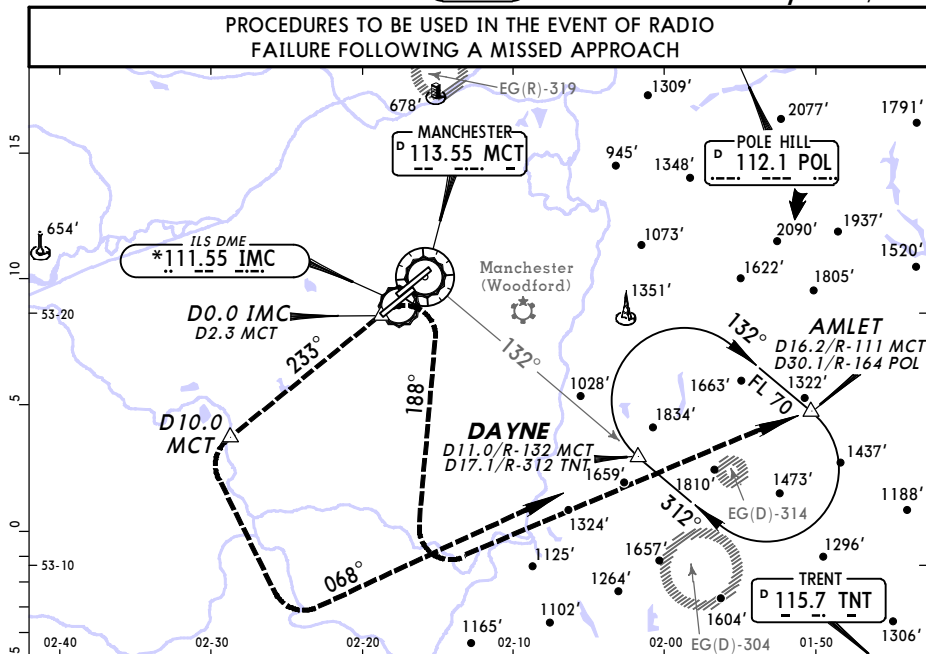
Rwy 23R: Climb to 3500'. STRAIGHT AHEAD until passing 750' or D0.0 INN (D0.3 MCT) inbound, whichever is the later, then turn RIGHT onto track 358°. At D10.0 MCT turn direct to BURNI (D24.0/R-340 MCT) climbing to 5000' to enter ROSUN holding.

Ackt unable to reach 3500' before D10.0 MCT, commence climbing turn LEFT at D10.0 MCT to 3500'. At or above 3500' continue LEFT turn and proceed direct to BURNI.

PANS OPS

CHANGES: Bearings.

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MISSED APCH:

Rwy 05R: Climb to 3500'. **ILS & LOC:** STRAIGHT AHEAD to 700' or D0.0 IMC (D2.3 MCT) inbound, whichever is the later, (**VOR DME:** STRAIGHT AHEAD to 700'), then turn RIGHT onto track 188° climbing to FL 70. When established on track 188° and above 3500' turn LEFT direct to AMLET to join DAYNE holding.

Rwy 23L: Climb STRAIGHT AHEAD to 3500'. At D10.0 MCT turn LEFT onto track 068° continue climbing to FL 70 to enter DAYNE holding.

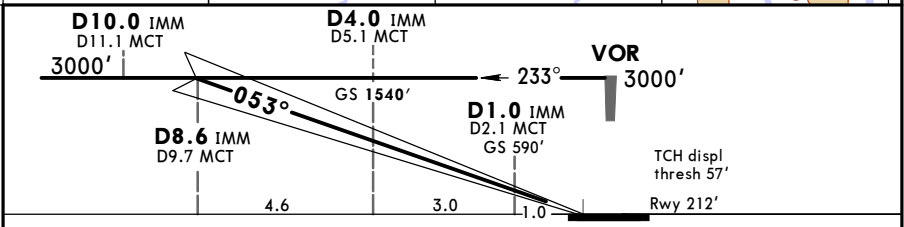
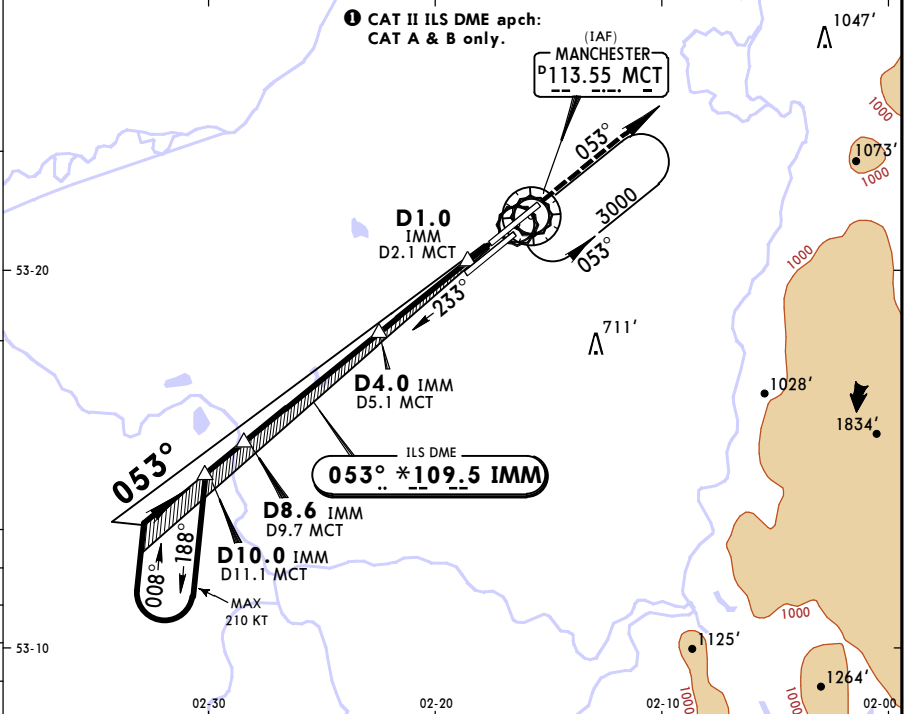
Acft unable to reach 3500' before D10.0 MCT, climbing turn LEFT at D10.0 MCT until reaching 3500', before proceeding to DAYNE holding as detailed above.

EGCC/MAN
MANCHESTER

JEPPesen
25 SEP 15 (11-1A)

MANCHESTER, UK
CAT II/III ILS DME Rwy 05L

D-ATIS Arrival		MANCHESTER Radar (APP)		MANCHESTER Tower		*Ground	
128.175 113.550		118.575		118.625	119.4	121.850	121.7
LOC IMM *109.5	Final Apch Crs 053°	GS D4.0 IMM 1540' (1328')	CAT II & IIIA ILS Refer to Minimums		Apt Elev 257' Rwy 212'		 MSA MCT VOR
MISSED APCH: Climb STRAIGHT AHEAD to 3500', then as directed. In case of complete radio failure see 11-01.							
Alt Set: hPa Rwy Elev: 8 hPa Trans level: By ATC Trans alt: 5000'							
1. Special Aircrew & Acft Certification Required. 2. ILS DME reads zero at rwy 05L displaced threshold. 3. WARNING: RA fluctuations may occur due to Bollin Valley.							



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II PAPI	3500'
GS 3.00°	372	478	531	637	743	849		

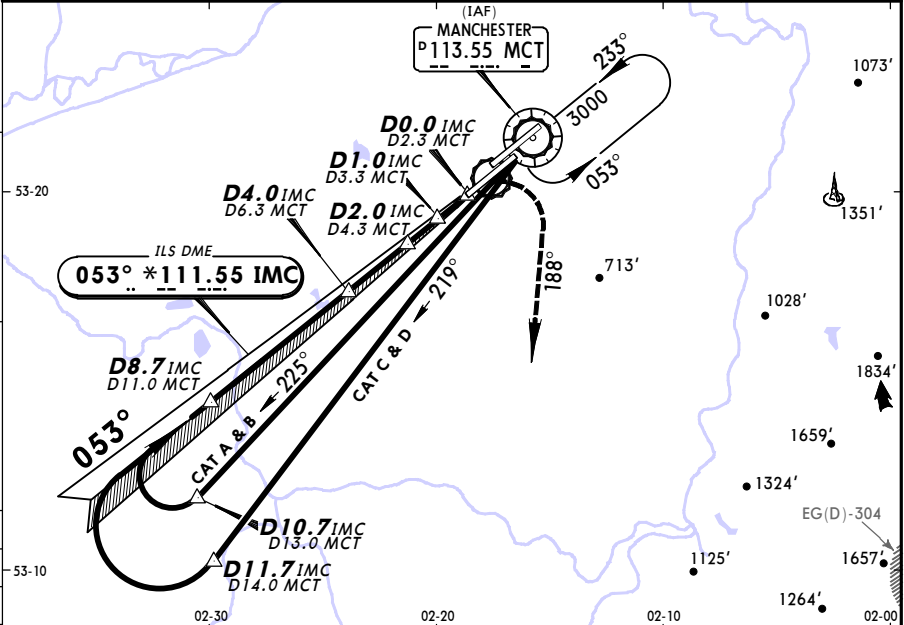
STRAIGHT-IN LANDING RWY 05L		
CAT IIIA ILS	AB RA 107' DA(H) 312'(100')	CAT II ILS CD
DH 50'		
RVR 200m	RVR 300m	NOT AUTHORIZED

EGCC/MAN
MANCHESTER

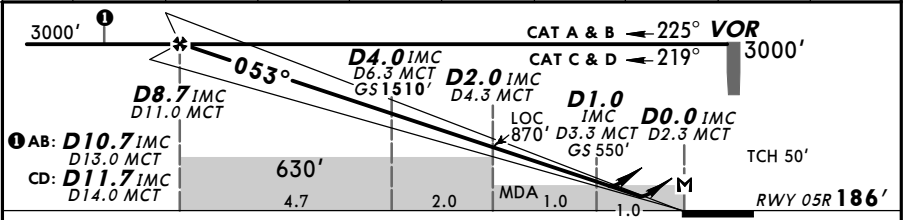
JEPPesen
22 JUN 12 (1-2) Eff 28 Jun

MANCHESTER, UK
ILS DME Rwy 05R

D-ATIS Arrival		MANCHESTER Radar (APP)		MANCHESTER Tower		*Ground	
128.17	113.55	118.57	118.62	119.4	121.85	121.7	
LOC IMC	Final Apch Crs	GS D4.0 IMC	ILS DA(H)	Apt Elev 257'			
*111.55	053°	1510' (1324')	386' (200')	RWY 186'			
MISSED APCH: Climb to 3500'. STRAIGHT AHEAD to 700' or D0.0 IMC (D2.3 MCT) inbound whichever is the later, then turn RIGHT onto track 188°, then as directed. In case of complete radio failure see 11-01A.						Alt Set: hPa Rwy Elev: 7 hPa Trans level: By ATC Trans alt: 5000'	
1. ILS DME reads zero at rwy 05R threshold. 2. Procedure MAX 210 KT.						MSA MCT VOR	



LOC (GS out)	IMC DME	7.0	6.0	5.0	4.0	3.0	2.0	1.0
	MCT DME	10.3	9.3	8.3	7.3	6.3	5.3	4.3
	ALTITUDE	2780'	2460'	2140'	1820'	1510'	1190'	870'



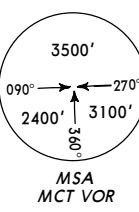
Gnd speed-Kts	70	90	100	120	140	160	HIALS	
ILS GS or LOC Descent Angle 3.00°	372	478	531	637	743	849	PAPI	
MAP at D0.0 IMC/D2.3 MCT							700' D0.0 IMC	

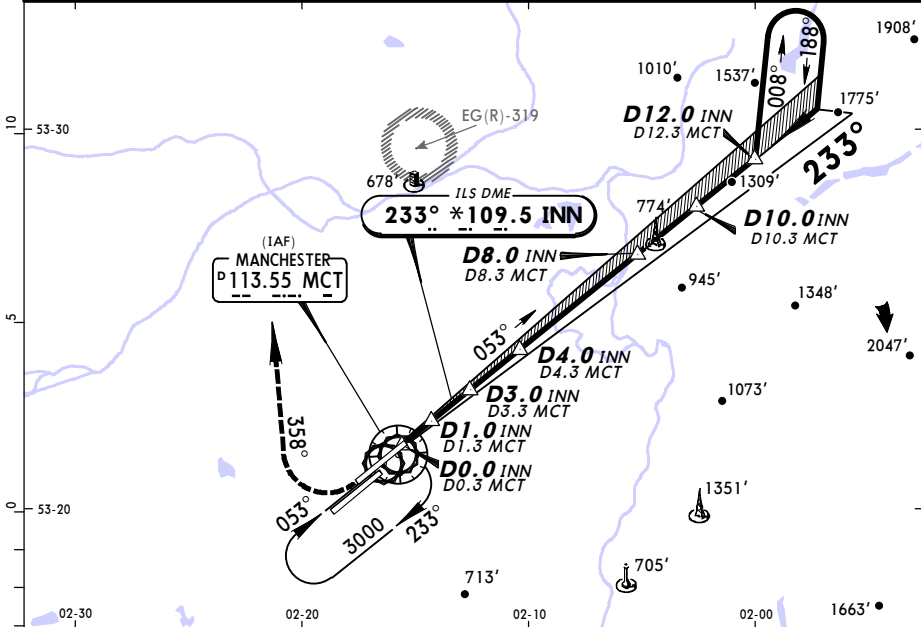
STRAIGHT-IN LANDING RWY 05R				CIRCLE-TO-LAND			
ILS		LOC (GS out) CDFA					
DA(H) 386' (200')		DA/MDA(H) 530' (344')					
FULL	Limited	ALS out	ALS out	Max Kts	MDA(H)	VTS	
A				100	750' (493')	1500m	
B	RVR 550m	RVR 750m	RVR 1200m	135	820' (563')	1600m	
C				180	1110' (853')	2400m	
D				205	1110' (853')	3600m	

EGCC/MAN
MANCHESTER

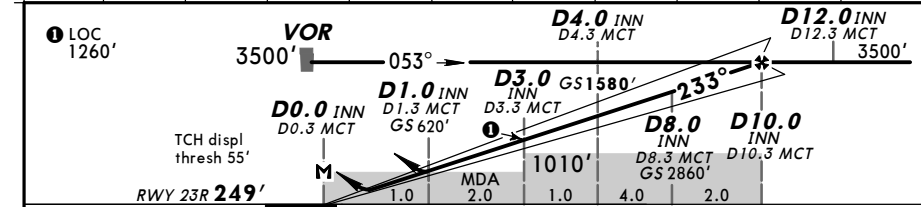
JEPPESON
22 JUN 12 (1-3) Eff 28 Jun

MANCHESTER, UK
ILS DME Rwy 23R

BRIEFING STRIP™	D-ATIS Arrival		MANCHESTER Radar (APP)		MANCHESTER Tower		*Ground	
	128.17	113.55	118.57		118.62	119.4	121.85	121.7
	LOC INN	Final Apch Crs	GS D4.0 INN	ILS DA(H)	Apt Elev 257'			
	*109.5	233°	1580' (1331')	449' (200')	RWY 249'			
	MISSED APCH: Climb to 3500'. STRAIGHT AHEAD until passing 750' or D0.0 INN (D0.3 MCT) inbound, whichever is the later, then turn RIGHT onto track 358°, then as directed. For separation from departing traffic RWY 23L expedite climb through 750' before commencing RIGHT turn onto 358°. In case of complete radio failure see 11-01.							
Alt Set: hPa		Rwy Elev: 9 hPa		Trans level: By ATC		Trans alt: 5000'		
ILS DME reads zero at rwy 23R displaced threshold.								



LOC (GS out)	INN DME	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
	MCT DME	1.3	2.3	3.3	4.3	5.3	6.3	7.3	8.3	9.3
	ALTITUDE	620'	940'	1260'	1580'	1900'	2220'	2540'	2860'	3180'



Gnd speed-Kts	70	90	100	120	140	160		
ILS GS or LOC Descent Angle	372	478	531	637	743	849		
MAP at D0.0 INN/D0.3 MCT							750' D0.0 INN ↑ whichever later ↑	

PANS OPS		Standard				STRAIGHT-IN LANDING RWY 23R				CIRCLE-TO-LAND										
		ILS				LOC (GS out)				CDFA										
		DA(H) 449' (200')				DA/MDA(H) 640' (391')														
		FULL		Limited	ALS out	ALS out		Max Kts	MDA(H)		VIS									
		A	B	C	D	RVR 550m	RVR 750m	RVR 1200m	RVR 1100m	RVR 1500m	RVR 1800m	100	135	180	205	750' (493')	820' (563')	1110' (853')	1500m	1600m

CHANGES: Bearings. Minimums.

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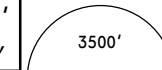
EGCC/MAN
MANCHESTER

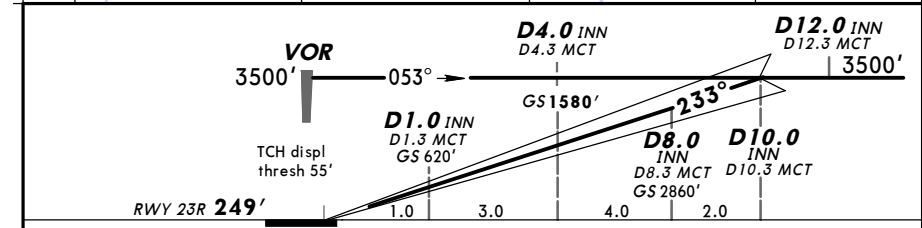
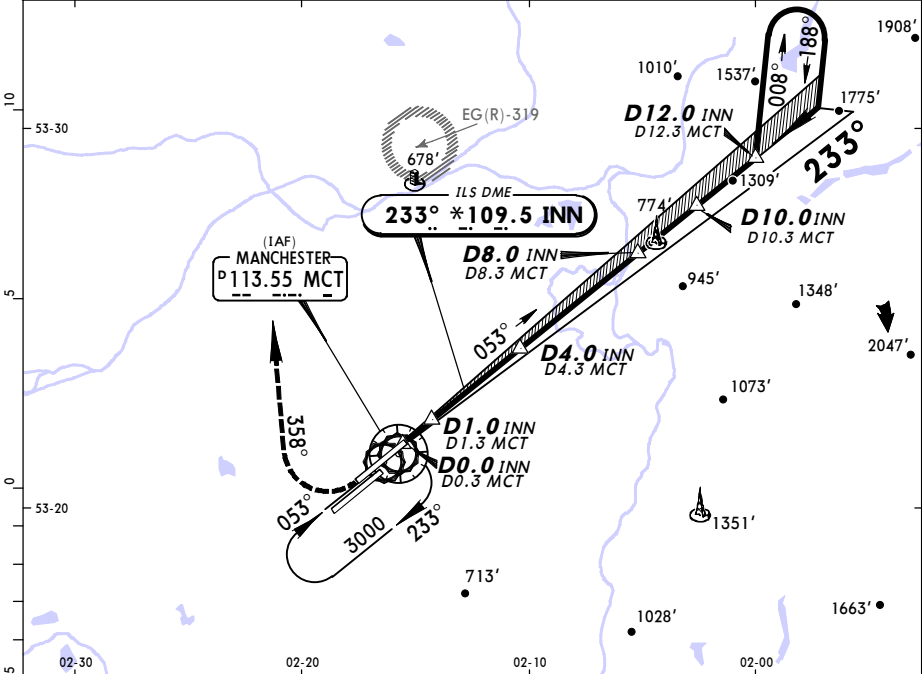
22 JUN 12
Eff 28 Jun

JEPPesen

MANCHESTER, UK
11-3A CAT II/III ILS DME Rwy 23R

BREFFING STRIP™

D-ATIS Arrival		MANCHESTER Radar (APP)		MANCHESTER Tower		*Ground	
128.17	113.55	118.57		118.62	119.4	121.85	121.7
LOC INN	Final Apch Crs	GS D4.0 INN	CAT II & IIIA ILS Refer to Minimums	Apt Elev 257'			
*109.5	233°	1580' (1331')		RWY 249'			
MISSED APCH: Climb to 3500'. STRAIGHT AHEAD until passing 750' or D0.0 INN (D0.3 MCT) inbound, whichever is the later, then turn RIGHT onto track 358°, then as directed. For separation from departing traffic RWY 23L expedite climb through 750' before commencing RIGHT turn onto 358°. In case of complete radio failure see 11-01.							
Alt Set: hPa		Rwy Elev: 9 hPa		Trans level: By ATC		Trans alt: 5000'	
1. Special Aircrew & Acft Certification Required. 2. ILS DME reads zero at rwy 23R displ threshold.							



Gnd speed-Kts		70	90	100	120	140	160	HIALS-II PAPI </	
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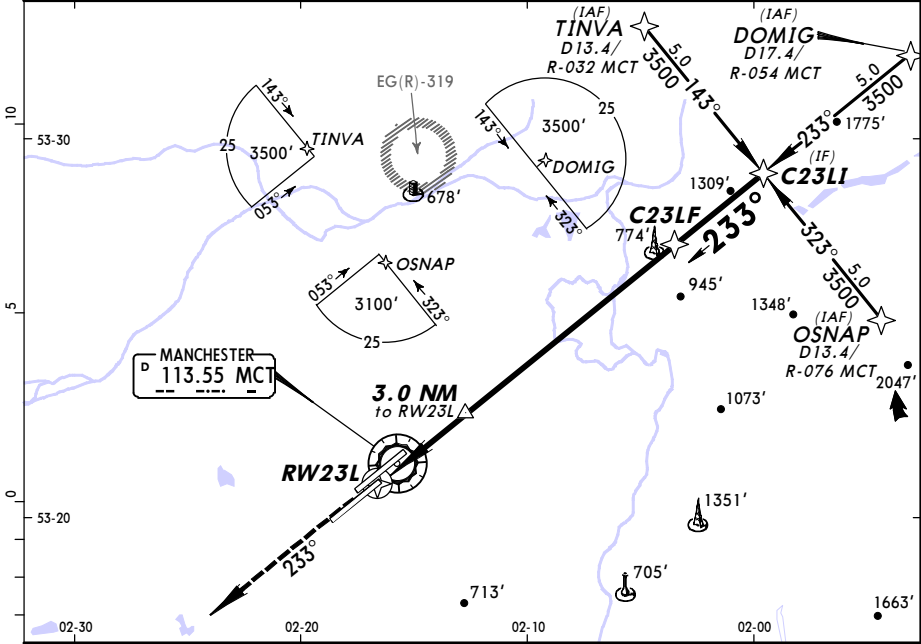
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MANCHESTER

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22 JUN 12
Eff 28 Jun (12-1)

MANCHESTER, UK
RNAV (GNSS) Rwy 23L

BRIEFING STRIP™

D-ATIS Arrival		MANCHESTER Radar (APP)		MANCHESTER Tower		*Ground	
128.17	113.55	118.57		118.62	119.4	121.85	121.7
RNAV	Final Apch Crs 233°	Procedure Alt C23LF 3500' (3273')	LNAV/VNAV DA(H) 680' (453')	Apt Elev 257'	TAA 25 NM IAF		
MISSED APCH: Climb STRAIGHT AHEAD to 3500', then as directed. In case of complete radio failure see 11-01A.							
Alt Set: hPa Rwy Elev: 8 hPa Trans level: By ATC Trans alt: 5000'							
1. Pilots should request RNAV approach on first contact with Radar. 2. Procedure MAX 185 KT. 3. Baro-VNAV not authorized below -15°C.							



5

DIST to RW23L	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
ALTITUDE	910'	1230'	1550'	1870'	2190'	2510'	2820'	3140'	3460'

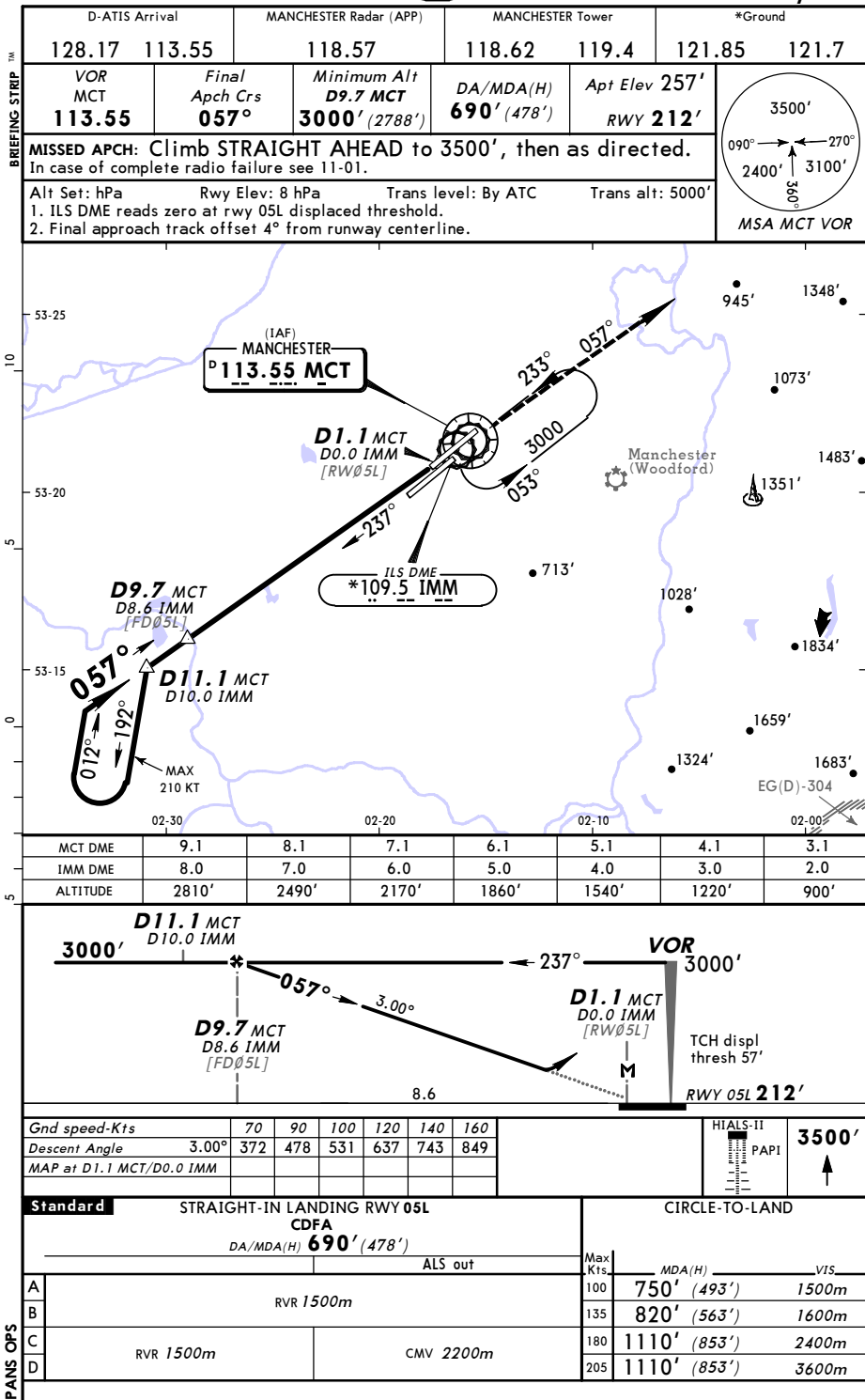
CHANGES: Bearings. Minimums.

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22 JUN 12 (13-1) Eff 28 Jun

MANCHESTER, UK
VOR DME Rwy 05L

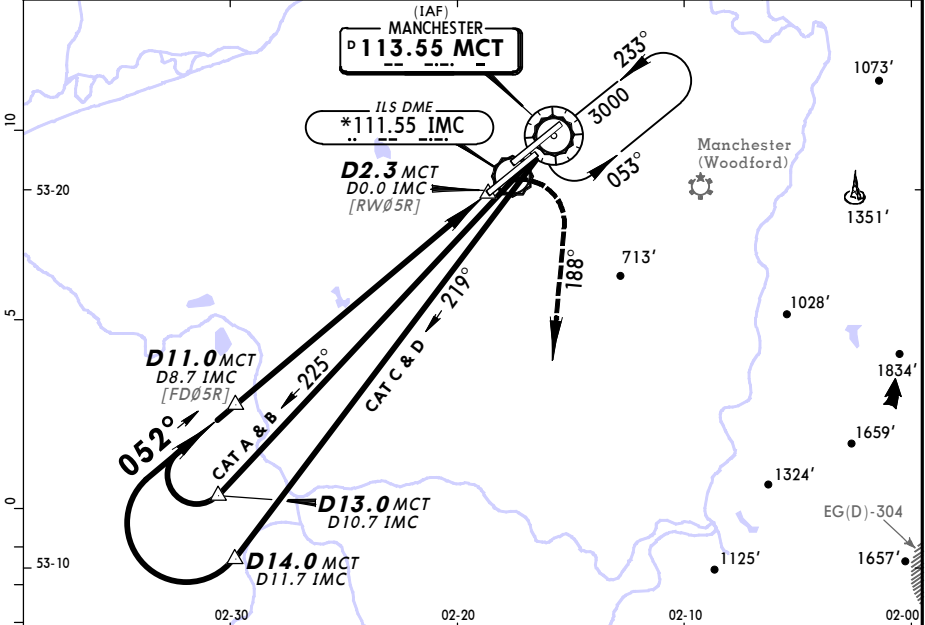


EGCC/MAN
MANCHESTER

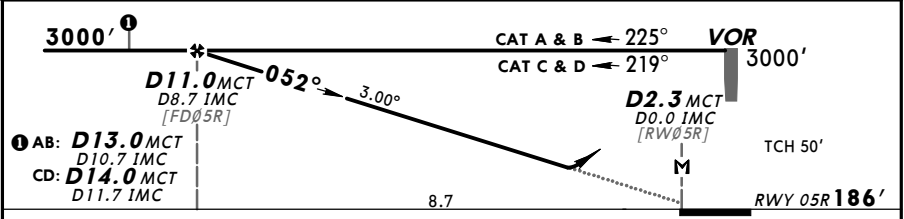
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22 JUN 12 (13-2) Eff 28 Jun

MANCHESTER, UK
VOR DME Rwy 05R

D-ATIS Arrival		MANCHESTER Radar (APP)		MANCHESTER Tower		*Ground	
128.17	113.55	118.57		118.62	119.4	121.85	121.7
VOR MCT 113.55	Final Apch Crs 052°	Minimum Alt D11.0 MCT 3000' (2814')	DA/MDA(H) 630' (444')	Apt Elev 257' RWY 186'			
MISSED APCH: Climb to 3500'. STRAIGHT AHEAD to 700', then turn RIGHT onto track 188°, then as directed. In case of complete radio failure see 11-01A.							
Alt Set: hPa Rwy Elev: 7 hPa Trans level: By ATC Trans alt: 5000' 1. ILS DME reads zero at rwy 05R threshold. 2. Final apch track offset 0.9° from rwy centerline. 3. Procedure MAX 210 KT.							



MCT DME	10.0	9.0	8.0	7.0	6.0	5.0	4.0
IMC DME	7.7	6.7	5.7	4.7	3.7	2.7	1.7
ALTITUDE	2680'	2360'	2050'	1730'	1410'	1090'	780'



Gnd speed-Kts	70	90	100	120	140	160		700'	188°	3500'
Descent Angle	3.00°	372	478	531	637	743		↑	RT	↑
MAP at D2.3 MCT/D0.0 IMC										

Standard STRAIGHT-IN LANDING RWY 05R				CIRCLE-TO-LAND		
CDFA						
DA/MDA(H) 630' (444')						
ALS out				Max Kts	MDA(H)	VIS
RVR 1400m				100	750' (493')	1500m
				135	820' (563')	1600m
CMV 2100m				180	1110' (853')	2400m
				205	1110' (853')	3600m

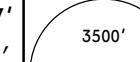
CHANGES: Bearings.

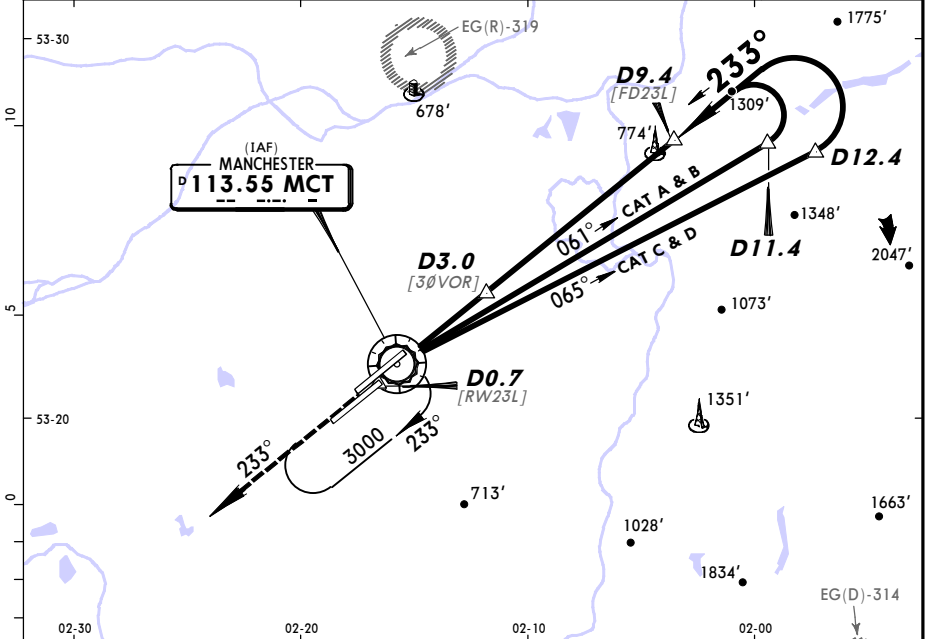
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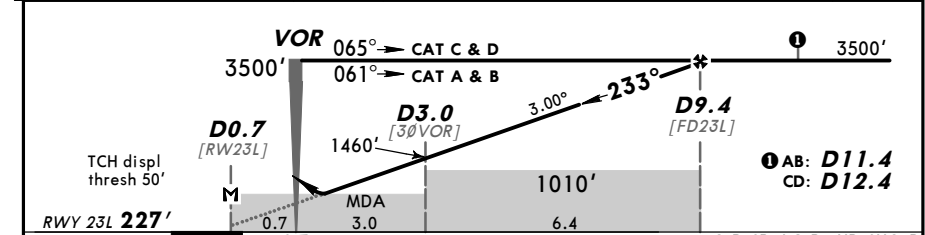
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22 JUN 12 **13-3** **Eff 28 Jun**

MANCHESTER, UK
VOR DME Rwy 23L

BRIEFING STRIP™	D-ATIS Arrival		MANCHESTER Radar (APP)		MANCHESTER Tower		*Ground	
	128.17 113.55		118.57		118.62 119.4		121.85 121.7	
	VOR MCT	Final Apch Crs	Procedure Alt D9.4	DA/MDA(H)	Apt Elev 257'			
	113.55	233°	3500' (3273')	690' (463')	RWY 227'			
	MISSED APCH: Climb STRAIGHT AHEAD to 3500', then as directed. In case of complete radio failure see 11-01A.							
	Alt Set: hPa		Rwy Elev: 8 hPa		Trans level: By ATC		Trans alt: 5000'	
MSA MCT VOR								



MCT DME	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
ALTITUDE	820'	1140'	1460'	1780'	2100'	2420'	2730'	3050'	3370'



Gnd speed-Kts	70	90	100	120	140	160	HIALS	
Descent Angle	3.00°	372	478	531	637	743	PAPI	3500'
MAP at D0.7								

Standard STRAIGHT-IN LANDING RWY 23L				CIRCLE-TO-LAND			
CDFA							
DA/MDA(H) 690' (463')							
ALS out				Max Kts	MDA(H)	VIS	
A RVR 1500m				100	750' (493')	1500m	
B				135	820' (563')	1600m	
C RVR 1500m				180	1110' (853')	2400m	
D CMV 2200m				205	1110' (853')	3600m	

PANS OPS

Chart changes since cycle 12-2016

ADD = added chart, REV = revised chart, DEL = deleted chart.
ACT PROCEDURE IDENT INDEX REV DATE EFF DATE

MANCHESTER, (MANCHESTER - EGCC)

TERMINAL CHART CHANGE NOTICES

No Chart Change Notices for Airport EGCC

Chart Change Notices for Country GBR

Type: Gen Tmnl

Effectivity: Permanent

Begin Date: Immediately

End Date: No end date

The following Take-off minima according to Commission Regulation No. 965/2012 (EASA Air Operations Regulation) are applicable for Low Visibility Take-off Operations within the UK FIR for CAT ABCD aircraft: 1. With RL and RCLM during day or with RL or CL during night: RVR 300m 2. With RL and CL: RVR 200m 3. With RL and CL and TDZ, MID and RO RVR: RVR 150m 4. With HIRL and CL and TDZ, MID and RO RVR: RVR 125m 5. On CAT III RWYs with approved guidance system or HUD/HUDLS: RVR 75m