

## **London to Melbourne Air Race – 1934 (*The MacRobertson Trophy Air Race*)**

**Cruise at 7,500 ft. unless noted. Set Season to Summer. Reset Time to "Day" for each leg**

**Navigation by Dead Reckoning, NDB's and some VOR's -- Checkpoints are mainly Airports, NDBs or landmarks.**

**The flights must be flown in the order shown below (or in the reverse direction AFTER the Australia-bound flight is completed).**

**Report flights as LM-00 through LM-47, or LM-00R thru LM-47R for the return (here, possibly amend flight levels as per semi-circular rules...).**

### **<<< Special Remarks (*with reference to original documents*)>>>**

#### ***XPlane users :***

*LM-00 : CH, ND, SDM NDB's are not in the database.*

*LM-01 : LYX, LT, CGZ NDB's are not in the database.*

*LM-02 : MOU NDB missing in the database.*

*LM-03 : SNE NDB missing in the database.*

*LM-05 : PRA, FRS, TEA, AME NDB's are not in the database.*

*LM-06 : BRD, PRV NDB are not in the database.*

*LM-08 : FR NDB missing in the database.*

*LM-09 : BAB NDB (using BOD instead), JYO NDB (using AMN VOR instead) are not in the database.*

*LM-10 : AJF NDB missing in the database.*

*LM-12 : NR NDB missing in the database.*

*LM-14 : ZKU, 2BD NDB's are not in the database.*

*LM-15 : AIN NDB missing in the database.*

*LM-19 : TRR, NUH, PL NDB's are not in the database.*

*LM-20 : NUH NDB missing in the database.*

*LM-21 : FR, AP NDB's are not in the database. VIAL is now VEAB.*

*LM-22 : BN NDB is not in the database. VIAL is now VEAB.*

*LM-23 : JS, TK NDB's are not in the database.*

*LM-24 : EG NDB is missing in the database.*

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*LM-27 : MDN NDB missing in the database.*

*LM-30 : SR NDB missing in the database.*

*LM-31 : KB NDB missing in the database.*

*LM-32 : KN, PK NDB's are not in the database.*

*LM-33 : NX NDB is not in the database.*

*LM-35 : WARQ is now WAHQ.*

*LM-36 : WARQ is now WAHQ.*

*LM-37 : WADW is now WATU.*

*LM-38 : WADW is now WATU.*

*LM-40 : HWS NDB missing in the database.*

*LM-42 : BKT NDB missing in the database.*

*LM-43 : WTN NDB missing in the database.*

*LM-44 : BCK NDB is not in the database.*

*LM-45 : BRW NDB is not in the database.*

*LM-46 : CDO, WWK, TEM NDB's are not in the database*

*LM-47 : MNG, BOL, NDB's are not in the database.*

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### 1. AMSTERDAM TO MILDENHALL

*Note : Runways allocated by the original documentation are Dep. EHAM Rwy 22, Arr. EGUN Rwy 29.*

*EHAM 22 is the exact spot where the Dutch DC-2 began the historic race, which it won.*

*Check weather reports and select appropriate runways.*

From – To	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 6,500 ft	Apt Elev: -11 ft		
Amsterdam (EHAM), Netherlands  To  Mildenhall (EGUN), UK	<b>Departure: EHAM, 04-22, 06-24, 18-36 L, C and R</b> Tune NAV1 to SPL VOR/DME (108.40) and set OBS to 278°. Set altimeter. Take off, and start climb to 6,500 ft.				
	<b>Enroute:</b>  <i>To NWI NDB (342.0).</i> After take off, turn and track 278° OB from SPL VOR. Fly to NDB.			278	128.0
	<i>To EGUN.</i> Overhead NWI NDB, turn left and track 236° OB from NDB. If you need a Navaid, tune NAV1 to MLD TACAN (115.90)			236	35.0
	<b>Approach : EGUN, 10-28 (ILS at both runways)</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Mildenhall Airport, runway in use, and land.				
	Length: 9,179ft	Width: 138 ft	Surface: Asphalt		
<b>Flight No: LM-00</b>	<b>Arrival Airport Elev: 33 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	<b>164.0 NM</b>

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### 2. MILDENHALL TO AUXERRE

*Note : Runways allocated by the original documentation are Dep. EGUN Rwy 11, Arr. LFLA Rwy 19.  
Check weather reports and select appropriate runways.*

From – To	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 33 ft		
Mildenhall (EGUN), UK  To  Auxerre (LFLA), France	<b>Departure: EGUN, 11-29</b> Before take off, tune ADF to SND NDB (362.0). Set altimeter. Take off, start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To SND NDB.</i> After take off, turn and fly to NDB.			169	48.0
	<i>To LZD NDB (397.0).</i> Overhead SND NDB, turn left to 165° and fly to NDB.			165	38.0
	<i>To GI NDB (339.0).</i> Overhead LZD NDB, turn right and track 137° OB from LZD. When signal fades out, tune ADF to GI NDB and fly to NDB. About 49 NM Dead Reckoning between stations.			137	89.0
	<i>To MV NDB (434.0).</i> Overhead GI NDB, turn left to 164° and fly to NDB. About 50 NM Dead Reckoning between stations.			164	80.0
	<i>To AX NDB (417.0).</i> Overhead MV NDB, turn left and track 152° OB from MV. When signal fades out, tune ADF to AX NDB and fly to NDB. About 50 NM Dead Reckoning between stations.			149	43.0
	<i>To LFLA.</i> Overhead AX NDB, turn right to 181°.			181	4.4
	<b>Approach: LFLA, 01-19 (ILS Rwy 19, AX 109.95)</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Branches Airport, runway in use, and land.				
	<b>Length: 5,417 ft</b>	<b>Width: 98 ft</b>	<b>Surface: Asphalt</b>		
<b>Flight No: LM-01</b>	<b>Arrival Airport Elev: 520 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	<b>303.0 NM</b>

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### 3. AUXERRE TO MARSEILLE

*Note : Runways allocated by the original documentation are Dep. LFLA Rwy 19, Arr. LFML Rwy 14L.*

*Check weather reports and select appropriate runways.*

From – To	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 520 ft		
Auxerre (LFLA), France  To  Marseille (LFML), France	<b>Departure: LFLA, 01-19</b> Before take off, tune ADF to AX NDB (417.0). Set altimeter. Take off, start climb to 7,500 ft				
	<b>Enroute:</b>  <i>To NV NDB (394.0).</i> After take off, turn and track 190° OB from AX NDB. When AX signal fades out, tune ADF to NV NDB. About 30 NM Dead Reckoning between stations. Fly to NDB when signal is received.			190	55.0
	<i>To RNN NDB (358.0).</i> Overhead NV NDB, turn left and track 143° OB from NV. When NV signal fades out, tune ADF to RNN NDB. About 31 NM Dead Reckoning between stations. Fly to NDB when signal is received.			143	62.0
	<i>To BO NDB (299.0).</i> Overhead RNN NDB, turn right and track 160° OB from RNN. When signal fades out, tune ADF to BO NDB. About 7 NM dead zone between stations. Fly to NDB when signal is received.			160	37.0
	<i>To ORG NDB (328.0).</i> Overhead BO NDB, turn right and track 161° OB from BO. When signal fades out, tune ADF to ORG NDB and fly to NDB.			161	86.0
	<i>To CM NDB (369.0).</i> Overhead ORG NDB, turn right to 169° and fly to NDB.			169	14.4
	<i>To MAR NDB (383.0).</i> Overhead CM NDB, turn left to 156° and fly to NDB.			156	27.0
	<i>To LFML.</i> Overhead MAR NDB, turn left to 131°.			131	4.7
	<b>Approach: LFML, 13L-31R (ILS available both runways), 13R (ILS MCE, 108.30), 31L</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Marseille Provence Airport, runway in use, and land.				
	<b>Length: 13L-31R 11,308 ft</b> <b>13R-31L 7,781 ft</b>	<b>Width: 148 ft</b>	<b>Surface: Asphalt</b>		
<b>Flight No: LM-02</b>	<b>Arrival Airport Elev: 74 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	<b>277.0 NM</b>

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### 4. MARSEILLE TO FIGARI

*Note : Runways allocated by the original documentation are Dep. LFML Rwy 14L, Arr. LFKF Rwy 05.*

*Check weather reports and select appropriate runways.*

From – To	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 74 ft		
Marseille ( <b>LFML</b> ), France  To  Figari / Sud Corse ( <b>LFKF</b> ), France	<b>Departure: LFML, 13L-31R, 13R-31L</b> Before take off, tune ADF to OB NDB (395.0). Set altimeter. Take off, start climb to 7,500 ft				
	<b>Enroute:</b>  <i>To OB NDB (395.0).</i> After take off, turn and track 119° IB to OB NDB. Fly to NDB.			119	23.0
	<i>To TLN NDB (322.0).</i> Overhead OB NDB, turn left to 116° and fly to NDB.			116	24.0
	<i>To IS NDB (341.0).</i> Overhead TLN NDB, turn right and track 118° OB bearing from TLN. When signal fades out, tune ADF to IS NDB. About 53 NM Dead Reckoning between stations. Fly to NDB when signal is received.			118	128.0
	<i>To WP1 (Senetosa Lighthouse).</i> Overhead IS NDB, turn right to 155° and fly to landmark.			155	22.0
	<i>To WP2 (Punta di Capineru).</i> Turn to 115° and fly to waypoint, on the left side of the entry to Figari Bay.			115	12.6
	<i>To LFKF.</i> Overhead WP2, turn left to 40°. Fly to the airport.			40	3.7
	<b>Approach: LFKF, 05-23(ILS Rwy 23, GR 110,50)</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Figari Sud Corse Airport, runway in use, and land.				
	<b>Length: 8,132 ft</b>	<b>Width: 148 ft</b>	<b>Surface: Asphalt</b>		
<b>Flight No: LM-03</b>	<b>Arrival Airport Elev: 85 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	<b>215.0 NM</b>

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### 5. FIGARI TO ROME

*Note : Runways allocated by the original documentation are Dep. LFKF Rwy 05, Arr. LIRF Rwy 07.*

*Check weather reports and select appropriate runways.*

From – To	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 85 ft		
Figari ( <b>LFKF</b> ), France  To  Rome ( <b>LIRF</b> ), Italy	<b>Departure: LFKF, 05-23</b> Before take off, tune ADF to FA NDB (325.0). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To FA NDB.</i> Turn and track 046° IB to FA NDB, and fly to NDB.  <i>To OST NDB (321.0).</i> Overhead FA NDB, turn right and track 080° OB from FA NDB. Maintain hdg. No Nav aids above open water. When FA signal fades out, tune ADF to OST NDB. About 70 NM Dead Reckoning before OST signal is received. Turn on ADF Morse Ident. Fly to NDB when signal is received.			046   080	9.2   134.0
	<b>Approach: LIRF 07-25 (ILS Rwy 25, FEE 109.70), 16R-34L, 16C-34C, 16L-34R (ILS all 16-34)</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Leonardo da Vinci Airport, runway in use, and land.			156	0.3
	Length: 07-25 10,833 ft, 16R-34L 12,812 ft 16L-34R 12,812 ft	Width: 148 ft 197 ft 197 ft	Surface: Asphalt		
<b>Flight No: LM-04</b>	<b>Arrival Airport Elev: 14 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	<b>144.0 NM</b>

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### 6. ROME TO BRINDISI

*Note : Runways allocated by the original documentation are Dep. LIRF Rwy 16L, Arr. LIBR Rwy 14.*

*Check weather reports and select appropriate runways.*

From – To	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 14 ft		
Rome (LIRF), Italy  To  Brindisi (LIBR), Italy	<b>Departure: LIRF, 07-25, 16R-34L, 16L-34R</b> Before take off, tune ADF to OST NDB (327.0). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To FRS VOR/DME (115.60, OBS 97°).</i> After take off, turn track 097° from OST. When levelled at cruise altitude, tune NAV1 to FRS VOR and set OBS to 097. Fly to VOR.			097	48.0
	<i>To TEA VOR/DME (112.90).</i> Overhead FRS VOR, turn right to 122°. Set OBS to 097° and fly to VOR.			120	37.0
	<i>To FOG NDB (340.0).</i> Overhead TEA VOR, turn left and track 079° OB from TEA. Start timer. After +/- 15 minutes, or if signal fades out, maintain heading, tune ADF to FOG and fly to NDB. (May be some interval between stations – Then fly Dead Reckoning.)			079	71.0
	<i>To BPL NDB (401.0).</i> Overhead FOG NDB, turn right to 106° and fly to NDB.			106	54.0
	<i>To LIBR.</i> Overhead BPL NDB, turn right and track 110° OB from BPL. Fly to the airport.			110	64.0
	<b>Approach: LIBR 05-23, 14-32 (ILS Rwy 32, IBN 109.50)</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Casale Airport, runway in use, and land.				
	Length: 05-23 5,877 ft, 13-31 9,994 ft	Width: 148 ft	Surface: Asphalt		
Flight No: LM-05	Arrival Airport Elev: 42 ft <span style="float: right;">Estimated totals for this flight&gt;&gt;&gt;</span>				275.0 NM



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### 7. BRINDISI TO ATHENS

*Note : Runways allocated by the original documentation are Dep. LIBR Rwy 14, Arr. LGAV Rwy 03R.*

*Check weather reports and select appropriate runways.*

From – To	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 9,500 ft	Apt Elev: 42 ft		
Brindisi (LIBR), Italy  To  Athens (LGAV), Greece	<b>Departure: LIBR 05-23, 14-32</b> Before take off, tune NAV1 to BRD VORTAC (113.20) and set OBS to 136°. Set altimeter. Take off and start climb to 9,500 ft.				
	<b>Enroute:</b>  <i>To BRD VORTAC.</i> After take off, turn and track 136° IB to BRD.			136	3.9
	<i>To KEK NDB (403.0).</i> Overhead BRD, turn and track 120° OB from BRD. Maintain heading when signal is lost. Tune ADF to KEK NDB. About 56 NM Dead Reckoning over open water. As soon as KEK signal is received, adjust heading and fly to NDB.			120	107.0
	<i>To PAK NDB (353.0).</i> Overhead KEK NDB, turn right and track 131° OB from KEK. When signal fades out, maintain heading, tune ADF to PAK NDB. As soon as PAK signal is received, adjust heading and fly to NDB.			131	56.0
	<i>To AML NDB (367.0).</i> Overhead PAK NDB, turn right and track 153° OB from PAK. When signal fades out, tune ADF to AML NDB and fly to NDB.			153	74.0
	<i>To KOR NDB (392.0).</i> Overhead AML NDB, turn right and track 078° OB from AML. After +/- 15 minutes flight, tune ADF to KOR NDB and fly to NDB.			078	76.0
	<i>To WP1 (Fleves Island).</i> Overhead KOR NDB, turn right and track 099°. Fly to landmark.			088	40.0
	<i>To LGAV.</i> Overhead WP1, turn left to 036°.			061	13.3
	<b>Approach: LGAV 03L-21R, 03R-21L (ILS all runways)</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Elephterios Venizelos Int'l, runway in use, and land.				
	<b>Length: 03L-21R 12,469 ft, 03R-21L 13,128 ft</b>	<b>Width: 148 ft</b>	<b>Surface: Asphalt</b>		
<b>Flight No: LM-06</b>	<b>Arrival Airport Elev: 308 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	<b>370.0 NM</b>

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### 8. ATHENS TO RODOS (RHODES)

*Note : Runways allocated by the original documentation are Dep. LGAV Rwy 15L, Arr. LGRP Rwy 07.  
Check weather reports and select appropriate runways.*

From – To	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 308ft		
Athens ( <b>LGAV</b> ), Greece  To  Rodod (Rhodes) ( <b>LGRP</b> ), Greece	<b>Departure: LGAV 03L-21R, 03R-21L</b> Before take off, tune NAV1 to SPA VOR/DME (117.50) and set OBS to 116°. Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To SYR NDB (417.0).</i> After take off, turn and track 116° OB from SPA. SYR NDB signal should be received at DME 42 NM from SPA. Fly to NDB.			116	57.2
	<i>To MKO NDB (401.0).</i> Overhead SYR NDB, turn right to 082° and fly to NDB.			082	18.9
	<i>To LRO NDB (419.0).</i> Overhead MKO NDB, turn right and track 097° OB from MKO. When signal fades out, maintain heading, tune ADF to LRO NDB and fly to NDB.			097	71.0
	<i>To KOS NDB (311.0).</i> Overhead LRO NDB, turn right to 144° and fly to NDB.			144	27.0
	<i>To ROS NDB (339.0).</i> Overhead KOS NDB, turn to 109°. About 25 NM Dead Reckoning between the stations. When KOS signal fades out, tune ADF to ROS and fly to NDB as soon as ROS becomes active.			109	55.0
	<b>Approach: LGRP 06-24 (ILS Rwy 24, IRDS 110.30)</b> <i>To runway.</i> Overhead ROS NDB, adjust heading, fly to Diagoras Airport, runway in use, and land.			238	1.7
	<b>Length: 10,824 ft</b>	<b>Width: 148 ft</b>	<b>Surface: Asphalt</b>		
<b>Flight No: LM-07</b>	<b>Arrival Airport Elev: 17 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	
					<b>231.0 NM</b>

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### 9. RODOS (RHODES) TO LARNACA

*Note : Runways allocated by the original documentation are Dep. LGRP Rwy 07, Arr. LCLK Rwy 04*

*Check weather reports and select appropriate runways.*

From – To	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 17 ft		
Rodas (Rhodes) (LGRP), Greece  To  Larnaca (LCLK), Cyprus	<b>Departure: LGRP 06-24</b> Before take off, tune ADF to ROS NDB (339.0). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To ROS NDB.</i> After take off, turn and fly to NDB.			058	1.7
	<i>To KZO NDB (416.0).</i> Overhead ROS NDB, turn right and track 097° OB from ROS. When signal fades out, maintain heading, tune ADF to KZO NDB and fly to NDB.			097	72.0
	<i>To PHA NDB (328.0).</i> Overhead KZO NDB, turn right and track 115° OB from KZO. Watch hdg. No Nav aids above open water, about 90 NM Dead Reckoning between stations. Turn on ADF Morse Ident. When signal fades out, maintain heading, tune ADF to PHA NDB and fly to NDB as soon as signal is received.			115	166.0
	<i>To LCA NDB (432.0).</i> Overhead PHA NDB, turn left and track 078° OB from PHA. Tune ADF to LCA NDB and fly to NDB.			078	53.0
	<i>To LCLK.</i> Overhead LCA NDB, turn left to 043°.			041	5.1
	<b>Approach: LCLK 04-22 (ILS Rwy 22, ILC 110.30)</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Larnaca Int'l Airport, runway in use, and land.				
	<b>Length: 9,795 ft</b>	<b>Width: 148 ft</b>	<b>Surface: Asphalt</b>		
<b>Flight No: LM-08</b>	<b>Arrival Airport Elev: 2 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	<b>398.0 NM</b>

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### 10. LARNACA TO AMMAN

*Note : Runways allocated by the original documentation are Dep. LCLK Rwy 22, Arr. OJAI Rwy 26R.*

*Check weather reports and select appropriate runways.*

From – To	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 2 ft		
Larnaca (LCLK), Cyprus  To  Amman (OJAI), Jordan	<b>Departure: LCLK 04-22</b> Before take off, tune ADF to LCA NDB (432.0). Set altimeter. Take off and start climb to 7,5xx ft.				
	<b>Enroute:</b>  <i>To LCA NDB.</i> After take off, turn and fly to LCA NDB.			221	5.1
	<i>To BOD NDB (351.0).</i> Overhead LCA NDB, turn left and track 114° OB from LCA NDB. No navaid over open water. About 10 NM Dead Reckoning between stations. When signal fades out, maintain heading, tune ADF to BOD NDB. Fly to NDB when signal is received.			114	110.0
	<i>To WP1.</i> Overhead BOD NDB, turn right and track 170° OB from BOD, flying towards Lake Tiberias (aka Sea of Galilee). After +/- 25 minutes flight, you will be flying overhead Rosh-Pina Airport (LLIB), which is your waypoint.			170	55.0
	<i>To QA NDB (391.0).</i> Overhead LLIB, turn left to 155°. Maintain heading and fly Dead Reckoning. Tune ADF to QA NDB and fly to NDB.			155	80.0
	<i>To OJAI.</i> Overhead QA NDB, turn right to 260°.			260	5.2
	<b>Approach: OJAI 08L-26R (ILS both runways), 08R-26L (ILS Rwy 26L, IQA 110.90)</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Queen Alia Int'l Airport, runway in use, and land.				
	<b>Length: 08L-26R 11,945 ft</b> <b>08R-26L 11,988 ft</b>	<b>Width: 200 ft</b>	<b>Surface: Asphalt</b> <b>Concrete</b>		
<b>Flight No: LM-09</b>	<b>Arrival Airport Elev: 2,395 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	<b>256.0 NM</b>

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### 11. AMMAN TO AL JOUF

*Note : Runways allocated by the original documentation are Dep. OJAI Rwy 08R, Arr. OESK Rwy 10*  
*Check weather reports and select appropriate runways.*

From – To	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 2,395 ft		
Amman (OJAI), Jordan  To  Al Juf (OESK), Saudi Arabia	<b>Departure: OJAI 08L-26R, 08R-26L</b> Before take off, tune ADF to QA NDB (410.0). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To QA NDB.</i> After take off, turn and fly to NDB.			080	5.2
	<i>To ASH VOR/DME (112.30, OBS 130°).</i> Overhead QA NDB, turn right and track 119° OB from QA NDB			119	169.0
	<i>To AJF VORTAC (117.80).</i> Overhead ASH VOR, turn left to 102°. Tune NAV1 to AJF and fly to the VORTAC.			102	69.0
	<b>Approach: OESK 10-28 (ILS Rwy 28, IAJF 109.90)</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Al Juf Airport, runway in use, and land.			096	1.5
	Length: 11,990 ft	Width: 148 ft	Surface: Asphalt		
Flight No: LM-10	Arrival Airport Elev: 2,261 ft <span style="float: right;">Estimated totals for this flight&gt;&gt;&gt;</span>				245.0 NM

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### 12. AL JOUF TO RAFHA

*Note : Runways allocated by the original documentation are Dep. OESK Rwy 10, Arr. OERF Rwy 11*

*Check weather reports and select appropriate runways.*

From – To	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 2,261 ft		
Al Jouf (OESK), Saudi Arabia  To  Rafha (OERF), Saudi Arabia	<b>Departure: OESK 10-28</b> Before take off, tune NAV1 to AJF VORTAC (117.80). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  To RAF VOR/DME (116.80). Turn and track 088° OB bearing from AJF VORTAC. When DME shows 80 NM from AJF, tune NAV1 to RAF VOR and fly towards VOR.			088	177.0
	<b>Approach: OERF 11-29</b> To runway. As soon as airport is in sight, adjust heading, fly to Rafha Airport, runway in use, and land.			310	0.5
	Length: 9,840 ft	Width: 148 ft	Surface: Asphalt		
Flight No: LM-11	Arrival Airport Elev: 1,474 ft			Estimated totals for this flight>>>	
					178.0 NM

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### 13. RAFHA TO KUWAIT

*Note : Runways allocated by the original documentation are Dep. OERF Rwy 11, Arr. OKBK Rwy 15R*

*Check weather reports and select appropriate runways.*

From – To	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 1,474ft		
Rafha (OERF), Saudi Arabia  To  Kuwait (OKKK), Kuwait	<b>Departure: OERF 11-29</b> Before take off, tune NAV1 to RAF VOR/DME (116.80). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To KUA VOR/DME (114.15).</i> After take off, turn and track 090° OB bearing from RAF VOR. When RAF DME shows 115NM, tune NAV1 to KUA VOR and set OBS to 090°. Fly to KUA.			090	234.0
	<b>Approach: OKKK 15R-33L, 15L-33R, (ILS all runways)</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Kuwait Int'l Airport, runway in use, and land.			132	1.9
	<b>Length: 15R-33L 11,183 ft</b> <b>15L-33R 11,513 ft</b> <b>16-34 15,061 ft</b>	<b>Width: 148 ft</b> <b>148 ft</b> <b>197 ft</b>	<b>Surface: Concrete</b> <b>Asphalt</b> <b>Asphalt</b>		
<b>Flight No: LM-12</b>	<b>Arrival Airport Elev: 204 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	<b>236.0 NM</b>

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### 14. KUWAIT TO DAHRAN

*Note : Runways allocated by the original documentation are Dep. OKBK Rwy 14L, Arr. OEDR Rwy 16R.*

*Check weather reports and select appropriate runways.*

From – To	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 204 ft		
Kuwait (OKKK), Kuwait  To  Dhahran (OEDR), Saudi Arabia	<b>Departure: OKKK 15R-33L, 15L-33R, 16-34</b> Before take off, tune NAV1 to KUA VOR/DME (114,15) and set OBS to 149°. Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To TJ NDB (382.0).</i> After take off, turn and track 149° OB from KUA. Tune ADF to TJ. As soon as signal is received, fly to NDB.			149	95.0
	<i>To RT NDB (286.0).</i> Overhead TJ NDB, turn left to 132° and fly to NDB.			132	96.0
	<i>To OEDR.</i> Overhead RT NDB (OERT), turn right to 164°.			164	27.0
	<b>Approach: OEDR 16R-34L, 16L-34R, (ILS all runways)</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Dhahran Int'l Airport, runway in use, and land.				
	Length: 16R-34L 12,042 ft 16L-34R 11,844 ft	Width: 148 ft	Surface: Concrete Asphalt		
Flight No: LM-13	Arrival Airport Elev: 83 ft			Estimated totals for this flight>>>	222.0 NM



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### 15. DAHRAN TO ABU DHABI

*Note : Runways allocated by the original documentation are Dep. OEDR Rwy 16L, Arr. OMAA Rwy 13.*

*Check weather reports and select appropriate runways.*

From – To	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 84 ft		
Dhahran (OEDR), Saudi Arabia  To  Abu Dhabi (OMAA), U.A.E.	<b>Departure: OEDR 16R-34L, 16L-34R</b> Before take off, tune ADF to SI NDB (343.0). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To SI NDB.</i> After take off, turn and track 129° IB to SI NDB. As soon as SI signal is received, amend heading and fly to NDB.			129	33.0
	<i>To WK NDB (323.0).</i> Track 125° OB from SI NDB until signal fades out. Tune ADF to WK NDB. About 40 NM Dead Reckoning between stations. When WK signal is received, amend heading and fly to NDB.			125	69.0
	<i>To OMAA.</i> Overhead WK NDB, turn and track 102° OB from WK. Tune NAV1 to ADV (114.25, OBS 102°). About 30 NM Dead Reckoning between stations. As soon as ADV signal is received, amend heading as required and fly towards VOR.			102	172.0
	<b>Approach: OMAA 13R-31L, 13L-31R (ILS at all runways)</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Abu Dhabi Int'l Airport, runway in use, and land.				
	<b>Length: 13,463 ft</b>	<b>Width: 148 ft</b>	<b>Surface: Asphalt</b>		
<b>Flight No: LM-14</b>	<b>Arrival Airport Elev: 83 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	<b>274.0 NM</b>

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### 16. ABU DHABI TO MUSCAT

*Note : Runways allocated by the original documentation are Dep. OMAA Rwy 13, Arr. OOMS Rwy 08  
Check weather reports and select appropriate runways.*

From – To	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 83 ft		
Abu Dhabi (OMAA), U.A.E.  To  Muscat (OOMS), Oman	<b>Departure: OMAA 13-31</b> Before take off, tune NAV1 to ADV VOR/DME(114.25) and set OBS to 123°. Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To OOMS / MCT VOR/DME (114.50, OBS 101°).</i> After take off, turn and track 101° OB from ADV VOR. When DME shows 100 NM, tune NAV1 to MCT VOR/DME (114.50) and set OBS to 101°. Fly towards VOR.			101	204.0
	<b>Approach: OOMS 08-26 (ILS both runways), 02-20</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Muscat Int'l Airport, runway in use, and land.				
	Length: 08L-26R 13,124 ft 08R-26L 11,742 ft	Width: 197 ft 148 ft	Surface: Asphalt		
<b>Flight No: LM-15</b>	Arrival Airport Elev: 23 ft <span style="float: right;">Estimated totals for this flight&gt;&gt;&gt;</span>				<b>205.0 NM</b>

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### 17. MUSCAT TO JIWANI

*Note : Runways allocated by the original documentation are Dep. OOMS Rwy 08, Arr. OPJI Rwy 03*  
*Check weather reports and select appropriate runways.*

From – To	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 23 ft		
Muscat (OOMS), Oman  To  Jiwani (OPJI), Pakistan	<b>Departure: OOMS 08-26</b> Before take off, tune NAV1 to MCT VOR/DME (114.50) and set OBS to 44°. Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To WP 01 (Land point).</i> Turn and track 044° OB from MCT. When DME shows 80 NM, tune NAV1 to CBH VOR/DME (115.60) and set OBS to 044°. Fly towards VOR. Way point reached when CBH DME shows 8.6 NM (coastline).  <i>To OPJI.</i> Overhead WP1 land point, turn east to 099°. You will fly above terrain, water, coastline and terrain again, then water again. Jiwani is on the other side of the bay.			044	152.0
	<b>Approach: OPJI 03-21</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Jiwani Airport, runway in use, and land.			099	84.0
	Length: 5,301 ft	Width: 151 ft	Surface: Clay		
Flight No: LM-16	Arrival Airport Elev: 184 ft <span style="float: right;">Estimated totals for this flight&gt;&gt;&gt;</span>				236.0 NM

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### 18. JIWANI TO KARACHI

*Note : Runways allocated by the original documentation are Dep. OPJI Rwy 03, Arr. OPKC Rwy 07R*

*Check weather reports and select appropriate runways.*

From – To	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 184 ft		
Jiwani (OPJI), Pakistan  To  Karachi (OPKC), Pakistan	<b>Departure:</b> Before take off, tune ADF to GD NDB (303.0). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To GD NDB.</i> Turn to 070°. As soon as signal is received, adjust heading as required and fly to NDB.			070	30.0
	<i>To PI NDB (400.0).</i> Overhead GD NDB, turn and track 084° OB from GD. When GD signal fades out, tune ADF to PI NDB, then fly to NDB. Short "no signal" zone between the stations.			084	55.0
	<i>To OR NDB (380.0).</i> Overhead PI NDB, turn and track 089° OB from PI. When PI NDB signal fades out, tune ADF to OR NDB and fly to NDB. +/- 17 NM "no signal" zone between the stations.			089	67.0
	<i>To KA NDB (244.0).</i> Overhead OR NDB, turn and track 101° OB from OR. When OR NDB signal fades out, tune ADF to KA NDB and fly to NDB. +/- 40 NM "no signal" zone between the stations.			101	116.0
	<i>To OPKC .</i> Overhead KA NDB, turn left to 078°. The first airport you will see larboard is Masroor (OPMR), then, starboard, a small AFB airport, OPSF, but Jinnah Int'l Airport is in front of you.			078	28.0
	<b>Approach: OPKC 06-24, 07L-25R (ILS Rwy 25R IKC, 110.10), 07R-25L (ILS Rwy 25R IQA, 109.70)</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Jinnah Int'l Airport, runway in use, and land.				
	Length: 07L-25R 10,449 07R-25L 11,141	Width: 151 ft	Surface: Concrete		
Flight No: LM-17	Arrival Airport Elev: 100 ft			Estimated totals for this flight>>>	296.0 NM

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### 19. KARACHI TO JODHPUR

*Note : Runways allocated by the original documentation are Dep. OPKC Rwy 07L, Arr. VIJO Rwy 05*

*Check weather reports and select appropriate runways.*

From – To	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 100 ft		
Karachi (OPKC), Pakistan  To  Jodhpur (VIJO), India	<b>Departure: OPKC 07L-25R, 07R-25L</b> Before take off, tune ADF to KC NDB (271.0). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To KD NDB (223.0).</i> After take off, turn and track 068° OB from KC NDB. When KC signal fades out, tune ADF to KD NDB, and fly to NDB.  <i>To KE NDB (410.0).</i> Turn right and track 080° OB from KD NDB. When KE signal fades out, tune ADF to KE NDB, then fly to KE as soon as signal is received. Short "no signal" zone between the stations.  <i>To VIJO.</i> Overhead KE NDB, turn and track tune 074° OB from KE. Tune NAV1 to JDP VOR/DME (116.20, OBS 074°) and track 074° bearing towards VOR.			068	70.0
				080	77.0
				074	183
	<b>Approach: VIJO 05-23</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Jodhpur AB, runway in use, and land.				
	<b>Length: 9,011 ft</b>	<b>Width: 150 ft</b>	<b>Surface: Asphalt</b>		
<b>Flight No: LM-18</b>	<b>Arrival Airport Elev: 715 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	<b>330.0 NM</b>

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### 20. JODHPUR TO DELHI

*Note : Runways allocated by the original documentation are Dep. VIJO Rwy 05, Arr. VIDP Rwy 28*

*Check weather reports and select appropriate runways.*

From – To	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 715 ft		
Jodhpur (VIJO), India  To  Delhi (VIDP), India	<b>Departure: VIJO 05-23</b> Before take off, tune NAV1 to JDP VOR/DME (112.30) and set OBS to 064°. Tune ADF to TRR NDB (266.0) . Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To SKA VOR/DME (117.20, OBS 064°).</i> After take off, turn and track 064° OB from JDP VOR. Signal will fade out at +/- 130 NM DME. Maintain heading over desert, and tune NAV1 to SKA VOR. About 63 NM Dead Reckoning until SKA signal is received. Fly to VOR when signal is received.			064	232.0
	<i>To DH NDB (202.0).</i> Overhead SKA, turn and track 012° OB from SKA, Tune ADF to DH NDB., as soon as signal is received,.fly to NDB.			012	44.0
	<b>Approach: VIDP 09-27 (ILS Rwy 27 DLH 110.50), 10-28 (ILS both runways),</b> <i>To runway.</i> Overhead PL NDB, airport in sight, adjust heading, fly to Indira Ghandi Int'l Airport, runway in use, and land.			270	5.2
	<b>Length: 09-27 9,267 ft</b> <b>10-28 12,486 ft</b> <b>11-29 14,347 ft</b>	<b>Width: 148 ft</b> <b>148 ft</b> <b>197 ft</b>	<b>Surface: Asphalt</b>		
<b>Flight No: LM-19</b>	<b>Arrival Airport Elev: 775 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	<b>282.0 NM</b>

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### 21. DELHI TO GWALIOR

*Note : Runways allocated by the original documentation are Dep. VIDP Rwy 10, Arr. VIGR Rwy 24*  
*Check weather reports and select appropriate runways.*

From – To	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 6,500 ft	Apt Elev: 775 ft		
Dehli (VIDP), India  To  Gwalior (VIGR), India	<b>Departure: VIDP 09-27, 10-28, 11-29</b> Before take off, tune NAV1 to SKA VOR/DME (117.20) and set OBS to 185°. Tune ADF to AG NDB (249.0). Set altimeter. Take off and start climb to 6,500 ft.				
	<b>Enroute:</b>  <i>To SKA VOR/DME (117.20, OBS 064°).</i> After take off and turn to 185°. When SKA signal is received, adjust heading as required, and fly to VOR.			185	43.0
	<i>To AG NDB (249.5).</i> Overhead SKA, turn left to 128° and fly to NDB.			128	66.0
	<i>To VIGR.</i> Overhead AG NDB, turn right and track 164° OB from AG NDB. Tune NAV1 to GWA VOR/DME (112.80, OBS 164°) and fly to Airport.			164	53.0
	<b>Approach: VIGR 06-24</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Maharajour AB, runway in use, and land.				
	<b>Length: 8,973 ft</b>	<b>Width: 150 ft</b>	<b>Surface: Concrete</b>		
<b>Flight No: LM-20</b>	<b>Arrival Airport Elev: 617 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	<b>163.0 NM</b>

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### 22. GWALIOR TO ALLAHABAD

*Note : Runways allocated by the original documentation are Dep. VIGR Rwy 06, Arr. VIAL Rwy 12*

*Check weather reports and select appropriate runways.*

From – To	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 617 ft		
Gwalior (VIGR), India  To  Allahabad (VEAB), India	<b>Departure: VIGR 06-24</b> Before take off, tune NAV1 to GWA VOR/DME (112.80) and ADF to KA NDB (292.0). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To KA NDB.</i> After takeoff, turn and track 085° OB from GWA, and track 085° OB until KA NDB signal is received. Fly to NDB.			085	117.0
	<i>To WP1 (Fursatganj Airport).</i> Overhead KA NDB, turn to 100°. Waypoint reached overhead VIRB.			100	54.0
	<i>To ALH VOR/DME (113.30).</i> Overhead WP1, Turn to 158°. Tune NAV1 to ALH VOR and fly to VOR when signal is received.			158	52.0
	<b>Approach: VEAB 06-24</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Allahabad Airport, runway in use, and land.			108	0.6
	Length: 12-30 8,337 ft	Width: 150 ft	Surface: Asphalt		
Flight No: LM-21	Arrival Airport Elev: 318 ft <span style="float: right;">Estimated totals for this flight&gt;&gt;&gt;</span>				223.0 NM



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### 23. ALLAHABAD TO RANCHI

*Note : Runways allocated by the original documentation are Dep. VIAL Rwy 06, Arr. VERC Rwy 13*

*Check weather reports and select appropriate runways.*

From – To	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 318 ft		
Allahabad (VEAB), India  To  Ranchi (VERC), India	<b>Departure: VEAB 06-24</b> Before take off, tune NAV1 to BBN VOR/DME (113.90) and set OBS to 089°. Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To BBN VOR/DME.</i> After take off, turn to 089°. Fly to BBN VOR as soon as signal is received.  <i>To RC NDB (285.0).</i> Overhead BBN, turn right and track 133° OB from BBN VOR. When BBN signal fades out, tune ADF to RC NDB. +/- 30 NM "no signal" zone between stations. Turn on ADF Morse Ident. Fly to NDB when signal is received.			089	61.0
	<b>Approach: VERC 13-31 (ILS Rwy 31, RAN 110.50)</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Ranchi Airport, runway in use, and land.			133	186.0
	Length: 9,021 ft      Width: 151 ft      Surface: Asphalt			196	0.2
Flight No: LM-22	Arrival Airport Elev: 2,145 ft      Estimated totals for this flight>>>				247.0 NM

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### 24. RANCHI TO CALCUTTA

*Note : Runways allocated by the original documentation are Dep. VERC Rwy 13, Arr. VECC Rwy 19L  
Check weather reports and select appropriate runways.*

From – To	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 2,145 ft		
Ranchi (VERC), India  To  Calcutta (VECC), India	<b>Departure: VERC 13-31</b> Before take off, tune NAV1 to JJS VOR/DME (115.40) and set OBS to 123°. Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To JJS VOR.</i> After take off, turn and track 123° IB to JJS Fly to VOR.			123	53.0
	<i>To DU NDB (385.0).</i> Overhead JJS NDB, turn and track 092° OB from JJS. Tune ADF to DU NDB. As soon as signal is received, adjust heading as required, and fly to NDB.			092	127.0
	<b>Approach: VECC 01L-19R, 01R-19L (ILS both runways)</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Chandra Bose Int'l Airport, runway in use, and land.			187	5.2
	<b>Length: 01L-19R 10,793 ft 01R-19L 11,868 ft</b>	<b>Width: 151 ft</b>	<b>Surface: Asphalt</b>		
<b>Flight No: LM-23</b>	<b>Arrival Airport Elev: 16 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	
					<b>188.0 NM</b>

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### 25. CALCUTTA TO COX'S BAZAR

*Note : Runways allocated by the original documentation are Dep. VECC Rwy 01L, Arr. VGCB Rwy 17*  
*Check weather reports and select appropriate runways.*

From – To	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 16 ft		
Calcutta ( <b>VECC</b> ), India  To  Cox's Bazar ( <b>VGCB</b> ), Bangladesh	<b>Departure: VECC 01L-19R, 01R-19L</b> Before take off, tune ADF to DU NDB (385.0). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To DU NDB.</i> Turn and fly to NDB.			007	5.2
	<i>To BL NDB (368.0).</i> Overhead DU, turn and track 088° OB from DU NDB. When signal fades out, tune ADF to BL NDB. +/- 30 NM "no signal" zone between stations. As soon as signal is received, adjust heading as required, and fly to NDB.			088	102.0
	<i>To CTG VOR/DME (113.40, OBS 111°).</i> Overhead BL, turn and track 111° IB to CTG. Fly to VOR			111	91.0
	<i>To CB NDB (396.0).</i> Overhead CTG, turn right and track 172°. Tune ADF to CB NDB and fly to NDB, roughly following coastline southwards.			172	49.0
	<b>Approach: VGCB 17-35</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Cox's Bazar Airport, runway in use, and land.			197	0.2
	<b>Length: 6,798 ft</b>	<b>Width: 125 ft</b>	<b>Surface: Concrete</b>		
<b>Flight No: LM-24</b>	<b>Arrival Airport Elev: 12 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	<b>246.0 NM</b>

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### 26. COX'S BAZAR TO THANDWE

*Note : Runways allocated by the original documentation are Dep. VGCB Rwy 17, Arr. VYTD Rwy 20.*

*Check weather reports and select appropriate runways.*

From – To	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 12 ft		
Cox's Bazar (VGCB), Bangladesh  To  Thandwe (VYTD), Myanmar	<b>Departure: VGCB 17-35</b> Before take off, tune ADF to CB NDB (396.0). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To SW NDB (216.0).</i> After take off, turn and track 148° OB from CB. When signal fades out, tune ADF to SW NDB. As soon as signal is received, adjust heading as required, and fly to NDB.			148	94.0
	<i>To KP NDB (250.0).</i> Overhead SW, turn left to 140°. Start timer. After about 15 minutes flight, tune ADF to KP NDB and fly to NDB. Reset timer.			140	56.0
	<i>To VYTD.</i> Overhead KP NDB, turn right to 144°. Start timer. After about 15 minutes flight, tune ADF to TD NDB (250.0) and fly towards NDB. Stop timer.			144	73.0
	<b>Approach: VYTD 02-20</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Mazin Airport, runway in use, and land.				
	<b>Length: 8,038 ft</b>	<b>Width: 102 ft</b>	<b>Surface: Asphalt</b>		
<b>Flight No: LM-25</b>	<b>Arrival Airport Elev: 20 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	<b>223.0 NM</b>

## London to Melbourne Air Race – 1934 *(The MacRobertson Trophy Air Race)*

### 27. THANDWE TO YANGOON

*Note : Runways allocated by the original documentation are Dep. VYTD Rwy 20, Arr. VYYY Rwy 03.*

*Check weather reports and select appropriate runways.*

From – To	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 20 ft		
Thandwe (VYTD), Myanmar  To  Yangon (VYYY), Myanmar	<b>Departure: VYTD 02-20</b> Before take off, tune ADF to TD NDB (270.0). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To PTN NDB (415.0).</i> After take off, turn and track 165° OB from TD NDB. When signal fades out, tune ADF to PTN NDB. As soon as signal is received, adjust heading as required, and fly to NDB.  <i>To MDS NDB (397.0).</i> Overhead PTN, Turn left and track 088° OB from PTN NDB. When signal fades out, tune ADF to MDS NDB. As soon as signal is received, adjust heading as required, and fly to NDB.			165	102.0
				088	76.0
	<b>Approach: VYYY 03-21 (ILS Rwy 21, IYGN 109.90)</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Yangon Int'l Airport, runway in use, and land.			035	2.8
	<b>Length: 11,246 ft</b>	<b>Width: 200 ft</b>	<b>Surface: Asphalt</b>		
<b>Flight No: LM-26</b>	<b>Arrival Airport Elev: 106 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	<b>182.0 NM</b>

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### 28. YANGOON TO TAK

*Note : Runways allocated by the original documentation are Dep. VYYY Rwy 03, Arr. VTPM Rwy 09.*

*Check weather reports and select appropriate runways.*

From – To	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 106 ft		
Yangoon (VYYY), Myanmar  To  Tak (VTPM), Thailand	<b>Departure: VYYY 03-21</b> Before take off, tune ADF to MDS NDB (397.0). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To PA NDB (365.0).</i> Track 092° OB from MDS NDB. When signal fades out, tune ADF to PA NDB and fly to NDB.  <i>To MS NDB (316.0).</i> Turn right and track 104° OB from PA NDB. When signal fades out, tune ADF to MS NDB and fly to NDB.			090	89.0
				104	51.0
	<b>Approach: VTPM 09-27</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Mae Sot Aero Airport, runway in use, and land.			122	0.2
	Length: 4,911 ft	Width: 148 ft	Surface: Asphalt		
Flight No: LM-27	Arrival Airport Elev: 688 ft <div style="float: right;">Estimated totals for this flight&gt;&gt;&gt;</div>				140.0 NM

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### 29. TAK TO BANGKOK

*Note : Runways allocated by the original documentation are Dep. VTPM Rwy 09, Arr. VTBD Rwy 21R.*

*Check weather reports and select appropriate runways.*

From – To	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 688 ft		
Tak (VTM), Thailand  To  Bangkok (VTBD), Thailand	<b>Departure: VTVM 09-27</b> Before take off, tune ADF to MS NDB (316.0). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To TL NDB (350.0).</i> After take off, turn and track 131° OB from MS NDB. When signal fades out, tune ADF to TL NDB. About 33 NM Dead Reckoning between stations. As soon as TL signal is received, adjust heading as required, and fly to NDB.			131	132.0
	<i>To LB NDB (280.0).</i> Overhead TL, turn right to 140° and fly to LB NDB.			140	32.0
	<i>To BKK VOR/DME (117.70, OBS 184°).</i> Turn right and track 184° OB from LB NDB. At your convenience, tune NAV1 to BKK VOR/DME (117.70), and fly towards VOR.			184	58.0
	<b>Approach: VTBD 03L-21R (ILS both sides), 03R-21L (ILS Rwy 21L, IDMG 110.30)</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Bangkok Int'l Airport, runway in use, and land.				
	<b>Length: 03L-21R 12,188 ft</b> <b>03T-21L 11,503 ft</b>	<b>Width: 197 ft</b> <b>148 ft</b>	<b>Surface: Asphalt</b>		
<b>Flight No: LM-28</b>	<b>Arrival Airport Elev: 6 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	<b>222.0 NM</b>

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### 30. BANGKOK TO PRACHUAP

*Note : Runways allocated by the original documentation are Dep. VTBD Rwy 21R, Arr. VTBP Rwy 18.*

*Check weather reports and select appropriate runways.*

From – To	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 6,500 ft	Apt Elev: 6 ft		
Bangkok (VTBD), Thailand  To  Prachuap (VTBP), Thailand	<b>Departure: VTBD 03L-21R, 03R-21L</b> Before take off, tune NAV1 to BKK VOR/DME (117.70) and set OBS to 184°. Tune ADF to HN NDB (213.0). Set altimeter. Take off and start climb to 6,500 ft.				
	<b>Enroute:</b>  <i>To HN NDB (213.0).</i> After take off, turn and track 208° OB from BKK VOR. At DME +/- 40 NM, HN signal will become active. Fly to NDB.			208	88.0
	<i>To VTBP.</i> Overhead HN NDB, turn left to 190°. Tune ADF to PCK NDB (320.0), and fly towards NDB.			190	52.0
	<b>Approach: VTBP 08-26</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Prachuap Khiri Airport, runway in use, and land.				
	Length: 6,559 ft	Width: 131 ft	Surface: Asphalt		
Flight No: LM-29	Arrival Airport Elev: 8 ft			Estimated totals for this flight>>>	138.0 NM



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### 31. PRACHUAP TO NAKHON SI THAMMARAT

*Note : Runways allocated by the original documentation are Dep. VTBP Rwy 18, Arr. VTSF Rwy 18.*

*Check weather reports and select appropriate runways.*

From – To	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 6,500 ft	Apt Elev: 8 ft		
Prachuap (VTBP), Thailand  To  Nakhon Si Thammarat (VTSF), Thailand	<b>Departure: VTBP 08-26</b> Before take off, tune ADF to PCK NDB (320.0). Set altimeter. Take off and start climb to 6,500 ft.				
	<b>Enroute:</b>  <i>To CP NDB (279.0).</i> After take off, turn and track 202° OB from PCK NDB. After levelling at cruise altitude, tune ADF to CP NDB and fly to NDB.			202	69.0
	<i>To VTSF.</i> Turn left to 127°. Tune NAV1 to NKS VOR/DME (117.40), set OBS to 166°. Start Climb to 7,500 ft. Fly towards the VOR and to the airport.			166	135.0
	<b>Approach: VTSF 01-19</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Nakhon Si Thammarat Airport, runway in use, and land.				
	Length: 6,927 ft	Width: 148 ft	Surface: Asphalt		
Flight No: LM-30	Arrival Airport Elev: 13 ft			Estimated totals for this flight>>>	204.0 NM

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### 32. NAKHON SI THAMMARAT TO KUALA TERRENGGANU

*Note : Runways allocated by the original documentation are Dep. VTSF Rwy 18, Arr. WMKN Rwy 22.*

*Check weather reports and select appropriate runways.*

From – To	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 13 ft		
Nakhon Si Thammarat (VTSF), Thailand  To  Kuala Terengganu (WMKN), Malaysia	<b>Departure: VTSF 01-19</b> Before take off, tune ADF to SK NDB (410.0). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To SK NDB (410.0).</i> After take off, turn and track 155°. About 50 NM Dead Reckoning on this heading. Once levelled at cruise altitude, tune ADF to SK NDB (or follow coastline south until SK signal is received). As soon as SK signal is received, adjust heading as required, and fly to NDB.			155	90.0
	<i>To PT NDB (201.0).</i> Overhead SK, turn to 127° and fly to NDB (or follow coastline south).			127	40.0
	<i>To NT NDB (383.0).</i> Overhead PT, turn and track 114° OB from PT. As soon as SK signal is received, adjust heading as required, and fly to NDB. (or follow coastline south).			114	39.0
	<i>To VKB VOR/DME (112.30, OBS 123°).</i> Turn to 123° and fly to VOR (or follow coastline south).			123	40.0
	<i>To WMKN.</i> Overhead VKB VOR, turn right and track 135° OB from VKB. Maintain heading. Airport at DME 67 NM from VKB.			135	67.0
	<b>Approach: WMKN 04-22</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Sultan Mahmud Airport, runway in use, and land.				
	<b>Length: 11,441 ft</b>	<b>Width: 150 ft</b>	<b>Surface: Asphalt</b>		
<b>Flight No: LM-31</b>	<b>Arrival Airport Elev: 20 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	
					<b>276.0 NM</b>

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### 33. KUALA TERRENGGANU TO SINGAPORE

*Note : Runways allocated by the original documentation are Dep. WMKN Rwy 22, Arr. WSSL Rwy 21.*

*Check weather reports and select appropriate runways.*

From – To	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 20 ft		
Kuala Terengganu (WMKN), Malaysia  To  Singapore (WSSL), Republic of Singapore	<b>Departure: WMKN 04-22</b> Before take off, tune ADF to VKP VOR/DME (113.30) and set OBS to 159°. Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To VKP VOR/DME (113.30).</i> After take off, turn and track 159° IB to VKP. Fly to VOR.			159	55.0
	<i>To KK NDB (286.0).</i> Turn right and track 170° OB from VKE VOR. Fly over water, and when reaching coastline, tune ADF to KK NDB. VKE signal will fade out, but KK signal will be received short after. Fly to NDB.			170	184.0
	<i>To WSSL.</i> Overhead KK, turn right to 229°. Tune ADF to SEL NDB (220.0) and fly towards. NDB			229	9.7
	<b>Approach: WSSL 03-21</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Seletar Airport, runway in use, and land.				
	Length: 6,067 ft	Width: 151 ft	Surface: Asphalt		
Flight No: LM-32	Arrival Airport Elev: 43 ft	Estimated totals for this flight>>>			248.0 NM

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### 34. SINGAPORE TO PALEMBANG

*Note : Runways allocated by the original documentation are Dep. WSSL Rwy 21, Arr. WIPP Rwy 11*

*Check weather reports and select appropriate runways.*

From – To	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 43 ft		
Singapore (WSSL), Republic of Singapore  To  Palembang (WIPP), Indonesia	Departure: WSSL 03-21 Before take off, tune ADF to BM NDB (370.0). Set altimeter. Take off and start climb to 7,500 ft.				
	Enroute:				
	To BM NDB. After take off, turn and track 141° IB to BM NDB. Fly to NDB.			141	23.0
	To TI NDB (385.0). Overhead BM, turn left and track 116° IB to TI. Fly to NDB.			116	28.0
	To NE NDB (320.0). Overhead TI, turn right and track 178° OB from TI NDB. When approaching a group of island, specifically fhe first rather big one (Pulau Sebakga), tune ADF to NE NDB and fly to NDB.			178	84.0
	To PLB VOR/DME (115.50, OBS 178°). Overhead NE NDB, maintain heading 178°. When PLB signal is received, fly to VOR.			178	144.0
	Approach: WIPP 11L-29R, 11-29 (ILS Rwy 11, IPLM 111.10, and Rwy 29, IPLB 110.50) To runway. As soon as airport is in sight, adjust heading, fly to Sultan M Badaruddin Li Airport, runway in use, and land.			115	3.1
Length: 11L-29R 6,962 ft 11-29 9,844 ft		Width: 148 ft	Surface: Asphalt		
Flight No: LM-33	Arrival Airport Elev: 37 ft			Estimated totals for this flight>>>	
					282.0 NM

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### 35. PALEMBANG TO JAKARTA

*Note : Runways allocated by the original documentation are Dep. WIPP Rwy 11, Arr. WIII Rwy 7L*

*Check weather reports and select appropriate runways.*

From – To	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 37 ft		
Palembang (WIPP), Indonesia  To  Jakarta (WIII), Indonesia	<b>Departure: WIPP 11-29</b> Before take off, tune NAV1 to PLB VOR/DME (115.50) and set OBS to 295°. Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To WP1 (Coastline).</i> After take off, turn and track 126° OB from PLB VOR. Waypoint reached at the coastline.			126	94.0
	<i>To WP2 (Pulau Rimaubalak, an island).</i> At Coastline, climb to 8,500 ft. Turn to 184° and follow it until Isthmus between Islands. Tune ADF to GL NDB, 324 KHz. Turn on Morse Ident.			185	122.0
	<i>To WP3.</i> Overhead WP2, turn left to 094°. Descend to 7,500 ft. Cross Isthmus to the most northern landpoint. Follow north shore eastward until reaching 120° bearing to GL NDB.			094	15.4
	<i>To CKG VOR/DME (113.60, OBS 122).</i> Overhead WP3, turn to 122° and fly to VOR.			122	35.0
	<b>Approach: WIII 07L-25R, 07R-25L (ILS at all runways)</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Soekarno-Hatta Int'l Airport, runway in use, and land.			063	8.7
	Length: 07L-25R 11,815 ft 07R-25L 12,010 ft 06-24 9,812 ft		Width: 197 ft		
Flight No: LM-34	Arrival Airport Elev: 34 ft			Estimated totals for this flight>>>	
					275.0 NM

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### 36. JAKARTA TO SOLO

*Note : Runways allocated by the original documentation are Dep. WIII Rwy 07R, Arr. WARQ Rwy 08.  
Check weather reports and select appropriate runways.*

From – To	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 34 ft		
Jakarta (WIII), Indonesia  To  Solo (WARQ), Indonesia	<b>Departure: WIII 07L-25R, 07R-25L, 06-24</b> Before take off, tune ADF to xxx NDB (xxx.x). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>				
	To TG NDB. After take off, turn right to 092° and fly to NDB.			092	10.8
	To AL NDB (215.0). Overhead TG, turn right to 108°. Tune ADF to AL and fly to NDB.			108	12.4
	To PW NDB (250.0). Overhead AL, turn right to 132°. Tune ADF to PW and fly to NDB.			132	33.0
	To OZ NDB (385.0). Overhead PW, turn left to 085°. Tune ADF to OZ and fly to NDB.			085	14.0
	To CA NDB (365.0). Overhead OZ, turn right to 099°. Tune ADF to CA. When CA signal is received, fly to NDB.			099	53.0
	To OC NDB (350.0). Overhead CA, turn to 098°. As soon as OC signal is received, tune ADF to OC NDB. As soon as signal is received, adjust heading as required, and fly to NDB.			098	110.0
	To SO NDB (255.0). Overhead OC NDB, turn right to 145° and fly to NDB.			145	39.0
	<b>Approach: WARQ 08-26 (ILS Rwy 26, ISLO 111.50)</b> To runway. As soon as airport is in sight, adjust heading, fly to Adi Sumarmo Int'l. Airport, runway in use, and land.			110	0.7
	Length: 8,534 ft	Width: 148 ft	Surface: Asphalt		
<b>Flight No: LM-35</b>	<b>Arrival Airport Elev: 419 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	
					<b>272.0 NM</b>

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### 37. SOLO TO DENPASAR

*Note : Runways allocated by the original documentation are Dep. WARQ Rwy 08, Arr. WADD Rwy 09.*

*Check weather reports and select appropriate runways.*

From – To	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 419 ft		
Solo (WARQ), Indonesia  To  Denpasar (WADD), Indonesia	<b>Departure: WARQ 08-26</b> Before take off, tune ADF to SO NDB (255.0). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To WP1 (Pulau Siklopo).</i> After take off, turn and track 131° OB from SO NDB. Fly upto coastline. When signal fades out, monitor and maintain heading. Waypoint reached when overhead the center of the island.  <i>To WADD.</i> Turn east at coastline and follow south coastline. Tune NAV1 to BLI VOR/DME (116.20) and set OBS to 096°. From the most easterly tip of East Java, you will fly over the southern access from the Indian Ocean to the Bali Strait, on your way to Denpasar. Fly towards VOR whenever you want to leave the Java coastlines			131	77.0
	<b>Approach: WADD 09-27 (ILS Rwy 27, IDPS 110.30)</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Bali Int'l Airport, runway in use, and land.			095	206.0
	<b>Length: 9,829 ft</b>	<b>Width: 148 ft</b>	<b>Surface: Asphalt</b>		
<b>Flight No: LM-36</b>	<b>Arrival Airport Elev: 14 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	<b>283.0 NM</b>

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### 38. DENPASAR TO WAINGAPU

*Note : Runways allocated by the original documentation are Dep. WADD Rwy 08, Arr. WADW Rwy 09.*

*Check weather reports and select appropriate runways.*

From – To	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 14 ft		
Denpasar (WADD), Indonesia  To  Waingapu (WATU), Indonesia	<b>Departure: WADD 09-27</b> Before take off, tune Tune NAV1 to BLI VOR/DME (116.20) and set OBS to 089°. Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>				
	To WP1. After take off, turn to intercept and track 089° OB from BLI VOR. Cross open water. Waypoint reached at Nusa Penida island land point.			089	16.8
	To WP2. Fly along southern coast of Island up to tip of island..			117	9.1
	To WP3. Cross open water to Lombok island land point.			091	15.4
	To WP4. Follow southern coastline to southern tip of the Taman Wisata Perairan Teluk Bumbang (a marine recreational park).			103	32.0
	To WP5. Cross open water to Sumbawa island land point.			097	21.0
	To WP6. Follow southern coastline to land point.			109	17.9
	To WP7. Follow southern coastline to land point.			079	52.0
	To WP8 (Tip of island). Follow southern coastline.			083	64.0
	To WK NDB (201.0). Cross open water. Tune ADF to WK NDB (201.0), and fly to NDB.			153	40.0
	To WP9. Overhead WK, turn left and track 078°. Follow northern coastline to most northern land point of Sumba Island.			078	41.0
	To WP10. Turn right to next land point. Tune NAV1 to WGP VOR/DME (117.30) and set OBS to 150°. Waypoint reached when VOR points to 150°. Fly towards VOR.			127	19.2
	<b>Approach: WADW 15-33</b> To runway. Overhead WP11, turn right to 150° and fly to NR NDB. As soon as airport is in sight, adjust heading, fly to Mau Hau Airport, runway in use, and land.			150	13.3
	Length: 6,090 ft	Width: 98 ft	Surface: Asphalt		
	Arrival Airport Elev: 21 ft	Estimated totals for this flight>>>			343.0 NM



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### 39. WAINGAPU TO KUPANG

*Note : Runways allocated by the original documentation are Dep. WADW Rwy 15, Arr. WATT Rwy 07;  
Check weather reports and select appropriate runways.*

From – To	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 21 ft		
Waingapu ( <b>WATU</b> ), Indonesia  To  Kupang ( <b>WATT</b> ), Indonesia	<b>Departure: WADW 15-33</b> Before take off, tune WGP VOR/DME (117.30) and set OBS to 109°. Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>				
	<i>To WP1 (coastline).</i> Turn and track 094° OB from WGP. Fly to coastline.			094	14.4
	<i>To WP2 (tip of Sumba island).</i> Fly south-east along coastline to tip of Island.			139	28.0
	<i>To WP3 (northern tip of Sawu island).</i> Cross open water to Sawu north coastline.			109	67.0
	<i>To WP4 (Ndao island).</i> Cross open water to the first available island on this heading.			117	51.0
	<i>To WP5 (northern tip of Rote island).</i> Overhead WP4, turn to 060°. Tune NAV1 to KPG VOR/DME (112.20) and set OBS to 048°. Follow east coast of Rote Island (Pulau Rote in Indonesian) up to its northern tip, which is your waypoint.			060	48.0
	<i>To WATT.</i> Overhead WP5, turn to 048°. NAV1 needle should be centered. Fly towards KPG VOR.			047	23.0
	<b>Approach: WATT 07-25</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to El Tari Airport, runway in use, and land.				
	<b>Length: 8,207 ft</b>	<b>Width: 148 ft</b>	<b>Surface: Asphalt</b>		
<b>Flight No: LM-38</b>	<b>Arrival Airport Elev: 333 ft</b> <span style="float: right;"><b>Estimated totals for this flight&gt;&gt;&gt;</b></span>				<b>231.0 NM</b>

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### 40. KUPANG TO DARWIN

*Note : Runways allocated by the original documentation are Dep. WATT Rwy 07, Arr. YPDN Rwy 11.*

*Check weather reports and select appropriate runways.*

From – To	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 333 ft		
Kupang (WATT), Indonesia  To  Darwin (YPDN), Australia	<b>Departure:</b> Before take off, tune ADF to KPG VOR/DME (112.20) and set OBS to 107°. Set altimeter. Take off and start climb to 7,500 ft.				
	<b>En route:</b>  <i>To BGT NDB (308.0).</i> After take off, turn and track 107° (set OBS accordingly) from KPG. 424 NM Open Water to cross to reach Australia coastline. Continue tracking 107° until KPG signal fades out, then about 300 NM Dead Reckoning before BGT NDB (in Australia) signal is received. Tune ADF to BGT NDB, and maintain 107° heading. When BGT becomes active (15 NM range), adjust heading accordingly.  <i>You may also, at departure, tune NAV1 to KPG VOR/DME (112.20) and track 107° OB, and at destination ,tune NAV1 to DN VOR/DME (112.60), and fly towards NDB until BGT signal is received.</i>			107	444.0
	<b>Approach: YPDN 11-29 (ILS Rwy 29, IDN 109.70), 18-36</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Darwin Int'l Airport, runway in use, and land.			111	1.2
	Length: 11-29 10,998 ft 18-36 5,024 ft	Width: 197 ft 98 ft	Surface: Asphalt		
Flight No: LM-39	Arrival Airport Elev: 103 ft			Estimated totals for this flight>>>	445.0 NM

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### 41. DARWIN TO NGUKURR

*Note : Runways allocated by the original documentation are Dep. YPDN Rwy 11, Arr. YNGU Rwy 11.*

*Check weather reports and select appropriate runways.*

From – To	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 103 ft		
Darwin (YPDN), Australia  To  Ngukurr (YNGU), Australia	<b>Departure: YPDN 11-29, 18-36</b> Before take off, tune NAV1 to DN VOR/DME (112.60) and set OBS to 104°. Set altimeter. Take off and start climb to x,xxx ft.				
	<b>Enroute:</b>  <i>To DN VOR.</i> After take off, turn and fly to VOR.  <i>To YNGU.</i> Turn and rack 120° OB from DN. About 133 NM Dead Reckoning on same heading before reaching YNGU. Hope you did not forget your E6B ;-)			104	1.8
	<b>Approach: YNGU 11-29</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Ngukurr Airport, runway in use, and land.			120	263.0
	Length: 5,013 ft	Width: 59 ft	Surface: Asphalt		
Flight No: LM-40	Arrival Airport Elev: 41 ft <span style="float: right;">Estimated totals for this flight&gt;&gt;&gt;</span>				265.0 NM

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### 42. NGUKURR TO MORNINGTON ISLAND

*Note : Runways allocated by the original documentation are Dep. YNGU Rwy 11, Arr. YMTI Rwy 11*

*Check weather reports and select appropriate runways.*

From – To	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 41 ft		
Ngukurr (YNGU), Australia  To  Mornington Isl. (YMTI), Australia	<b>Departure: YNGU 11-29</b> Before take off, set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To WP1 (coastline, Limmen Bight River mouth).</i> After take off, turn and track 109° from YNGU. Watch heading. Waypoint reached at the northern tip of the island located in the middle of river's mouth.			109	61.0
	<i>To WP2.</i> Turn to 117°. Follow coastline South East and East. On the way, you will cross the Sir Edward Pellew group of islands (North-East of Borroloola). Waypoint reached at Calvert River mouth.			117	136.0
	<i>To WP3.</i> Turn right to 126°, following coastline South East and East. Waypoint reached at Massacre Inlet mouth.			126	44.0
	<i>To YMTI.</i> Turn left to 080° and fly towards Mornington Island Airport, in front of Denham Island northern tip.			080	49.0
	<b>Approach: YMTI 09-27</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Mornington Island Airport, runway in use, and land.				
	Length: 09-27 4,971 ft	Width: 98 ft	Surface: Asphalt		
Flight No: LM-41	Arrival Airport Elev: 33 ft <span style="float: right;">Estimated totals for this flight&gt;&gt;&gt;</span>				291.0 NM

## London to Melbourne Air Race – 1934 *(The MacRobertson Trophy Air Race)*

### 43. MORNINGTON ISLAND TO CLONCURRY

*Note : Runways allocated by the original documentation are Dep. YMTA Rwy 06, Arr. YCCY Rwy 12.*

*Check weather reports and select appropriate runways.*

From – To	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: ft		
Mornington Isl. (YMTI), Australia  To  Cloncurry (YCCY), Australia	<b>Departure: YMTI 09-27</b> Before take off. Set ADF to CCY NDB (264.0). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>You are going here for a +/- 202 NM Dead Reckoning ride!</i>  To WP1. After take off, turn to 158°. Waypoint reached when overhead Burketown Airport.			158	69.0
	To WP2. Overhead YBKT, maintain same heading. Waypoint reached when overhead Kamileroi Airport			158	101.0
	To CCY NDB (264.0). Overhead YKML, turn and track 157°. CCY NDB signal will be received at +/- 50 NM from destination airport. Fly to NDB.			157	82.0
	<b>Approach: YCCY 06-24, 12-30</b> To runway. As soon as airport is in sight, adjust heading, fly to Cloncurry Airport, runway in use, and land.			127	0.3
	Length: 06-24 3,803 ft 12-30 6,567 ft	Width: 59 ft 98 ft	Surface: Asphalt		
Flight No: LM-42	Arrival Airport Elev: 616 ft			Estimated totals for this flight>>>	252.0 NM

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### 44. CLONCURRY TO LONGREACH

*Note : Runways allocated by the original documentation are Dep. YCCY Rwy 12, Arr. YLRE Rwy 22.*

*Check weather reports and select appropriate runways.*

From – To	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 616 ft		
Cloncurry (YCCY), Australia  To  Longreach (YLRE), Australia	<b>Departure: YCCY 06-24, 12-30</b> Before take off, tune ADF to CCY NDB (264.0). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>				
	To WP1. After take off, turn and track 124° OB from CCY. Waypoint reached overhead McKinley Airport.			124	58.0
	To WP2. Overhead YMCK, turn to 112°. Waypoint reached overhead Kynuna Airport.			112	41.0
	To WP3. Overhead YKYN, turn to 120°. Waypoint reached overhead Winton Airport.			120	78.0
	To YLRE. Overhead YWTN, turn right to 127°. Tune ADF to LRE NDB (353.0). LRE signal will be received at +/- 50 NM. Fly towards NDB as soon as signal is received.			127	92.0
	<b>Approach: YLRE 04-22, 09-27</b> To runway. As soon as airport is in sight, adjust heading, fly to Longreach Airport, runway in use, and land.				
	Length: 04-22 6,369 ft	Width: 98 ft	Surface: Asphalt		
Flight No: LM-43	Arrival Airport Elev: 625 ft			Estimated totals for this flight>>>	270.0 NM

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### 45. LONGREACH TO CHARLEVILLE

*Note : Runways allocated by the original documentation are Dep. YLRE Rwy 04, Arr. YBCB Rwy 22.*

*Check weather reports and select appropriate runways.*

From – To	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 625 ft		
Longreach (YLRE), Australia  To  Charleville (YBCV), Australia	<b>Departure: YLRE 04-22, 09-27</b> Before take off, tune ADF to LRE NDB (353.0). Set altimeter. Take off and start climb to x,xxx ft.				
	<b>Enroute:</b>  <i>To WP1.</i> After take off, turn and track 126° OB from LRE NDB. Signal will fade out at +/- 50 NM. Maintain heading. Waypoint reached overhead Blackall Airport.  <i>To YBCV.</i> Overhead YBCK, turn to 152°. Tune ADF to LRE NDB (269.0). Maintain heading and fly to NDB as soon as signal is received. Fly towards CV NDB.			126  152	87.0  127.0
	<b>Approach: YBCV 12-30, 18-36</b> <i>To runway.</i> As soon as airport is in sight, turn and fly to xxx, runway in use, and land.				
	<b>Length: 12-30 5,005 ft 18-36 3,506 ft</b>	<b>Width: 98 ft 75 ft</b>	<b>Surface: Asphalt</b>		
<b>Flight No: LM-44</b>	<b>Arrival Airport Elev: 1,000 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	<b>214.0 NM</b>

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### 46. CHARLEVILLE TO NYNGAN

*Note : Runways allocated by the original documentation are Dep. YBCB Rwy 12, Arr. YNYN Rwy 19.*

*Check weather reports and select appropriate runways.*

From – To	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 6,500 ft	Apt Elev: 1,000 ft		
Charleville (YBCV), Australia  To  Nyngan (YNYN), Australia	<b>Departure: YBCB 12-30, 18-36</b> Before take off, tune ADF to CV NDB (269.0). Set altimeter. Take off and start climb to 6,500 ft.				
	<b>Enroute:</b>  <i>To CMU NDB (269.0).</i> After take off, turn and track 190° OB from CV NDB. When signal fades out (+/- 75 NM), tune ADF to CMU NDB (218.0) and fly to NDB.  <i>To BKE NDB (389.0).</i> Overhead CMU, turn and track 163° OB from CMU. Start climb to 7,500 ft. When signal fades out, tune ADF to BKE NDB. Both NDB's having 50 NM range, expect 22 nm "no signal" zone between stations. Fly to NDB as soon as signal is received.			190	103.0
	<i>To YNYN.</i> Overhead BKE, turn and track 135° OB from BRW NDB. When signal fades out, maintain heading for the 62 remaining NM to airport.			163	122.0
	<b>Approach: YNYN 05-23, 18-36</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Nyngan Airport, runway in use, and land.			135	111.0
	<b>Length: 05-23 5,385 ft</b> <b>18-36 3,486 ft</b>	<b>Width: 98 ft</b>	<b>Surface: Asphalt</b> <b>Grass</b>		
<b>Flight No: LM-45</b>	<b>Arrival Airport Elev: 563 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	<b>336.0 NM</b>



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### 47. NYNGAN TO ALBURY

*Note : Runways allocated by the original documentation are Dep. YNYN Rwy 19, Arr. YMAY Rwy 25*

*Check weather reports and select appropriate runways.*

From – To	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: ft	Apt Elev: 563 ft		
Nyngan ( <b>YNYN</b> ), Australia  To  Albury ( <b>YMAY</b> ), Australia	<b>Departure: YNYN 05-23, 18-36</b> Before take off, tune ADF to PKS NDB (242.0). Set altimeter. Take off and start climb to x,xxx ft.				
	<b>Enroute:</b>  <i>To PKS NDB.</i> After take off, turn to 141° and fly towards PKS. As soon as signal is received, adjust heading as required, and fly to NDB.			141	110.0
	<i>To WG NDB (221.0).</i> Overhead PKS, turn right to 186°. Start descent to 6,500 ft. Fly towards WG. As soon as signal is received, adjust heading as required, and fly to NDB.			186	127.0
	<i>To YMAY.</i> Overhead WG, turn to 192°. Tune NAV1 to AY VOR (115.60) and set OBS to 192°. Fly towards VOR.			192	59.0
	<b>Approach: YMAY 07-25</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Albury Airport, runway in use, and land.				
	Length: 6,239 ft	Width: 98 ft	Surface: Asphalt		
Flight No: LM-46	Arrival Airport Elev: 539 ft <span style="float: right;">Estimated totals for this flight&gt;&gt;&gt;</span>				296.0 NM

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### 48. ALBURY TO MELBOURNE

*Note : Runways allocated by the original documentation are Dep. YMAY Rwy 25, Arr. YMML Rwy 16.*

*Check weather reports and select appropriate runways.*

From – To	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 6,500 ft	Apt Elev: 539 ft		
Albury (YMAY), Australia  To  Melbourne (YMML), Australia	<b>Departure: YMAY 07-25</b> Before take off, tune ADF to COR NDB (380.0). Set altimeter. Take off and start climb to 6,500 ft.				
	<b>Enroute:</b>  <i>To COR NDB (380.0).</i> After take off, turn to 267°, IB to COR NDB. Fly to NDB.			267	30.0
	<i>To SHT NDB (212.0).</i> Overhead COR NDB turn to 228°. Fly to NDB.			228	54.0
	<i>To ML VOR/DME (114.10).</i> Overhead SHT NDB, turn and track 188°. Tune NAV1 to ML and set OBS to 188°. Fly towards VOR.			188	79.0
	<b>Approach: YMML 09-27 (ILS Rwy 27, IMW 109.30) , 16-34 (ILS Rwy 16, IMS 109.70)</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Melbourne Int'l. Airport, runway in use, and land.			164	0.8
	Length: 09-27 7,41 ft 16-34 12,020	Width: 148 ft 194 ft	Surface: Asphalt		
Flight No: LM-47	Arrival Airport Elev: 433 ft <span style="float: right;">Estimated totals for this flight&gt;&gt;&gt;</span>				162.0 NM