

## **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: 0808 Z  
Sunset: 1552 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 Tower: 118.625  
Manchester Tower: 119.400  
Manchester Ground Ground: 121.850  
Manchester Ground Ground: 121.700

Manchester Delivery Clearance Delivery: 121.700  
Manchester Radar Approach: 118.575  
Manchester Radar Approach: 135.000  
Scottish Control ACC: 128.055  
Scottish Control ACC: 134.425  
Manchester Direct (Approach Control Radar): 121.350  
Scottish Control ACC: 136.575

**EGCC/MAN**  
**MANCHESTER****JEPPESEN**  
17 NOV 17 **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. GENERAL****1.3. LOW VISIBILITY PROCEDURES (LVP) DURING CAT II/III OPERATIONS****1.3.1. GENERAL**

Pilots will be informed by Arrival and Departure ATIS or by RTF when these procedures are in operation.

- Departing ACFT: ATC will require departing ACFT to use the following holding points:

RWY 23R: J1, M1.

RWY 05L: A1, AG1, AF1.

- Arriving ACFT: All appropriate RWY exits will be illuminated and pilots should select the first convenient exit. Pilots are to delay the call "RWY vacated" until the ACFT has completely passed the end of the green/yellow color-coded TWY CL lights. These lights denote the extent of the ILS LSA.
- Surface Movement Radar (SMR) is available to monitor pilot "RWY vacated" reports. TWYs lit stopbar block-to-block ACFT separation in operation at or below RVR 200m.

- 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.

**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 J4).

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).

It is not recommended by ACFT manufacturers to conduct operational towing when ACFT contains passengers, cargo or fuel. Airline operators shall satisfy themselves that operational towing can be conducted and ensure any restrictions to undertake towing maneuvers are communicated to relevant ground handling agent and Manchester APT. It remains the airline operator's responsibility to assess the risks associated with push-back or towing procedure.

**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 stands (except stands 12L and 21), stands 202 thru 211 on Terminal 2 and all Terminal 3 stands (except stands 44 and 56 thru 58) equipped with SAFEDOCK.

On stands 12L, 21, 44, 56 thru 58, 100, 101, 201 and 213 thru 247 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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AIRPORT BRIEFING

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## 1. GENERAL

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### 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.

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## 2. ARRIVAL

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### 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 and 23R, subject to serviceability of the required facilities, are suitable for CAT II/III operations. However, due to terrain profile, RWY 05L CAT II approaches may only be made by ACFT CAT A and B (Vat not greater than 120 KT), and when the 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 utilization 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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AIRPORT BRIEFING

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## 2. ARRIVAL

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### 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.

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## 3. DEPARTURE

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### 3.1. START-UP, PUSH-BACK AND 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.

ACFT that require to depart from holding position T1 on RWY 23L for performance reasons must inform MANCHESTER Delivery prior to requesting push-back.

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MANCHESTER, UK  
AIRPORT BRIEFING**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](mailto: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.



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15 MAY 15 **10-1P6****Eff 28 May****MANCHESTER, UK**  
**AIRPORT BRIEFING****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:

<b>Via</b>	<b>Termination preferential route</b>
- 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**

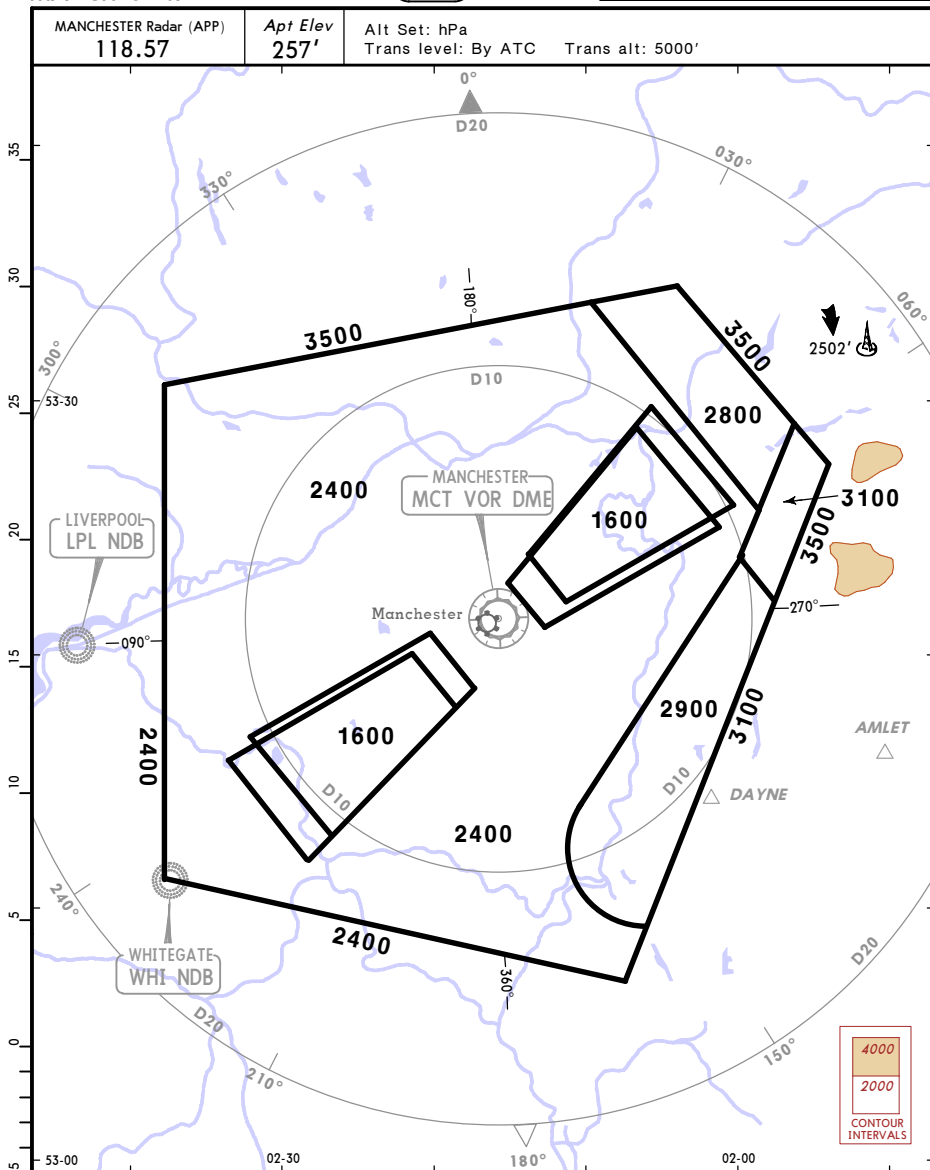
When lined up for take-off from RWY 05L/23R, the full length of the RWY surface may not be visible from the flight deck.

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7 FEB 14 (10-1R)

MANCHESTER, UK

**RADAR MINIMUM ALTITUDES**



#### OUTSIDE THE DESIGNATED RADAR MINIMUM ALTITUDE AREA

The minimum altitude to be allocated by the radar controller will be either the Minimum Sector Altitude or 1000' above any fixed obstacles:

- within 5 NM ① of the aircraft and
- within the sector 15 NM ② ahead of and within 20° either side of the aircraft's track.

3 NM ① or 10 NM ② when the aircraft is within 15 NM of the radar antennae.

PROCEDURE	LOSS OF COMMUNICATION PROCEDURE
<b>INITIAL APPROACH</b>	Continue visually or by means of an appropriate approved final approach aid. If not possible proceed to DAYNE holding via AMLET or ROSUN holding via BURNI at FL60 or last assigned level if higher, as appropriate to the final approach chart.
<b>INTERMEDIATE AND FINAL APPROACH</b>	Continue visually or by means of an appropriate final approach aid. If not possible follow the Missed Approach Procedure to DAYNE holding via AMLET or ROSUN holding via BURNI, as appropriate to the final approach chart.

CHANGES: Eastern sectors & altitudes revised.

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**JEPPesen** **MANCHESTER UK**  
2 JUN 17 **10-2** **STAR**

D-ATS	Alt Set: hPa
128.175	Transmitted By ATC
257	Altitude in feet
113.55	Altitude in feet
	space from NORTHEAST will route via SETEL.

**DALEY 2A [DALE2A]**  
**DALEY 2B [DALE2B]**  
**DALEY 4D [DALE4D]**  
**ARRIVALS**

**TO BE USED WHEN MCT UNSERVICEABLE**  
**SPEED: CROSS SLP OR 3 MIN BEFORE**  
**HOLDING: FACILITY AT 250 KT OR**  
**LESS WHEN AT FL140 OR BELOW**

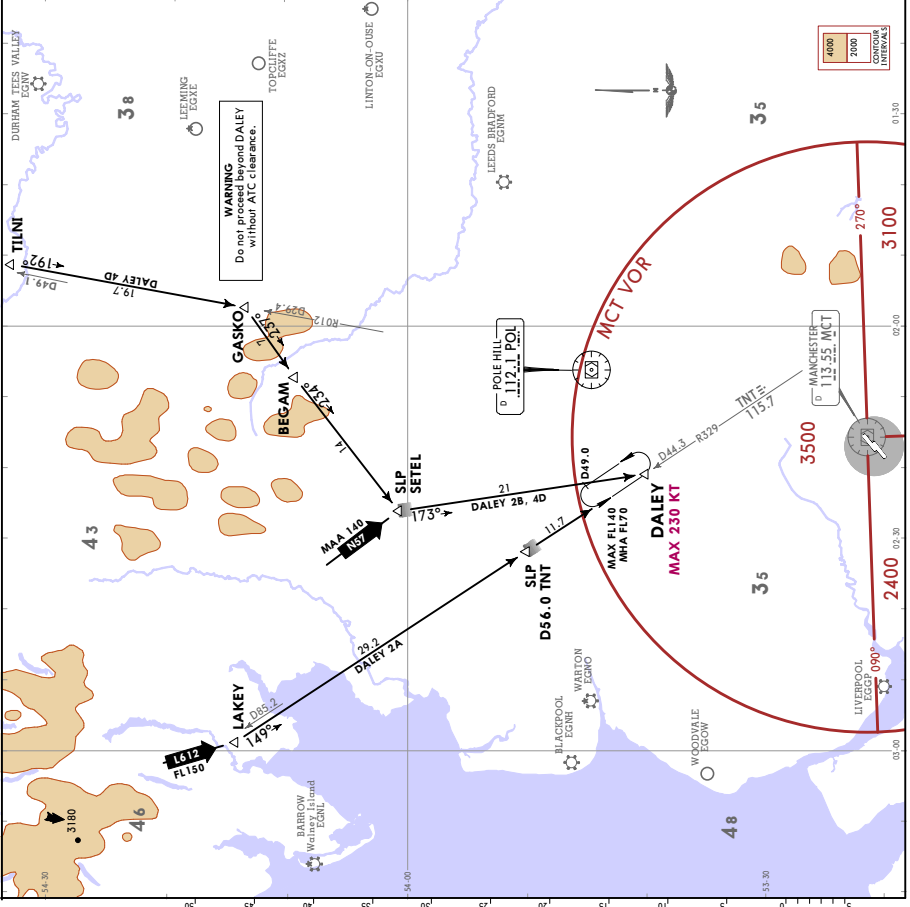
**DESCENT PLANNING/**  
**ATC REQUIREMENTS**

When determining top of descent point, pilots should plan for a 10 NM before LAKEV, DALEY 2A: FL230 by TILNI, and for possible clearance to lower holding level if ATC by DALEY. Pilots should to empty and notify ATC as soon as possible.

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

**ROUTING**

**DALEY 2A** At LAKEV turn LEFT, intercept TINT R329 inbound to DALEY.  
**DALEY 2B** At SETEL turn RIGHT, 173° track to DALEY.  
**DALEY 4D** At TILNI, intercept POL R012 inbound to DALEY. Turn LEFT, 173° track to SETEL, turn LEFT, 173° track to DALEY.



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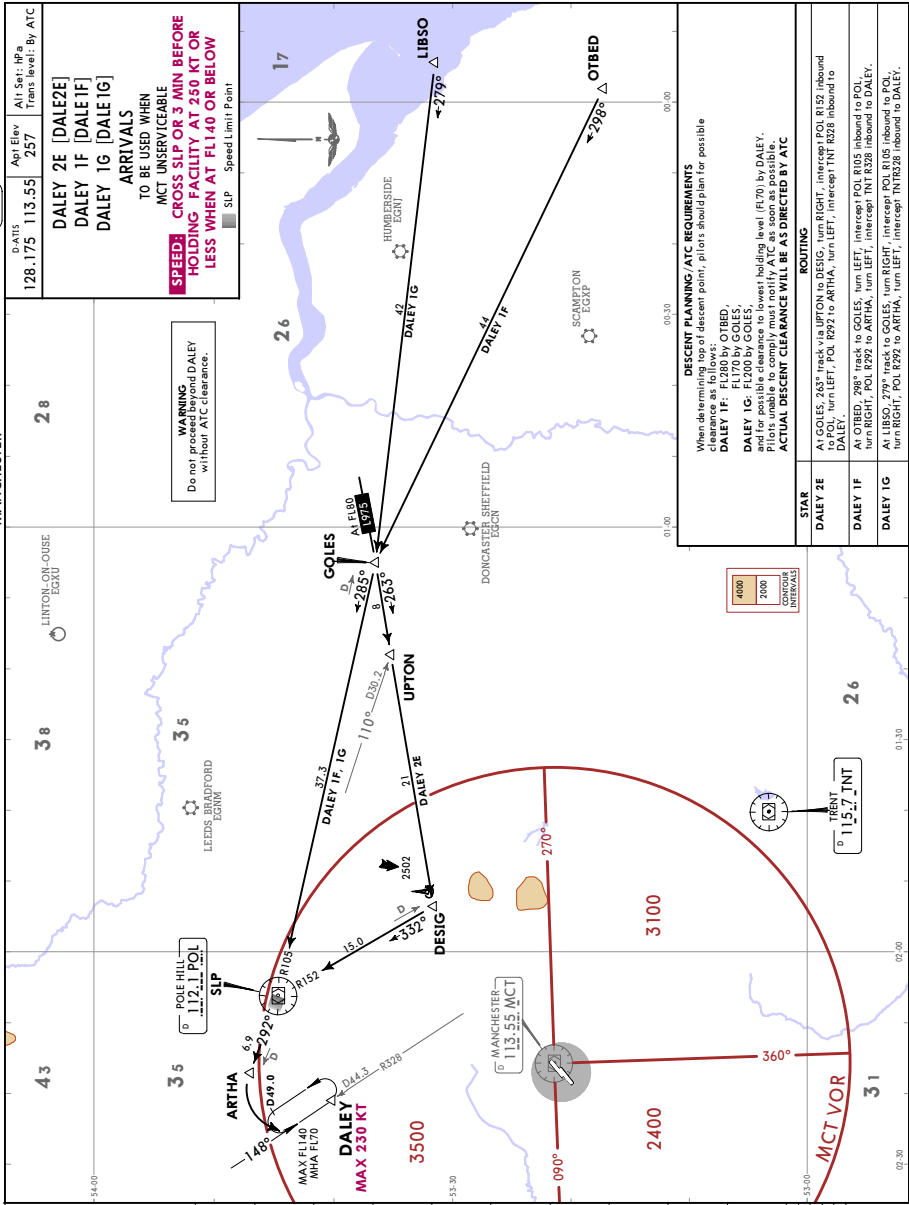
CHANGES: New format.

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JEPPESEN MANCHESTER, UK  
2 JUN 17 (10-2A) STAR

DAITS	Alt Elev	All Set: RPA
128.175 113.55	257	Trans level: By ATC
DALEY 2E [DALE2E] DALEY 1F [DALE1F] DALEY 1G [DALE1G]		
ARRIVALS		
TO BE USED WHEN MCT UNSERVICEABLE		
<b>SPEED: CROSS SLP OR 3 MIN BEFORE HOLDING FACILITY AT 250 KT OR LESS WHEN AT FL140 OR BELOW</b>		
SLP		Speed Limit Point

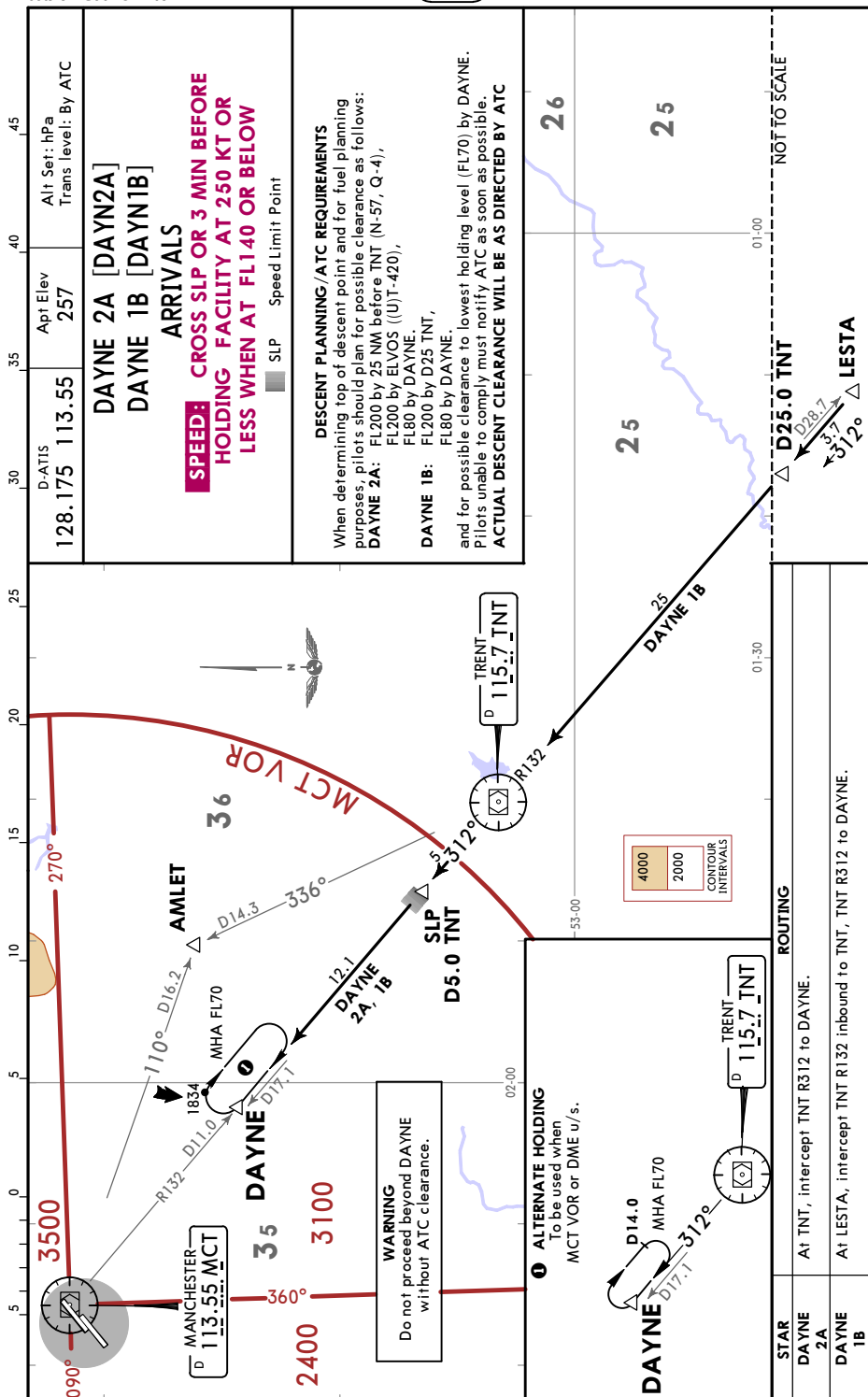
**WARNING**  
Do not proceed beyond DALEY  
without ATC clearance.



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JEPPesen  
27 OCT 17 (10-2B) Eff 9 Nov

MANCHESTER, UK  
STAR



CHANGES: None.

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27 OCT 17 (10-2E) Eff 9 Nov

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STAR

D-ATIS  
128.175 113.55

Apt Elev  
257

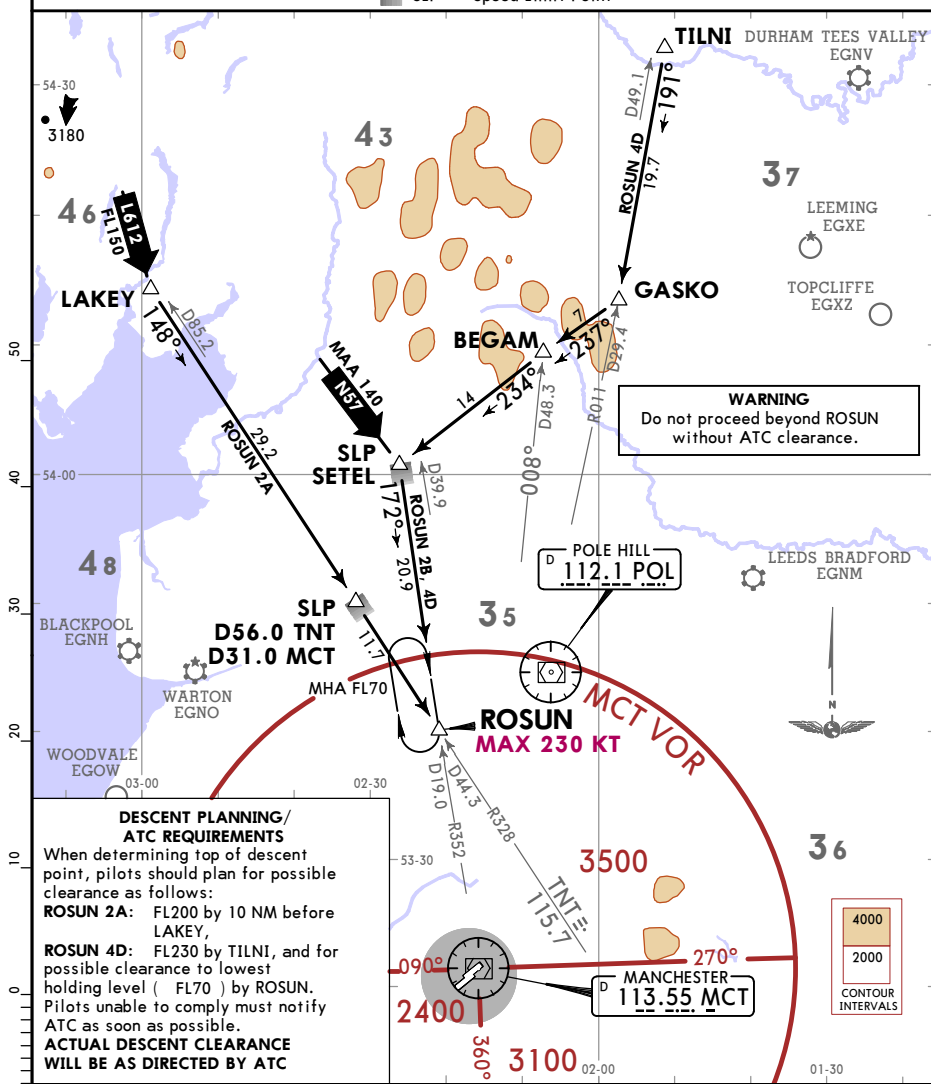
Alt Set: hPa  
Trans level: By ATC  
Aircraft joining controlled airspace from NORTHEAST  
will route via SETEL.

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

WHEN MCT VOR UNSERVICEABLE REFER TO STARS DALEY 2A, 2B & 4D ON CHART 10-2

**SPEED:** CROSS SLP OR 3 MIN BEFORE HOLDING FACILITY AT 250 KT OR LESS WHEN AT FL140 OR BELOW

SLP Speed Limit Point



STAR	ROUTING
ROSUN 2A	At LAKEY turn LEFT, intercept TNT R328 inbound to ROSUN.
ROSUN 2B	At SETEL turn RIGHT, intercept MCT R352 inbound to ROSUN.
ROSUN 4D	At TILNI, intercept POL R011 inbound to GASKO, turn RIGHT, 237° track to BEGAM, turn LEFT, 234° track to SETEL, turn LEFT, intercept MCT R352 inbound to ROSUN.

CHANGES: None.

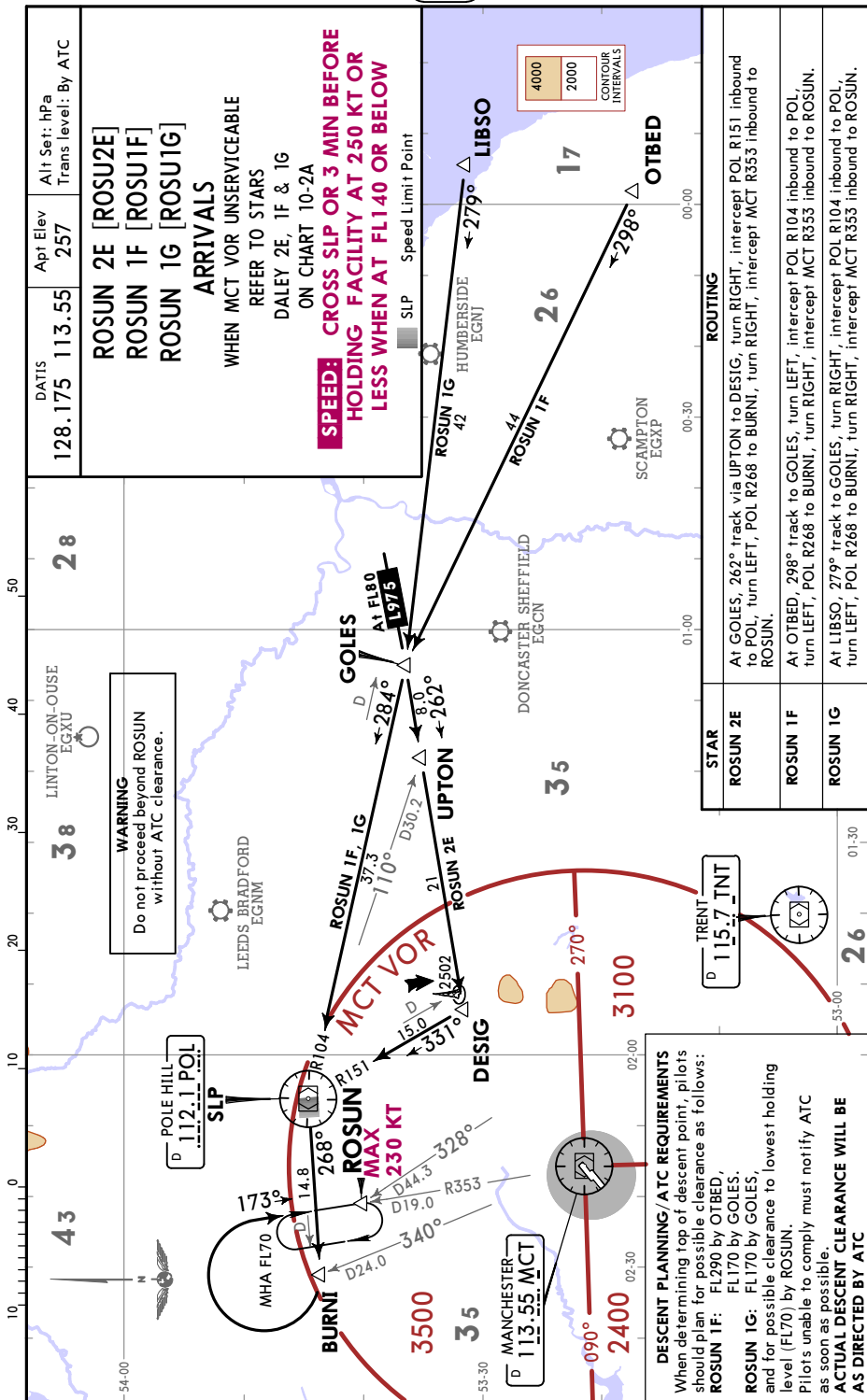
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2 JUN 17 (10-2F)

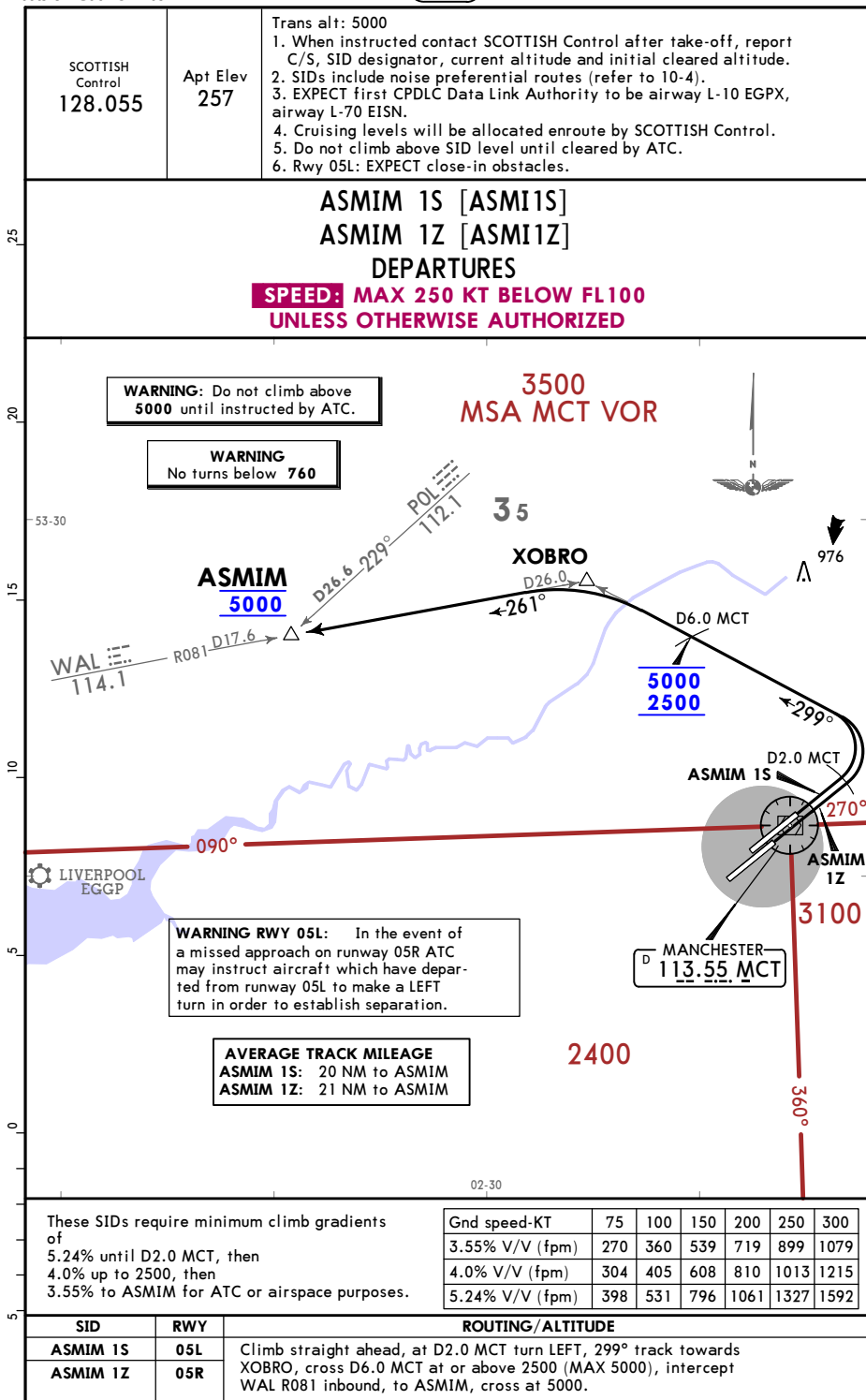
MANCHESTER, UK  
STAR



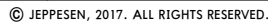
EGCC/MAN  
MANCHESTER

JEPPESEN  
27 OCT 17 10-3 Eff 9 Nov

MANCHESTER, UK  
SID



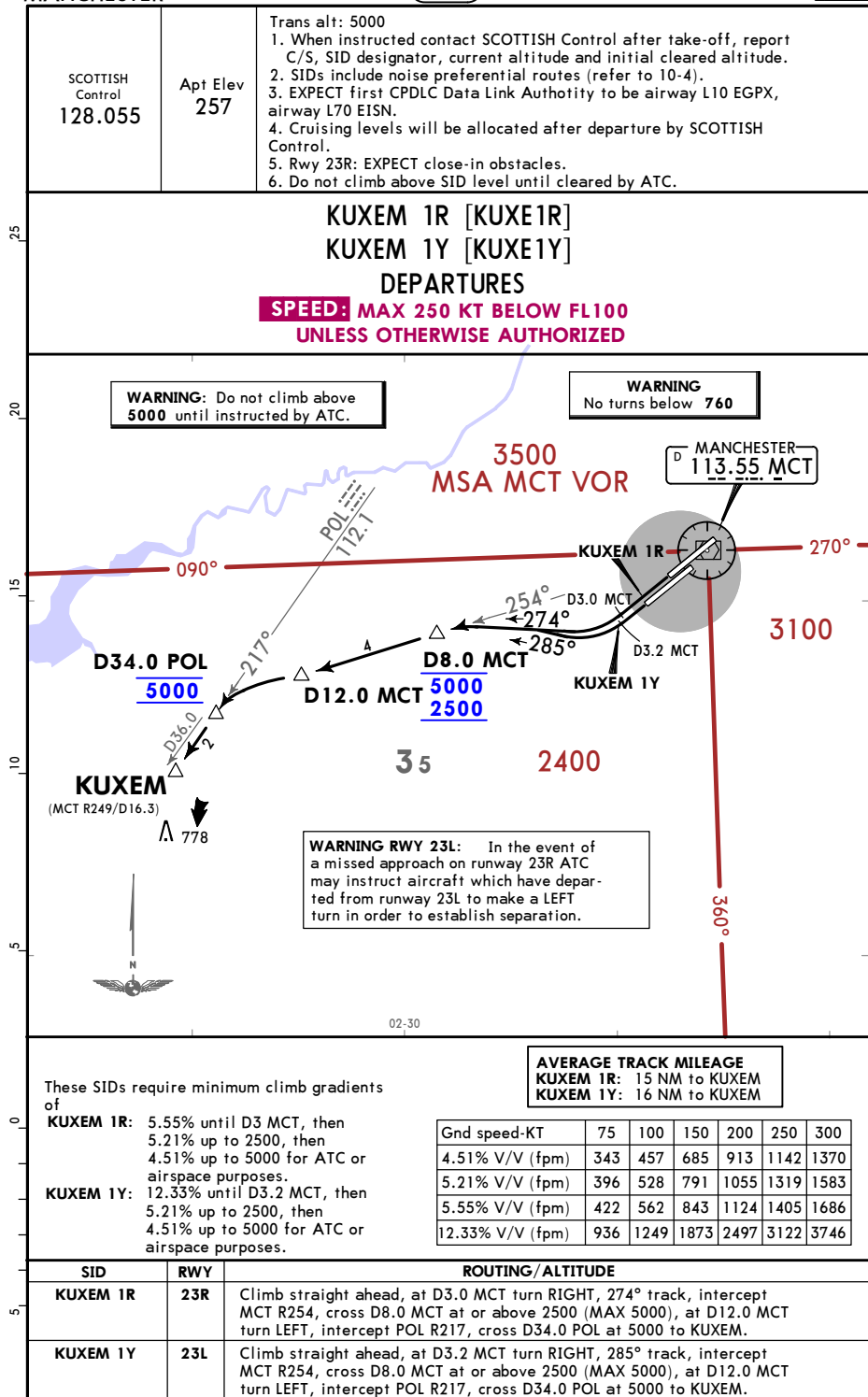




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27 OCT 17 (10-3C) Eff 9 Nov

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SID



EGCC /MAN  
MANCHESTER

SCOTTISH  
Elev  
134.425

Apt Elev  
257

Trans alt: 5000

1. Master enroute context: 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. Climb to 3500 ft (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 required to climb to 3500 ft and then descend to 3000 ft. Pilots unable to accept a SANBA SID when offered must inform ATC.
6. Rwy 23R: EXPECT close-in obstacles.



53.30



2502



3500

25

20

15

10

5

0

-5

-10

2 JUN 17 (10-3D) **JEPPESEN MANCHESTER, UK** **STD**

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

DEPARTURES  
RESTRICTED USE

VIA AIRWAYS AND FOR LEAVING  
CONTROLLED AIRSPACE VIA T1  
**SPEED: MAX 250 KT BELOW FL100**  
**UNLESS OTHERWISE AUTHORIZED**

Available to non-jet ACFT and the following jet ACFT up to 35000 KG MTOW. Bae 146 (Avro RJ series); Embraer E135, E145; Bombardier CRJ1/2/7/9; BD-700 Global Express; Gulfstream G550; etc.  
**Pilots must ensure adherence to clearance as issued by ATC.**

These SIDs require minimum climb gradients

**LISTO 2R:** 14.6% until D2.0 MCT, then 6% up to 5000 for ATC or airspace purposes.

**LISTO 2Y:** 14.6% until D3.2 MCT for ATC or airspace purposes.

Grid 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	3121	3746
14.6% V/V (fpm)	1109	1479	2218	2957	3696	4436

35

3100

35

**WARNING:** Do not climb above 3000 until instructed by ATC.

**WARNING**  
No turn below 760.

**WARNING RWY 23L:** In the event of a missed approach, RWY 23L may be used by aircraft which have departed from runway 23L to make a LEFT turn in order to establish separation.

**SPEED PROFILE**  
Speed profile applies to all ACFT following these SIDs unless cancelled by ATC.  
Jet traffic MTOW above 35000 KG:  
280-290 KT between FL100 & FL260.  
Jet traffic MTOW below 35000 KG & all non-jet traffic: 210-250 KT until FL260.  
Pilots must ensure adherence to ATC clearance obtaining departure clearance.

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

**Aircrew requesting cruising levels at or below FL70 will be routed via PEDIG.**

NOT TO SCALE

**ROUTE/ALTITUDE**  
**LISTO 2R** 23R  
Climb straight ahead, at D2.0 MCT turn LEFT, 163° track, cross runway 23R, 3000 ft, intercept HON (MAX 5000), intercept HON R340 inbound to LISTO at 5000.

**HONILEY**  
Elev  
113.65  
HON

31

360°

35

2400

160°

LISTO

5000

3000

35

3100

01.30

CHANGES: New format.

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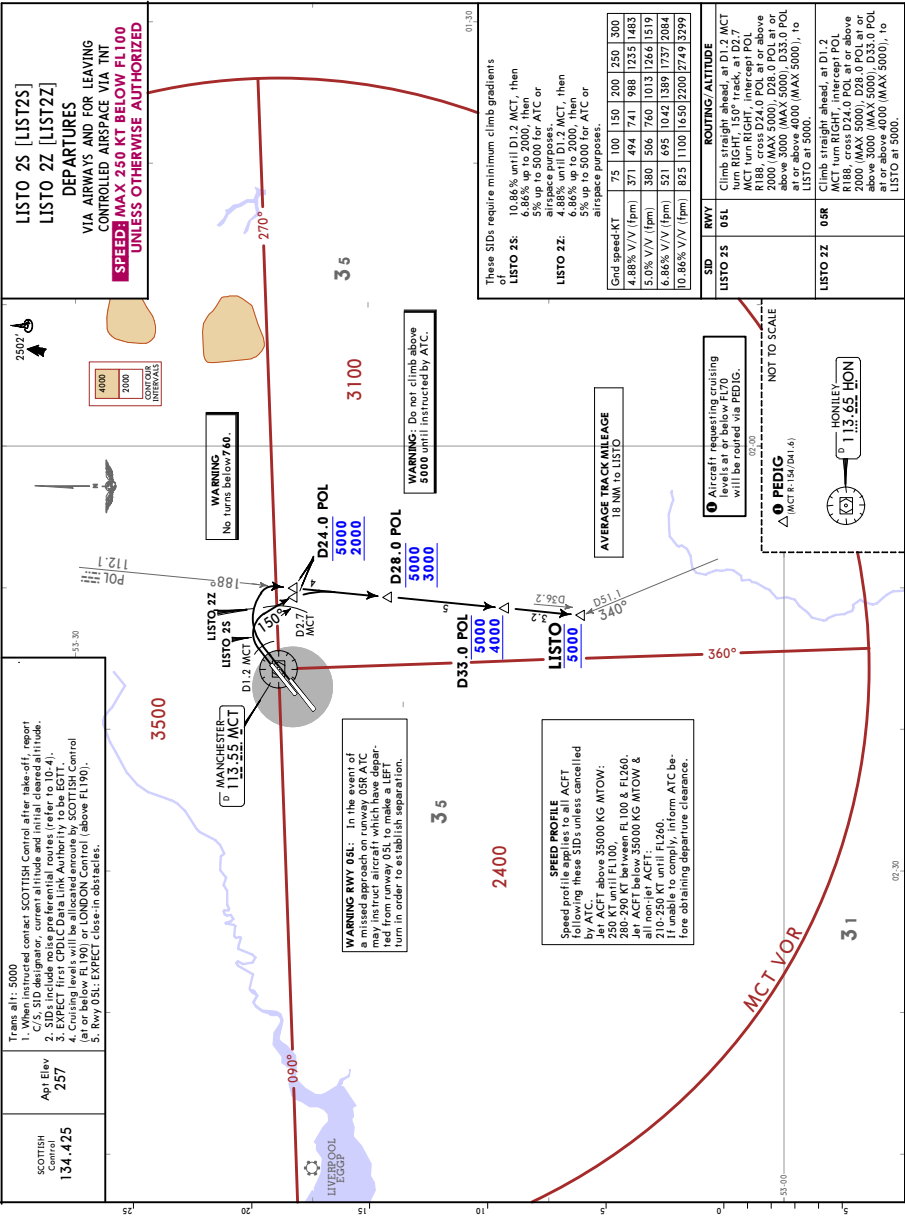
EGCC/MAN  
MANCHESTER

JEPPESSEN  
2 JUN 17

10-3E

MANCHESTER, UK

SID



Trans at: 5000  
1. Maximum climb rate: 3000 ft/min  
2. SIDs include noise preferential routes (refer to 10-4).  
3. EXPECT first CPDLC Data Link Authority to be EOT.  
4. Expect first CPDLC Data Link Authority to be EOT.  
5. Rwy 09L: EXPECT close-in obstacles.

SCOTTISH  
Control  
134.425

Apr Elev  
257

MANCHESTER  
113.55 MCT

LISTO 25  
D1.2 MCT

LISTO 22  
D2.1 MCT

MANCHESTER  
113.55 MCT

LISTO 25  
D1.2 MCT

LISTO 22  
D2.1 MCT

MANCHESTER  
113.55 MCT

LISTO 25  
D1.2 MCT

LISTO 22  
D2.1 MCT

MANCHESTER  
113.55 MCT

LISTO 25  
D1.2 MCT

LISTO 22  
D2.1 MCT

MANCHESTER  
113.55 MCT

LISTO 25  
D1.2 MCT

LISTO 22  
D2.1 MCT

MANCHESTER  
113.55 MCT

LISTO 25  
D1.2 MCT

LISTO 22  
D2.1 MCT

MANCHESTER  
113.55 MCT

LISTO 25  
D1.2 MCT

LISTO 22  
D2.1 MCT

MANCHESTER  
113.55 MCT

LISTO 25  
D1.2 MCT

LISTO 22  
D2.1 MCT

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MANCHESTER

JEPPSEN  
27 OCT 17 10-3F Eff 9 Nov

MANCHESTER, UK  
SID

SCOTTISH  
Control  
128.055

Apt Elev  
257

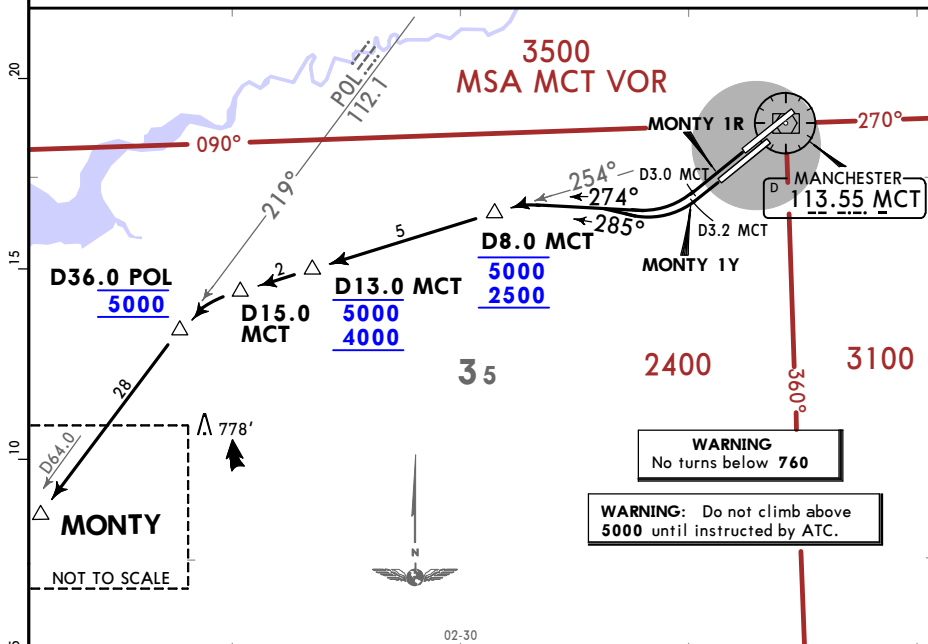
- Trans alt: 5000
1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
  2. SIDs include noise preferential routes (refer to 10-4).
  3. EXPECT first CPDLC Data Link Authority to be EGT.
  4. Cruising levels will be allocated enroute by SCOTTISH Control (at or below FL190) or LONDON Control (above FL190).
  5. Rwy 23R: 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 1R [MONT1R], MONTY 1Y [MONT1Y]

### DEPARTURES

FOR AIRCRAFT LEAVING CONTROLLED AIRSPACE AT MONTY

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



These SIDs require minimum climb gradients of

**MONTY 1R:** 5.55% until D3.0 MCT, then 5.21% up to 2500 for ATC or airspace purposes.

**MONTY 1Y:** 12.33% until D3.2 MCT, then 5.21% up to 2500 for ATC or airspace purposes.

**AVERAGE TRACK MILEAGE**  
MONTY 1R: 44 NM to MONTY  
MONTY 1Y: 45 NM to MONTY

Gnd speed-KT	75	100	150	200	250	300
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.

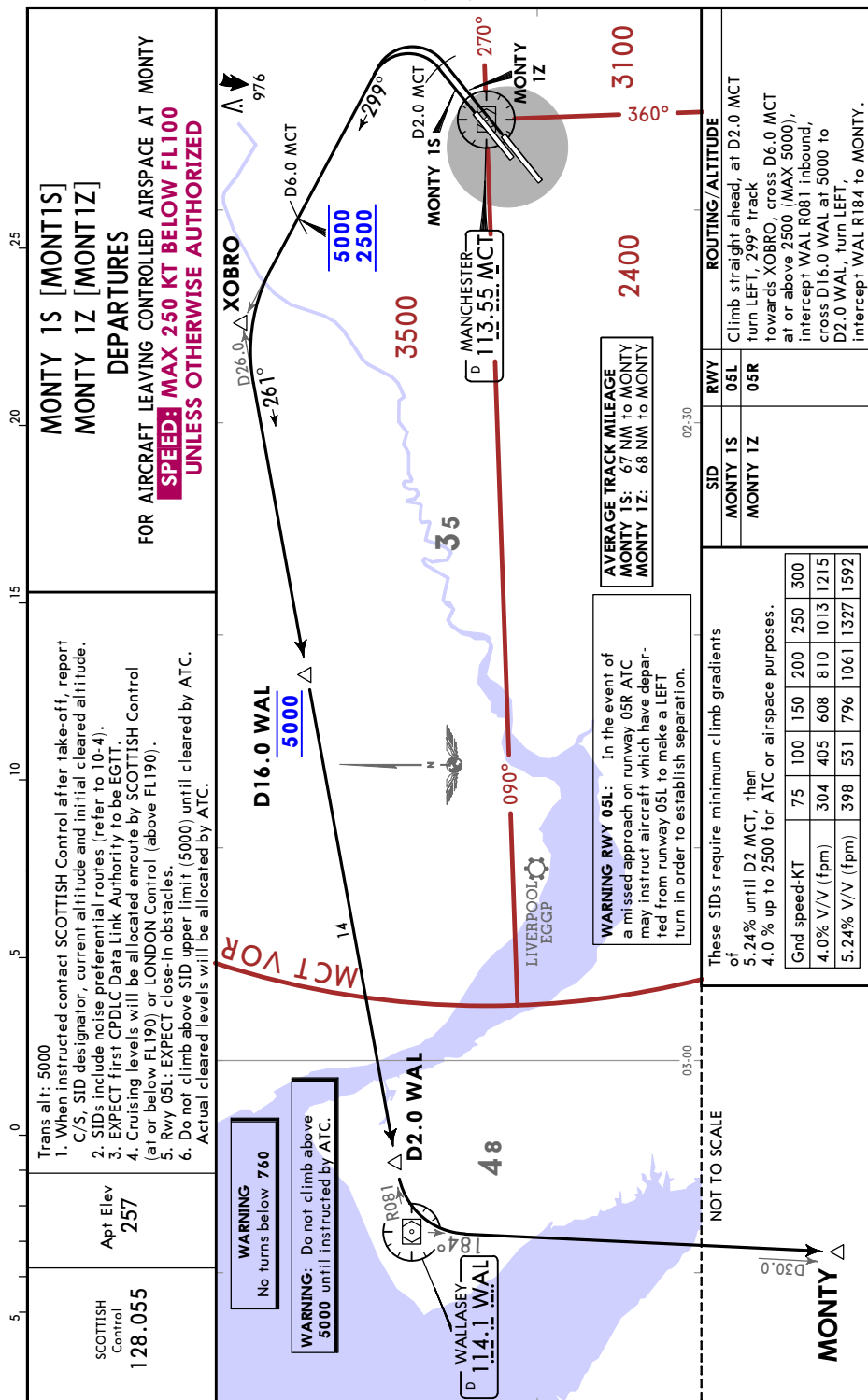
SID	RWY	ROUTING/ALTITUDE
<b>MONTY 1R</b>	<b>23R</b>	Climb straight ahead, at D3.0 MCT turn RIGHT, 274° track, intercept MCT R254, cross D8.0 MCT at or above 2500 (MAX 5000), D13.0 MCT at or above 4000 (MAX 5000), at D15.0 MCT turn LEFT, intercept POL R219, cross D36.0 POL at 5000, to MONTY.
<b>MONTY 1Y</b>	<b>23L</b>	Climb straight ahead, at D3.2 MCT turn RIGHT, 285° track, intercept MCT R254, cross D8.0 MCT at or above 2500 (MAX 5000), D13.0 MCT at or above 4000 (MAX 5000), at D15.0 MCT turn LEFT, intercept POL R219, cross D36.0 POL at 5000, to MONTY.



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27 OCT 17 10-3G Eff 9 Nov

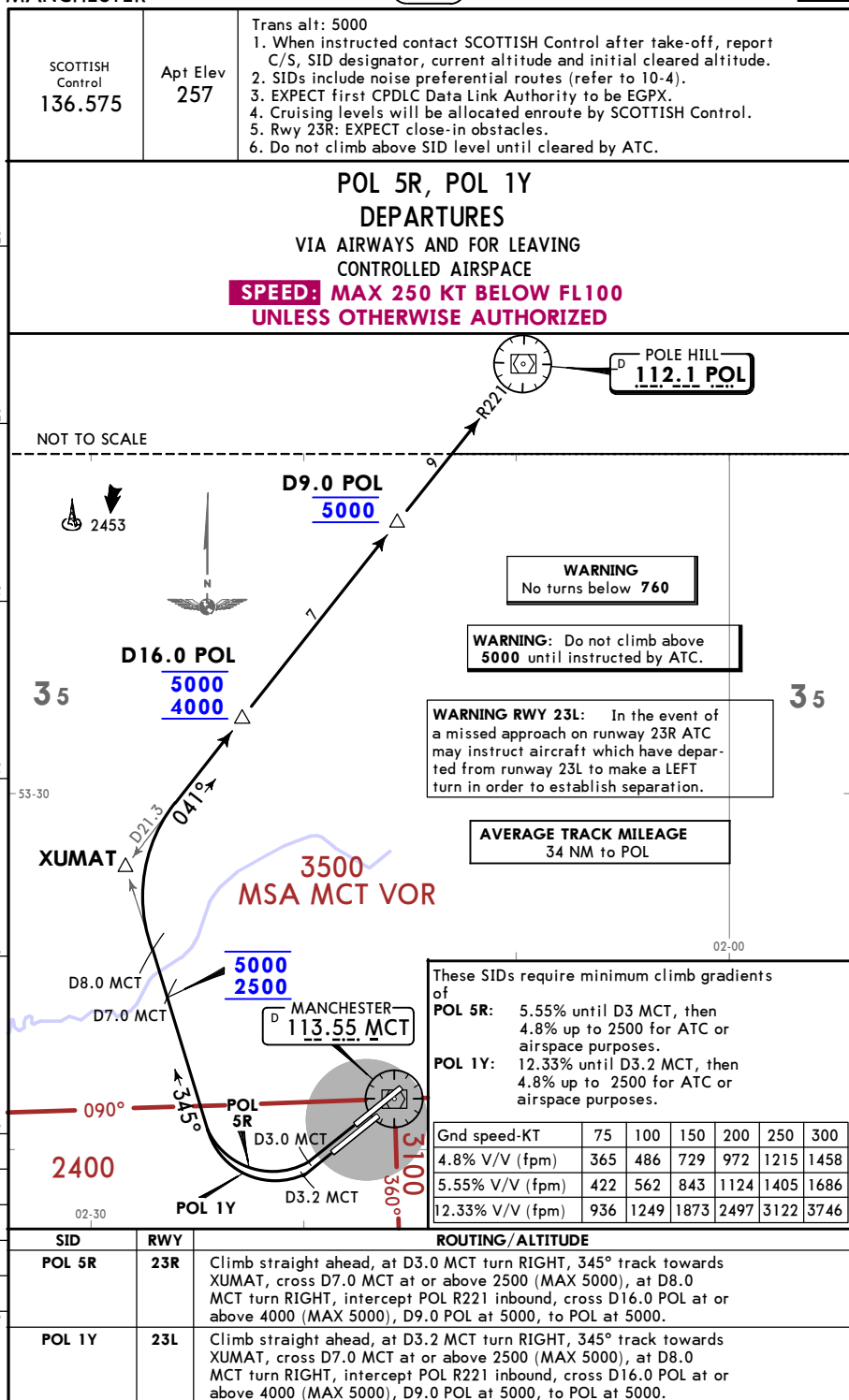
MANCHESTER, UK  
SID



EGCC/MAN  
MANCHESTER

JEPPSEN  
2 JUN 17 (10-3H)

MANCHESTER, UK  
SID







EGCC/MAN  
MANCHESTER

JEPPesen  
2 JUN 17 (10-3L)

MANCHESTER, UK  
SID

SCOTTISH  
Control  
136.575

Apt Elev  
257

- 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.
  5. Rwy 23R: EXPECT close-in obstacles.
  6. Do not climb above SID level until cleared by ATC.

SONEX 1R [SONE1R], SONEX 1Y [SONE1Y]

DEPARTURES

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

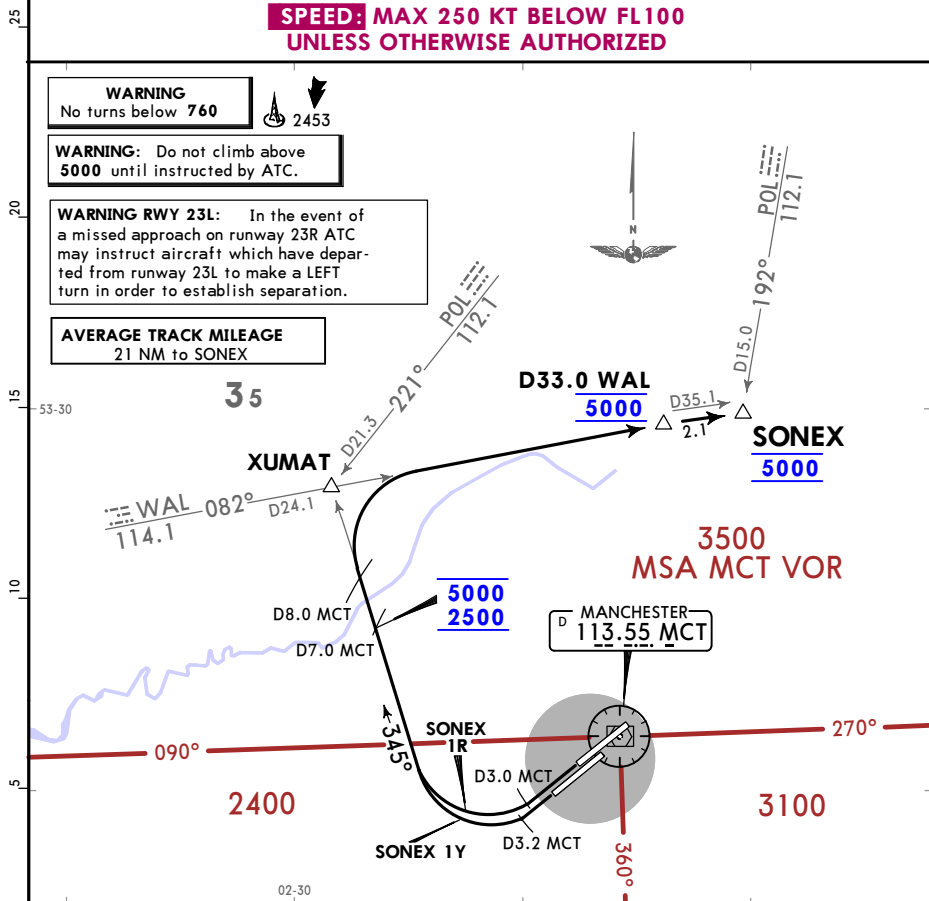
**WARNING**  
No turns below **760**



**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.

**AVERAGE TRACK MILEAGE**  
21 NM to SONEX



These SIDs require minimum climb gradients  
of

**SONEX 1R:** 5.55% until D3.0 MCT, then  
4.8% up to 2500 for ATC or  
airspace purposes.

**SONEX 1Y:** 12.33% until D3.2 MCT, 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
SONEX 1R	23R	Climb straight ahead, at D3.0 MCT turn RIGHT, 345° track towards XUMAT, cross D7.0 MCT at or above 2500 (MAX 5000), at D8.0 MCT turn RIGHT, intercept WAL R082, cross D33.0 WAL at 5000, to SONEX at 5000.
SONEX 1Y	23L	Climb straight ahead, at D3.2 MCT turn RIGHT, 345° track towards XUMAT, cross D7.0 MCT at or above 2500 (MAX 5000), at D8.0 MCT turn RIGHT, intercept WAL R082, cross D33.0 WAL at 5000, to SONEX at 5000.



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17 NOV 17 (10-8) Eff 27 Nov

MANCHESTER, UK  
MANCHESTER

# LINK AF/RAPID EXIT TWY AE PAVEMENT REHABILITATION

REFER ALSO TO LATEST NOTAMS

The pavement at the junction of Link AF/Rapid Exit TWY (RET) AE with TWY A will be rehabilitated. As part of the overall works programme, the TWY centreline through Link AF will be realigned. All work will take place during the daytime.

## Operational Implications:

### TWYs:

Link AF and RET AE will be closed H24.

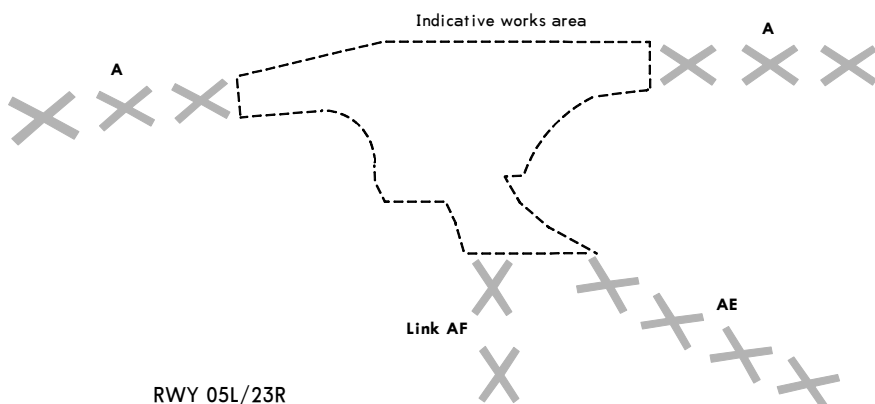
TWY A between Intermediate Holding Points A2 and A3 will be closed H24.

### RWYs:

During westerly RWY operations, arriving ACFT unable to vacate RWY 23R by RET BD (LDA 5049'/1539m) will be required to backtrack the RWY as directed by ATC;

Additionally, outside of periods of low visibility, Link B (LDA 6073'/1851m) will be available for arriving ACFT up to and including Code E ACFT (B747/B777);

During easterly RWY operations, those ACFT unable to depart RWY 05L from Link B (TORA 6680'/2036m) will be required to backtrack the RWY as directed by ATC.



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ENR 257  
NS3 51.2, 30002 16.5

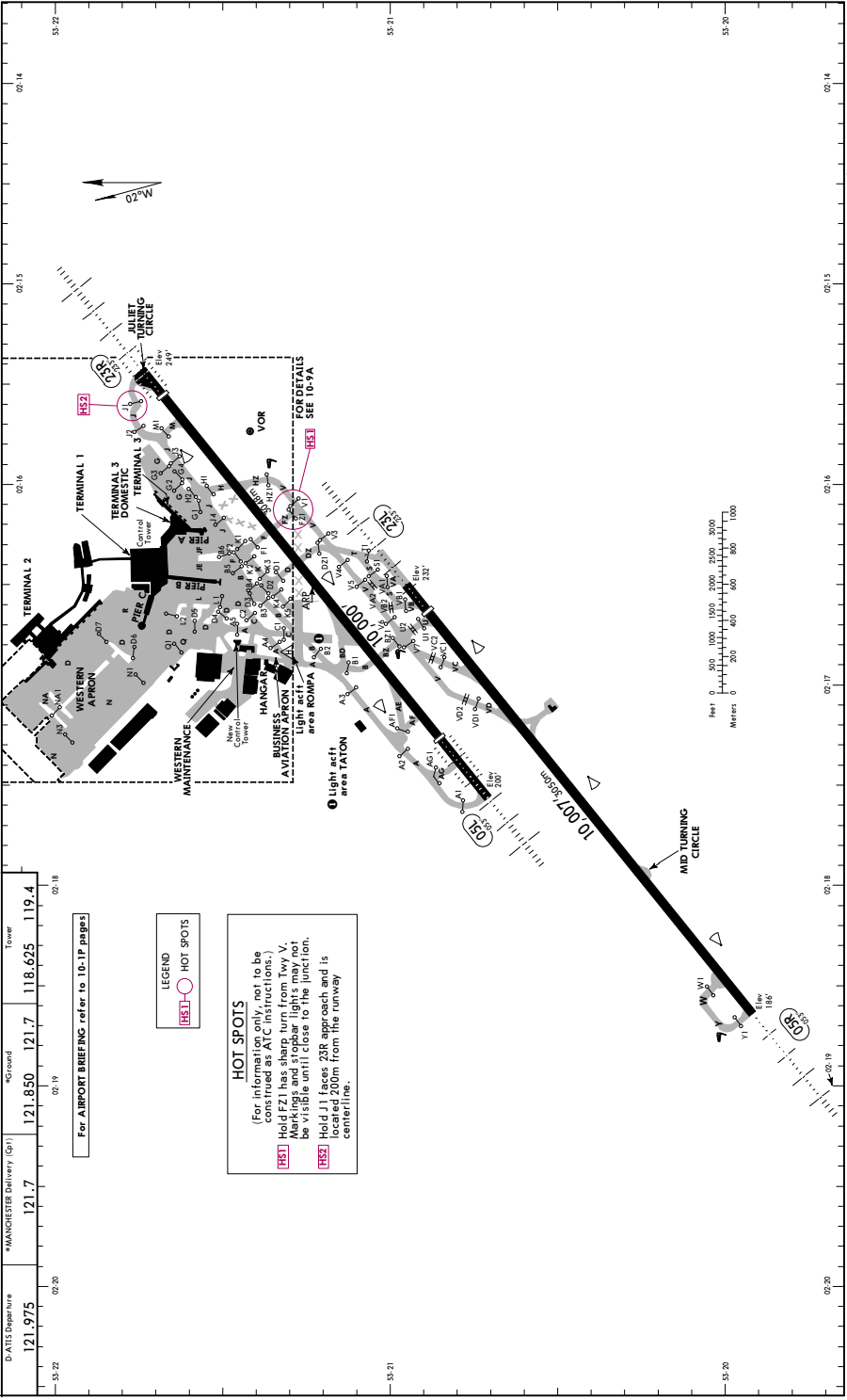
JEPPESSEN  
3 NOV 17  
ENR 257  
MANCHESTER, UK  
MANCHESTER

DATES	Departure	Arrival	Delivery (Gr1)	Ground	Tower
121.975	121.7	121.850	121.7	118.625	119.4

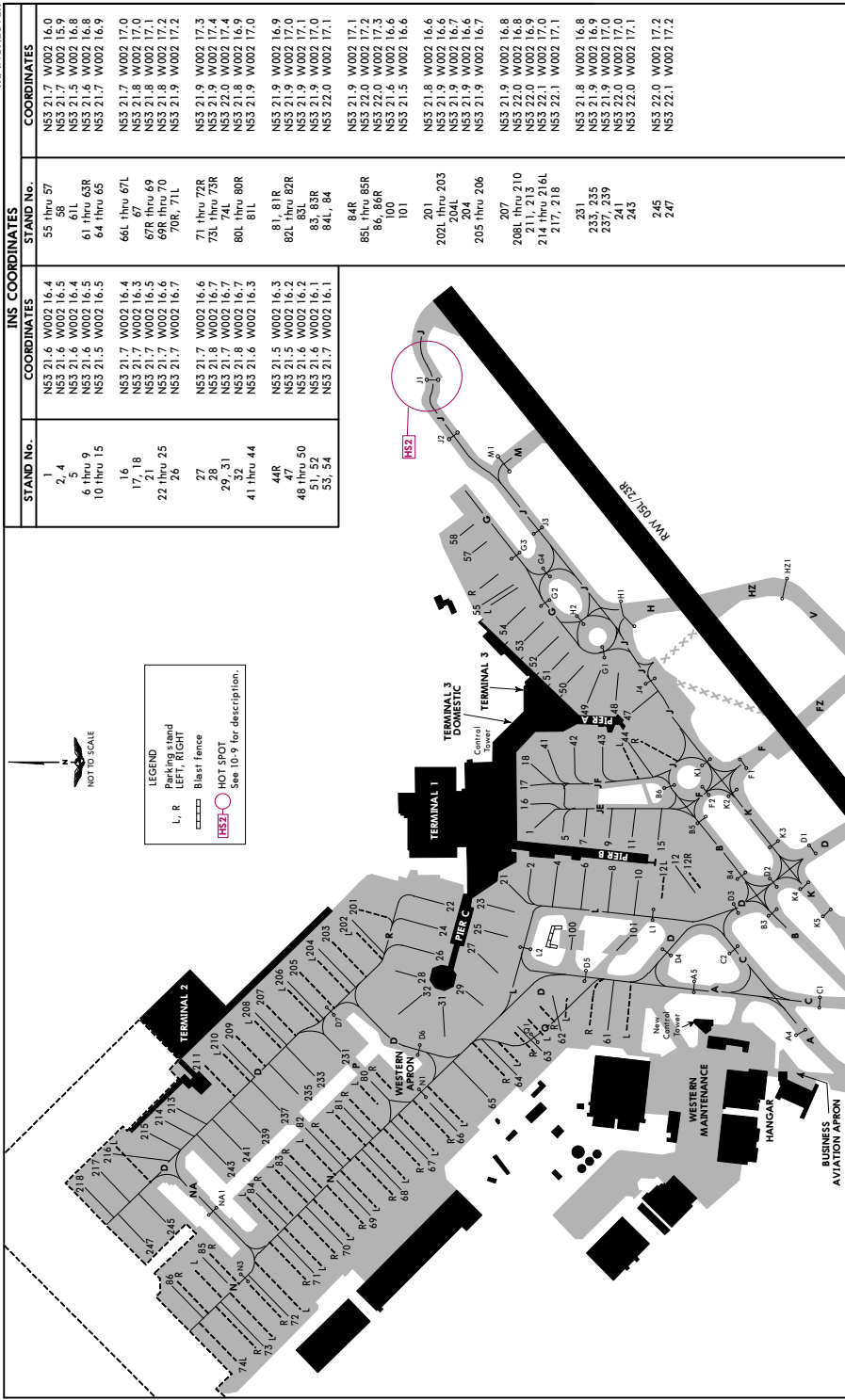
For AIRPORT BRIEFING refer to 10-1P pages

LEGEND  
HOT SPOTS

**HOT SPOTS**  
(For information only not to be considered for ATC instructions)  
[HS1] Hold PZ1 has sharp turn from Taxi V.  
Markings and stopbar lights may not be visible until close to the junction.  
[HS2] Hold J1 faces 23R approach and is located 200m from the runway centreline.







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**JEPPESSEN**

12 FEB 16 **10-9B**
**MANCHESTER, UK**  
**MANCHESTER**

ADDITIONAL RUNWAY INFORMATION									
RWY						USABLE LENGTHS		TAKE-OFF	WIDTH
						LANDING BEYOND			
						Threshold	Glide Slope		
05L	HIRL (60m)	CL (15m)	HIALS-II	TDZ ❶	RVR	8488' 2587m	7577' 2309m	❹	148' 45m
23R	HIRL (60m)	CL (15m)	HIALS-II	TDZ ❷ ❸	RVR	8904' 2714m	7871' 2399m		
<b>❶</b> PAPI-R (3.0°) <b>❷</b> PAPI-L (3.0°) <b>❸</b> HST-BD & AE <b>❹</b> 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 ❺ 23L	HIRL (61m)	CL (30m)	HIALS	PAPI-L (3.0°)	RVR	9396' 2864m	8363' 2549m	9997' 3047m ❻	148' 45m
<b>❺</b> Rwy grooved. <b>❻</b> 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 ❶**

	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	125m	150m	200m	250m	400m	500m
B						
C						
D	150m	200m	250m	300m		

**❶** Operators applying U.S. Ops Specs: CL required below 300m; approved HUD required below 150m.

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**JEPPESSEN**  
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.

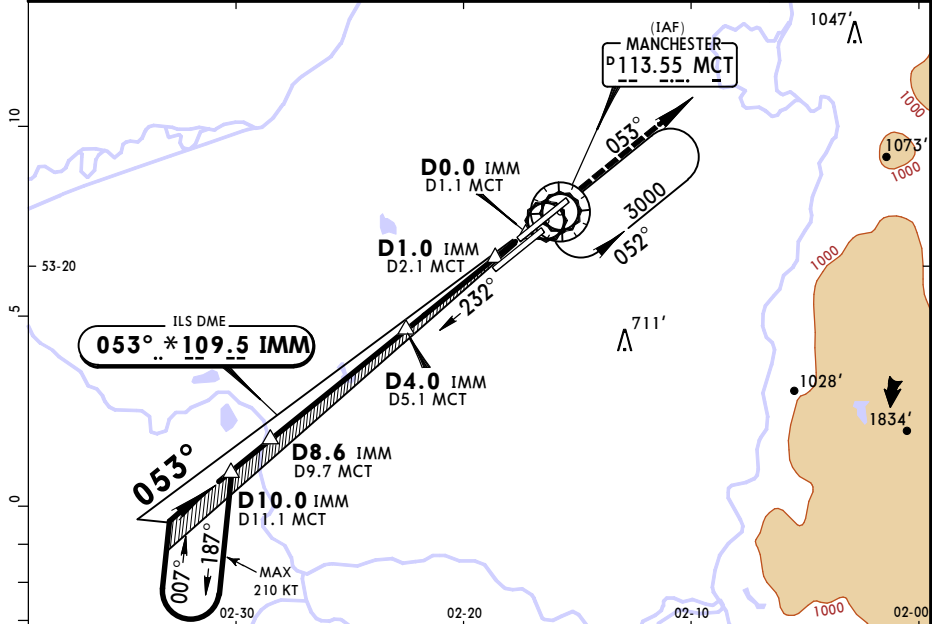
❷ Or rejected take-off distance whichever is the greater.

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MANCHESTER

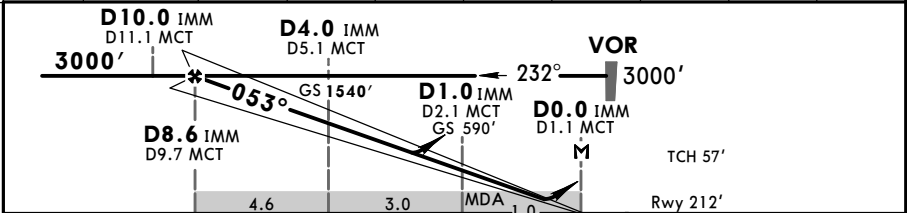
JEPPesen  
6 OCT 17 (11-1)

MANCHESTER, UK  
ILS DME or LOC 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	Final Apch Crs	GS D4.0 IMM	ILS DA(H)	Apt Elev 257'		<div><div>3500</div><div>090°→←270°</div><div>2400↑3100</div><div>360°</div></div> <div>MSA MCT VOR</div>	
*109.5	053°	1540' (1328')	412' (200')	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 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	<div> <div>HIALS-II</div> <div>PAPI</div> <div>3500'</div> </div>
ILS GS or		3.00°	372	478	531	637	743	
LOC Descent Angle		3.00°	372	478	531	637	743	
MAP at D0.0 IMM/D1.1 MCT		3.00°	372	478	531	637	743	

Standard				STRAIGHT-IN LANDING RWY 05L		CIRCLE-TO-LAND	
ILS				LOC (GS out)		CDFA	
DA(H) 412' (200')				DA/MDA(H) 640' (428')		ALS out	
FULL		TDZ or CL out	ALS out	RVR 1500m		Max Kts	MDA(H) VIS
A		RVR 550m	RVR 550m	RVR 1200m		100	750' (493') 1500m
B		RVR 550m	RVR 1200m	RVR 1300m		135	820' (563') 1600m
C		RVR 550m	RVR 1200m	RVR 2000m		180	1110' (853') 2400m
D		RVR 550m	RVR 1200m	RVR 2000m		205	1110' (853') 3600m

W/o HUD/AP/FD: RVR 750m

CHANGES: Procedure title, Bearings.

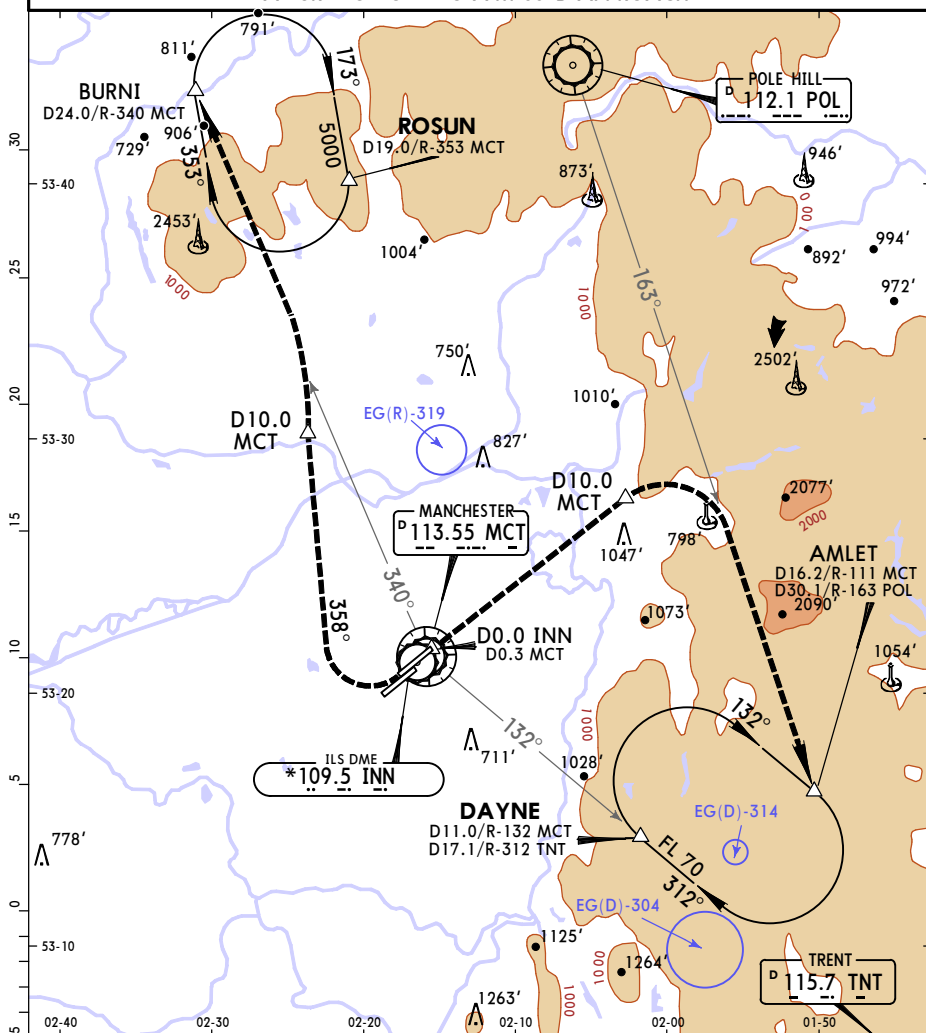
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EGCC/MAN  
MANCHESTER

JEPPesen  
30 JUN 17 (11-01)

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-163 POL to AMLET to enter DAYNE holding.

Acraft 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.

Acraft 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.

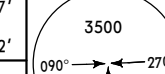
PANS OPS

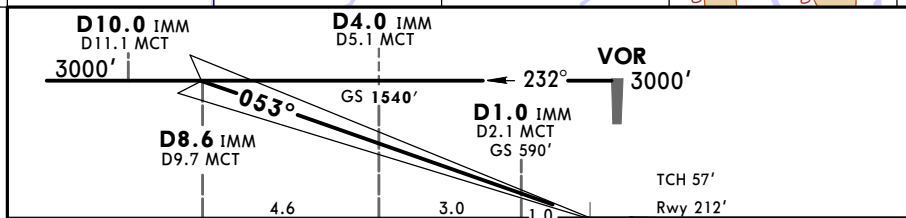
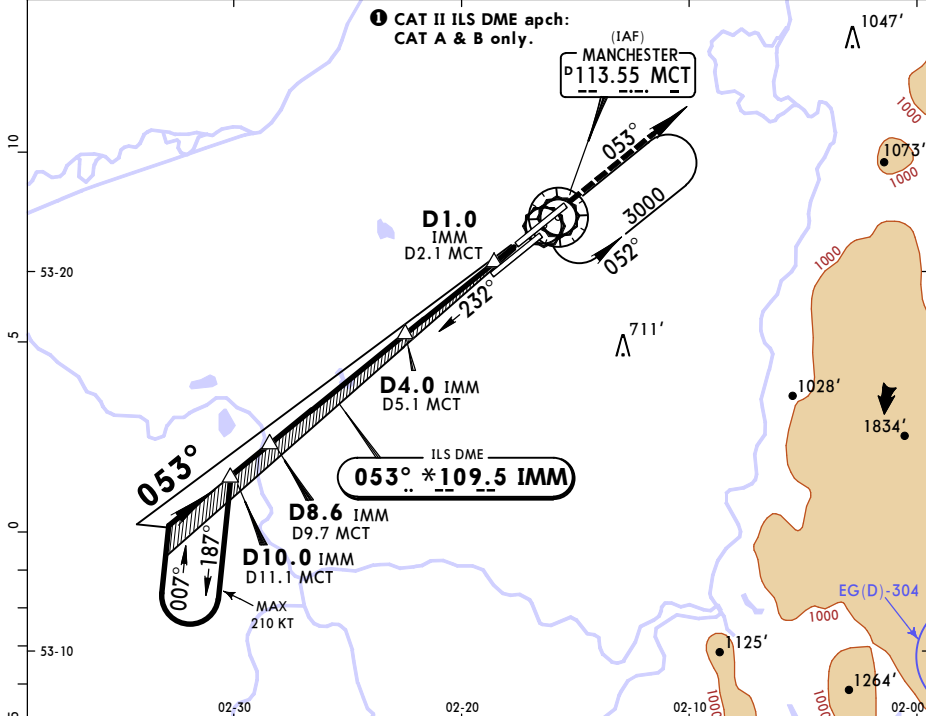


EGCC/MAN  
MANCHESTER

JEPPesen  
6 OCT 17 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'		
<b>MISSED APCH: Climb STRAIGHT AHEAD to 3500', then as directed.</b> 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 threshold. 3. WARNING: RA fluctuations may occur due to Bollin Valley.						
						MSA MCT VOR



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		
<b>CAT IIIA ILS</b> <b>1</b> DH 50' RVR 200m	<b>CAT II ILS</b> AB RA 107' DA(H) 312' (100') RVR 300m	CD NOT AUTHORIZED

1 CAT IIIB: Min RVR 75m

CHANGES: Bearings. Minimums.

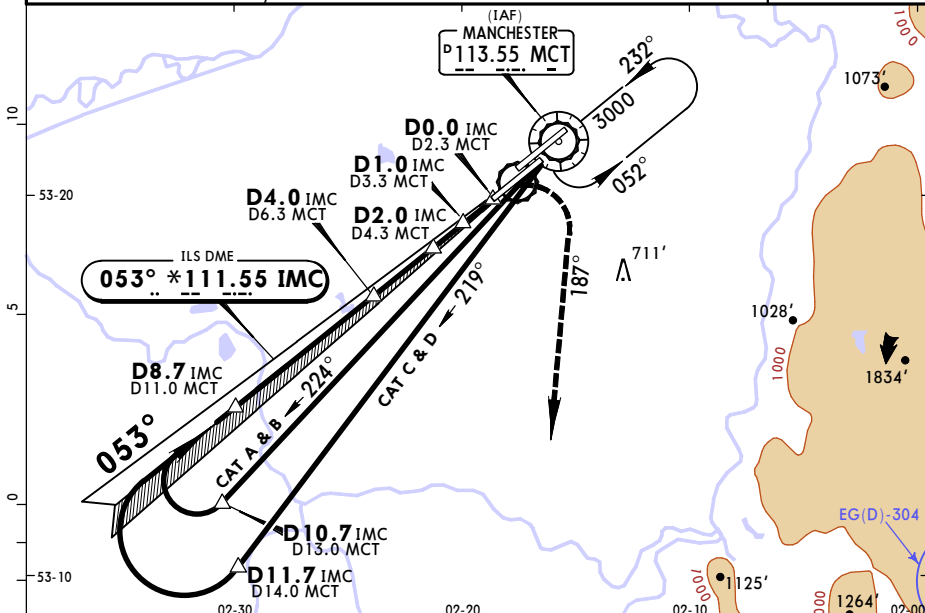
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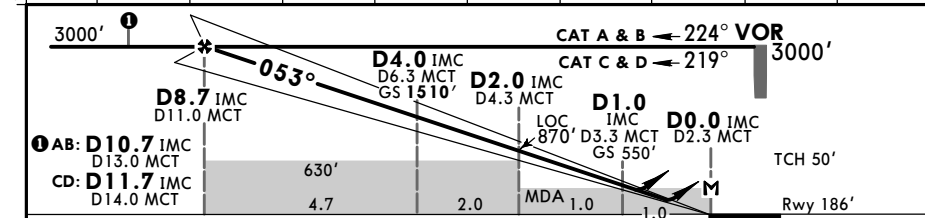
JEPPESSE  
6 OCT 17 (11-2)

MANCHESTER, UK  
ILS DME or LOC DME Rwy 05R

D-ATIS Arrival	MANCHESTER Radar (APP)	MANCHESTER Tower	*Ground
128.175 113.550	118.575	118.625 119.4	121.850 121.7
LOC IMC *111.55	Final Aptch Crs 053°	GS D4.0 IMC 1510' (1324')	ILS DA(H) 386' (200')
		Apt Elev 257'	Rwy 186'
<b>MISSED APCH:</b> Climb to 3500'. STRAIGHT AHEAD to 700' or D0.0 IMC (D2.3 MCT) inbound whichever is the later, then turn RIGHT onto track 187°, 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.			
			3500 090° 270° 2400 3100 360° MSA MCT VOR



LOC (GS out)	IMC DME	8.0	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	3.3
	ALTITUDE	2780'	2460'	2140'	1820'	1510'	1190'	870'	550'



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

STRAIGHT-IN LANDING RWY 05R				CIRCLE-TO-LAND	
ILS		LOC (GS out)		CDFA	
DA(H) 386' (200')		DA/MDA(H) 530' (344')		ALS out	
FULL		ALS out		Max Kts	
A				100	750' (493')
B				135	820' (563')
C				180	1110' (853')
D				205	1110' (853')
W/o HUD/AP/FD: RVR 750m					

CHANGES: Bearings.



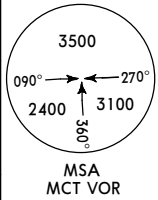
EGCC/MAN  
MANCHESTER

JEPPESSE  
6 OCT 17 (11-3) ILS DME or LOC DME Rwy 23R

MANCHESTER, UK  
Rwy 23R

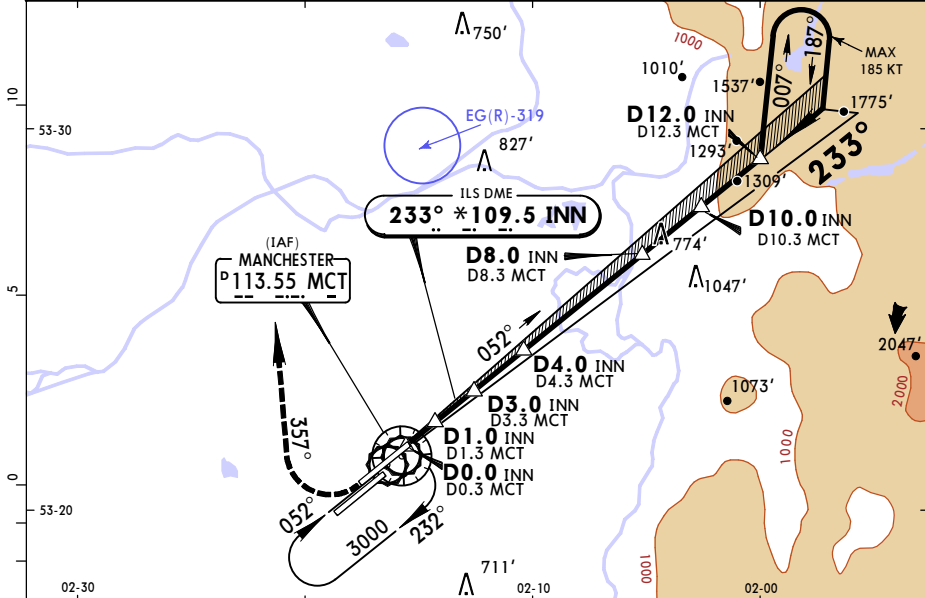
D-ATIS Arrival		MANCHESTER Radar (APP)		MANCHESTER Tower		*Ground	
128.175 113.550		118.575		118.625 119.4		121.850 121.7	

LOC INN *109.5	Final Appch Crs 233°	GS D4.0 INN 1580' (1331')	ILS DA(H) 449' (200')	Apt Elev 257'	Rwy 249'
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**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 357°, then as directed. For separation from departing traffic RWY 23L expedite climb through 750' before commencing RIGHT turn onto 357°. 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 threshold.			

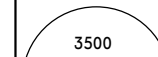


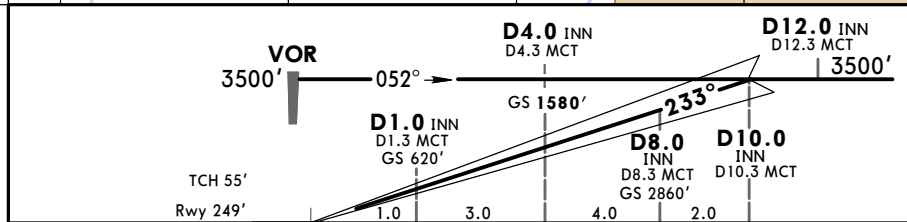
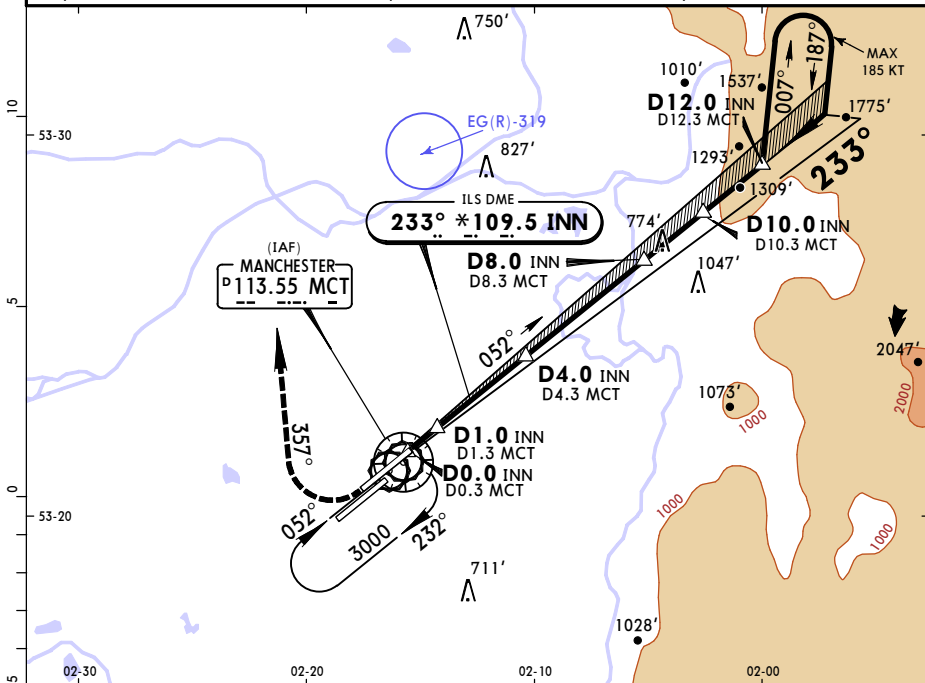
EGCC/MAN  
MANCHESTER

JEPPesen  
6 OCT 17 (11-3A)

MANCHESTER, UK  
CAT II/III ILS DME Rwy 23R

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 INN *109.5	Final Appch Crs 233°	GS D4.0 INN 1580' (1331')	CAT II & IIIA ILS Refer to Minimums		Apt Elev 257'  Rwy 249'	 MSA MCT VOR	
<b>MISSED APCH:</b> 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 357°, then as directed. For separation from departing traffic RWY 23L expedite climb through 750' before commencing RIGHT turn onto 357°. 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 threshold.							



Gnd speed-Kts	70	90	100	120	140	160	CAT II ILS	
GS	372	478	531	637	743	849	RA 103'	RA 105'
							DA(H) 349' (100')	DA(H) 351' (102')

Standard		STRAIGHT-IN LANDING RWY 23R	
CAT IIIA ILS	RA 103'	CAT II ILS	RA 105'
DH 50'	DA(H) 349' (100')	D	DA(H) 351' (102')
RVR 200m		RVR 300m	

1 CAT IIIB: Min RVR 75m

CHANGES: Bearings. Minimums.

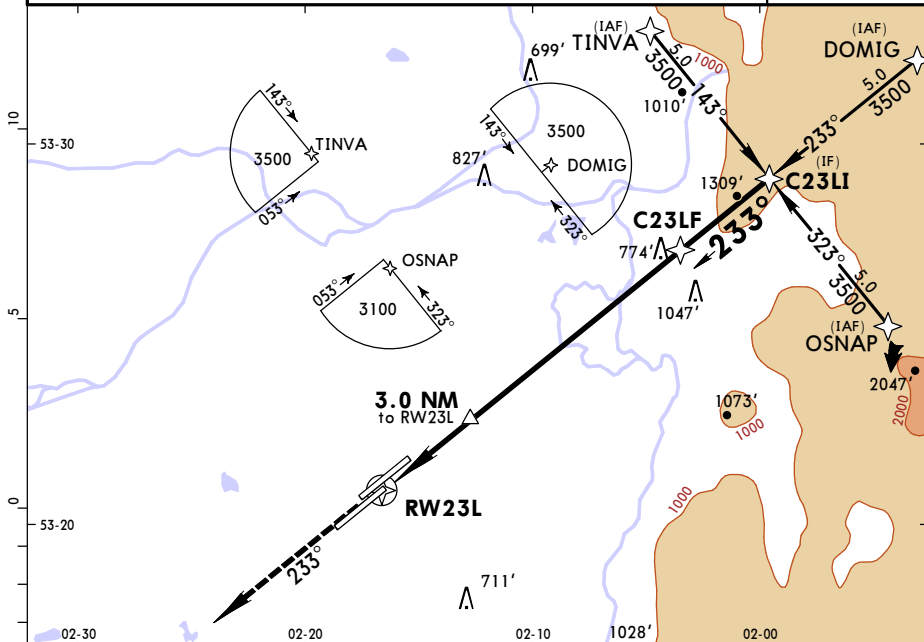
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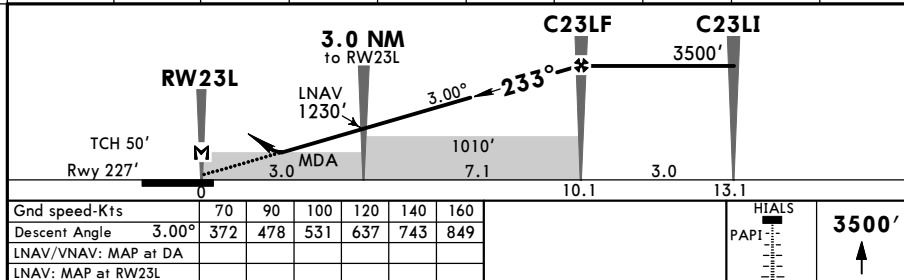
JEPPesen  
6 OCT 17 (12-1)

MANCHESTER, UK  
RNAV (GNSS) Rwy 23L

D-ATIS Arrival		MANCHESTER Radar (APP)		MANCHESTER Tower		*Ground	
128.175	113.550	118.575		118.625	119.4	121.850	121.7
RNAV	Final Apch Crs <b>233°</b>	Procedure Alt <b>C23LF</b> <b>3500'</b> (3273')	LNAV/VNAV DA(H) <b>680'</b> (453')	Apt Elev 257'	Rwy 227'	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.							



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'



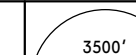
Standard				CIRCLE-TO-LAND	
LNAV/VNAV		LNAV CDFA		Max Kts	VIS
DA(H) <b>680'</b> (453')		DA/MDA(H) <b>680'</b> (453')			
ALS out		ALS out		MDA(H)	
A				100	750' (493') 1500m
B	RVR 1500m		RVR 1500m	135	820' (563') 1600m
C	RVR 1400m	RVR 1400m		180	1110' (853') 2400m
D	RVR 2100m		RVR 2100m	205	1110' (853') 3600m

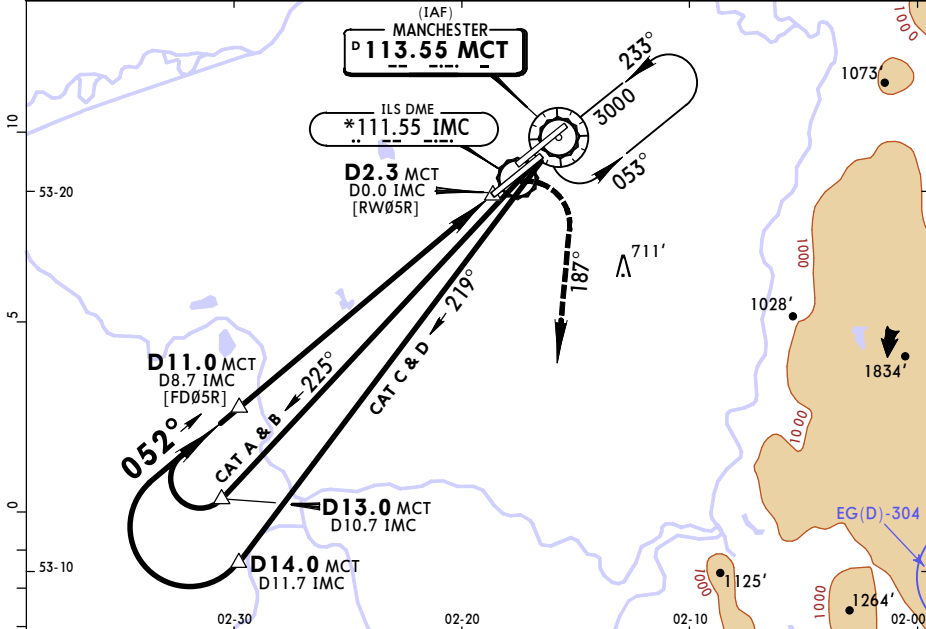


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MANCHESTER

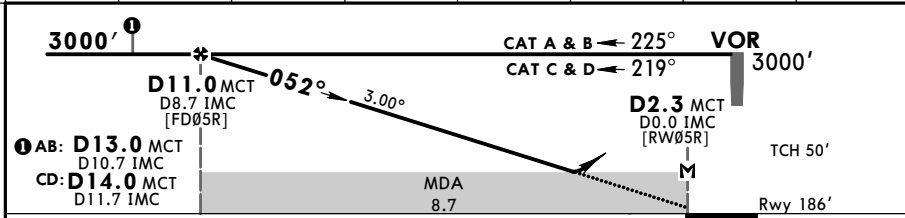
JEPPESSEN  
30 JUN 17 (13-2)

MANCHESTER, UK  
VOR DME Rwy 05R

D-ATIS Arrival		MANCHESTER Radar (APP)		MANCHESTER Tower		*Ground	
128.175 113.550		118.575		118.625	119.4	121.850	121.7
VOR MCT <b>113.55</b>	Final Aptch Crs <b>052°</b>	Minimum Alt <b>D11.0 MCT</b> <b>3000'</b> (2814')	DA/MDA(H) <b>630'</b> (444')	Apt Elev 257' Rwy 186'			
<b>MISSED APCH:</b> Climb to 3500'. STRAIGHT AHEAD to 700', then turn RIGHT onto track 187°, 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	HTALS		
Descent angle	3.00°	372	478	531	637	743	849	PAPI	700' 187° 3500'
MAP at D2.3 MCT/D0.0 IMC									

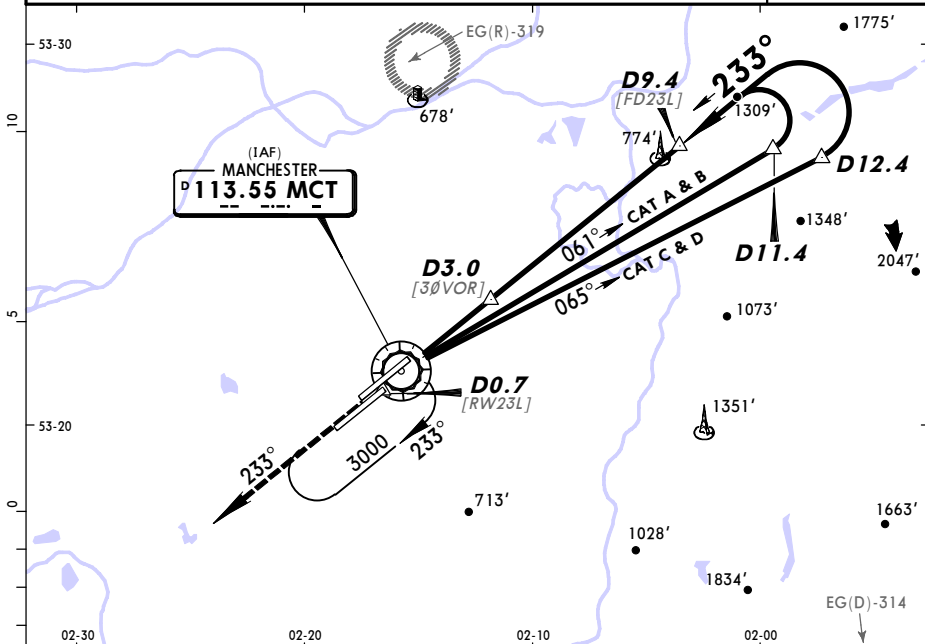
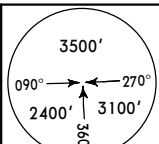
Standard				CIRCLE-TO-LAND			
STRAIGHT-IN LANDING RWY 05R							
CDFA							
DA/MDA(H) <b>630'</b> (444')							
ALS out				Max Kts	MDA(H)	VIS	
A	RVR 1500m			100	750' (493')	1500m	
B				135	820' (563')	1600m	
C	RVR 2100m			180	1110' (853')	2400m	
D				205	1110' (853')	3600m	

EGCC/MAN  
MANCHESTER

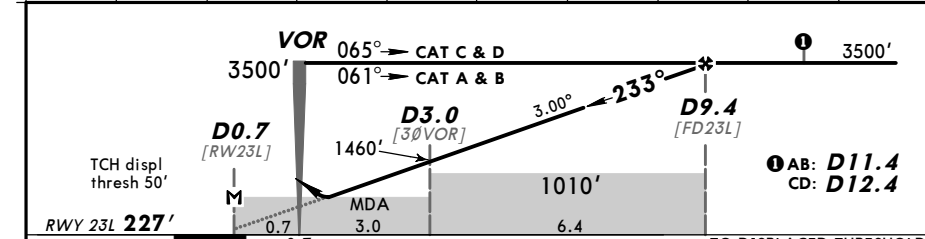
JEPPesen  
22 JUN 12 **13-3** Eff 28 Jun

MANCHESTER, UK  
VOR DME Rwy 23L

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 <b>113.55</b>	Final Apch Crs <b>233°</b>	Procedure Alt <b>D9.4</b> <b>3500'</b> (3273')	DA/MDA(H) <b>690'</b> (463')
		Apt Elev <b>257'</b> RWY <b>227'</b>	
<b>MISSED APCH: Climb STRAIGHT AHEAD to 3500', then as directed. In case of complete radio failure see 11-01A.</b>			
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'



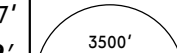
							TO DISPLACED THRESHOLD	
0.7							HIALS	
Gnd speed-Kts	70	90	100	120	140	160	PAPI	3500'
Descent Angle	3.00°	372	478	531	637	743	849	↑
MAP at D0.7								

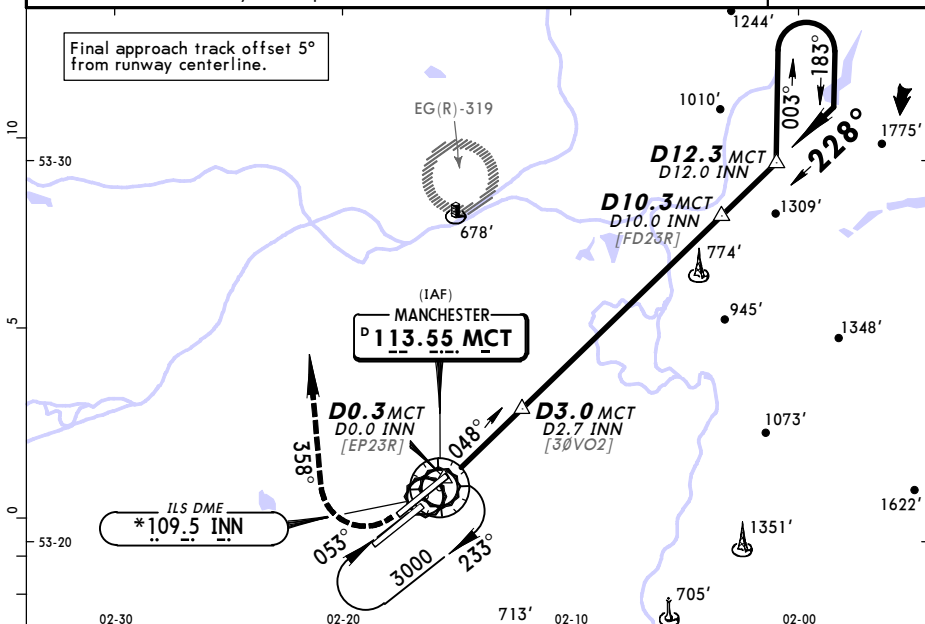
Standard	STRAIGHT-IN LANDING RWY 23L	CIRCLE-TO-LAND
	CDFA	
	DA/MDA(H) <b>690'</b> (463')	
	ALS out	Max Kts
A	RVR 1500m	100
B		135
C	RVR 1500m	180
D	CMV 2200m	205

# EGCC/MAN MANCHESTER

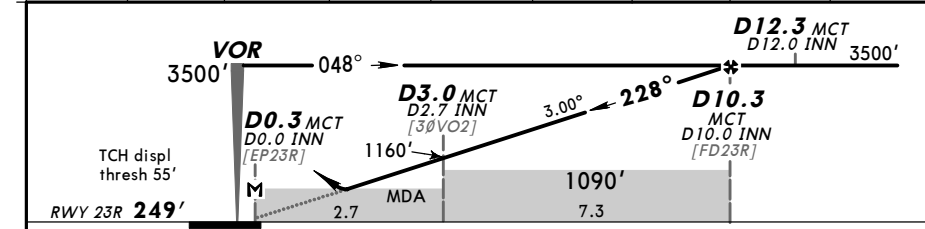
JEPPESSEN  
22 JUN 12 (13-4) Eff 28 Jun

MANCHESTER, UK  
VOR 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	
	VOR MCT	Final ApcH Crs	Procedure Alt D10.3 MCT	DA/MDA(H)	Apt Elev 257'			
	113.55	228°	3500' (3251')	690' (441')	RWY 249'			
	MISSED APCH: Climb to 3500'. STRAIGHT AHEAD until passing 750' or D0.3 MCT (D0.0 INN) inbound, whichever is the later, then turn RIGHT onto track 358°, then as directed. 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.								



MCT DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
INN DME	1.7	2.7	3.7	4.7	5.7	6.7	7.7	8.7
ALTITUDE	840'	1160'	1480'	1800'	2120'	2440'	2760'	3080'



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II	
Descent Angle	3.00°	372	478	531	637	743	PAPI	750' D0.3 MCT
MAP at D0.3 MCT/D0.0 INN								↑ whichever later ↑

<b>Standard</b>				<b>STRAIGHT-IN LANDING RWY 23R</b>				<b>CIRCLE-TO-LAND</b>			
				CDFA							
				DA/MDA(H) <b>690'</b> (441')							
				ALS out							
A	RVR 1400m			RVR 1500m			Max Kts	MDA(H)		VIS	
B				CMV 2100m			100	750' (493')		1500m	
C							135	820' (563')		1600m	
D							180	1110' (853')		2400m	
							205	1110' (853')		3600m	