

## 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*)>>>

#### **FSX (Steam) users :**

*LM-00 : SDM NDB missing in the database.*

*LM-07 : HK & SUN NDBs missing in the database.*

*LM-09 : RPN (Rosh Pina) NDB missing in the database. Waypoint overhead Rosh Pina (LLIB) Airport.*

*LM-10 : GRY NDB missing in the database. Waypoint over Guriat (OEGT) Airport.*

*LM-13 : RAS NDB missing in the database. Instead, flying direct to TJ NDB (OETN Airport, +/- 16 NM farther).*

*LM-14 : BD NDB missing in the database. Instead, using WK NDB (OTBD Airport).*

*LM-15 : NSB NDB missing in the database. Instead, using MCT VOR/DME (OOMS Airport).*

*LM-16 : NSB NDB missing in the database. Instead, Dead Reckoning.*

*LM-17 : Unable to locate Pirate's Cove. Instead, using KA NDB.*

*LM-18 : Using KO instead of KC. JO NDB missing in the database. Instead, short Dead Reckoning on approach.*

*LM-19 : JO NDB missing in the database. Dead Reckoning to first available navaid.*

*LM-20, LM-21 : GJ NDB missing in the database.*

*LM-24 : BC NDB missing in the database. Instead, using DU NDB.*

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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 ADF to CH NDB (388.5). Set altimeter. Take off, and start climb to 6,500 ft.				
	<b>Enroute:</b>  <i>To CH NDB.</i> Turn and fly to NDB.			236	9.2
	<i>To ND NDB (417.0).</i> Overhead CH NDB, turn right and track 285° OB bearing. Maintain heading. When signal fades out, tune ADF to ND NDB and fly to NDB.			285	107.0
	<i>To EGUN.</i> Overhead ND NDB, turn left and track 252° OB bearing from ND NDB.			252	48.0
	<b>Approach : EGUN, 11-29 (ILS Rwy 29, IMLD 110.15)</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Mildenhall Airport, runway in use, and land.				
	<b>Length: 9,193ft</b>	<b>Width: 200 ft</b>	<b>Surface: Asphalt</b>		
<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 ( <b>EGUN</b> ), UK  To  Auxerre ( <b>LFLA</b> ), France	<b>Departure: EGUN, 11-29</b> Before take off, tune ADF to SND NDB (362.5). Set altimeter. Take off, start climb to 7,500 ft.				
	<b>Enroute:</b>				
	To <b>SND NDB</b> . After take off, turn and fly to NDB.			172	48.0
	To <b>LYX NDB (397.0)</b> . Overhead SND NDB, turn left to 167° and fly to NDB.			167	37.0
	To <b>LT NDB (348.5)</b> . Overhead LYX NDB, turn left to 138° and fly to NDB.			138	35.0
	To <b>GI NDB (339.0)</b> . Overhead LT NDB, turn right and track 141° OB bearing. When signal fades out, tune ADF to GI NDB and fly to NDB.			141	54.0
	To <b>CGZ NDB (370.0)</b> . Overhead GI NDB, turn right and track 169° OB bearing. When signal fades out, tune ADF to CGZ NDB and fly to NDB.			169	51.0
	To <b>MV NDB (434.0)</b> . Overhead CGZ NDB, turn left to 161° and fly to NDB.			161	29.0
	To <b>AX NDB (417.0)</b> . Overhead MV NDB, turn left and track 152° OB bearing. When signal fades out, tune ADF to AX NDB and fly to NDB.			152	43.0
	To <b>LFLA</b> . Overhead AX NDB, turn right to 183°.			183	4.4
	<b>Approach: LFLA, 01-19 (ILS Rwy 19, AX 109.95)</b> To runway. As soon as airport is in sight, adjust heading, fly to Branches Airport, runway in use, and land.				
	<b>Length: 5,415 ft</b>	<b>Width: 98 ft</b>	<b>Surface: Asphalt</b>		
<b>Flight No: LM-01</b>	<b>Arrival Airport Elev: 523 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	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 523 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>				
	To MOU NDB (324.0). Track 176° OB from AX NDB. When AX signal fades out, tune ADF to MOU NDB and fly to NDB.			176	69.0
	To BO NDB (299.0). Overhead MOU NDB, turn left and track 159° OB bearing. After 15/18 minutes flight, or when signal fades out, tune ADF to BO NDB and fly to NDB.			159	76.0
	To ORG NDB (328.0). Overhead BO NDB, turn right and track 164° OB bearing. When signal fades out, tune ADF to ORG NDB and fly to NDB.			164	86.0
	To CM NDB (369.0). Overhead ORG NDB, turn right to 171° and fly to NDB.			171	14.4
	To MAR NDB (383.0). Overhead CM NDB, turn left to 158° and fly to NDB.			158	27.0
	To LFML. Overhead MAR NDB, turn left to 133°.			133	4.7
	<b>Approach: LFML, 14L-32R (ILS available both runways), 14R (ILS MCE, 108.30), 32L</b> To runway. As soon as airport is in sight, adjust heading, fly to Marseille Provence Airport, runway in use, and land.				
	Length: 14L-32R 11,485 ft 14R-32L 7,784 ft	Width: 148 ft	Surface: Asphalt		
Flight No: LM-02	Arrival Airport Elev: 74 ft			Estimated totals for this flight>>>	277.0 NM

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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	<u>Flight Description</u>			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, 14L-32R, 14R-32L</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 fly to NDB.			122	23.0
	<i>To TLN NDB (322.0).</i> Overhead OB NDB, turn left to 118° and fly to NDB.			118	24.0
	<i>To IS NDB (341.0).</i> Overhead TLN NDB, turn right and track 120° OB bearing from TLN. When signal fades out, tune ADF to IS NDB and fly to NDB as soon as signal is received.			120	128.0
	<i>To SNE NDB (394.5).</i> Overhead CT NDB, turn right to 165° and fly to NDB.			156	22.0
	<i>To WP1 (Punta di Capineru).</i> Waypoint on the left side of the entry to Figari Bay.			118	12.4
	<i>To LFKF.</i> Overhead WP1, turn left to 42°. Fly to the airport.			42	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.				
	Length: 8,132 ft	Width: 148 ft	Surface: Asphalt		
<b>Flight No: LM-03</b>	<b>Arrival Airport Elev: 87 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	<b>214.0 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	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 87 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 fly to FA NDB.  <i>Towards OST NDB (321.0).</i> Overhead FA NDB, turn right and track 082° OB bearing from FA NDB. Maintain hdg. No Nav aids until across open water, 70 NM or so from Rome. That will be approx. 70 NM of Dead Reckoning flight. Turn on ADF Morse Ident. Fly towards NDB.			048  082	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 Fiumicino Airport, runway in use, and land.			157	0.3
	<b>Length: 07-25 10,842 ft, 16-34 11,815 to 12,823 ft</b>	<b>Width: 148 ft to 197 ft</b>	<b>Surface: Asphalt</b>		
<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, 16C-34C, 16L-34R</b> Before take off, tune ADF to PRA NDB (339.0). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>				
	<i>To PRA NDB.</i> After take off, turn and fly to NDB.			125	12.0
	<i>To FRS NDB (371.0).</i> Overhead PRA NDB, turn left to 091° and fly to NDB.			091	38.0
	<i>To TEA NDB (316.0).</i> Overhead FRS NDB, turn right to 122° and fly to NDB.			122	37.0
	<i>To AME NDB (334.0).</i> Overhead TEA NDB, turn left and track 079° OB bearing from TEA. After +/- 15 minutes flight, or when signal fades out, maintain heading, tune ADF to AME NDB and fly to NDB. (May be some interval between stations – Then fly Dead Reckoning.)			079	85.0
	<i>To BPL NDB (401.0).</i> Overhead AME NDB, turn right to 119° and fly to NDB.			119	44.0
	<i>Towards BRD NDB (363.5).</i> Overhead BPL NDB, turn left and track 112° OB bearing from BPL. Tune ADF to BRD NDB and fly towards NDB.			112	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.				
	<b>Length: 07-25 6,341 ft, 14-32 8,306 ft</b>	<b>Width: 148 ft</b>	<b>Surface: Asphalt</b>		
<b>Flight No: LM-05</b>	<b>Arrival Airport Elev: 48 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	<b>280.0 NM</b>

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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: 48 ft		
Brindisi (LIBR), Italy  To  Athens (LGAV), Greece	<b>Departure: LIBR 05-23, 14-32</b> Before take off, tune ADF to BRD NDB (363.5). Set altimeter. Take off and start climb to 9,500 ft.				
	<b>Enroute:</b>  <i>To BRD NDB.</i> After take off, turn and fly to NDB.			137	4.3
	<i>To KEK NDB (403.0).</i> Overhead BRD NDB, turn left and track 121° OB bearing from BRD over open water. (May be 40 NM or more interval between stations-Fly Dead Reckoning).			121	107.0
	<i>To PRV NDB (353.0).</i> Overhead KEK NDB, turn right and track 132° OB bearing from BRD. When signal fades out, maintain heading, tune ADF to PRV NDB and fly to NDB.			132	57.0
	<i>To AML NDB (367.0).</i> Overhead PRV NDB, turn right and track 155° OB bearing from PRV. After some minutes of flight, maintain heading, tune ADF to AML NDB and fly to NDB.			155	74.0
	<i>To KOR NDB (392.0).</i> Overhead AML NDB, turn right and track 079° OB bearing from AML. After +/- 18 minutes flight, tune ADF to KOR NDB and fly to NDB.			079	76.0
	<i>To WP1 (Fleves Island).</i> Overhead KOR NDB, turn right to 100°. Fly to landmark			100	40.0
	<i>To LGAV.</i> Overhead WP1, turn left to 037°.			037	13.2
	<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.				
	Length: 03L-21R 12,461 ft, 03R-21L 13,141 ft	Width: 148 ft	Surface: Asphalt		
<b>Flight No: LM-06</b>	<b>Arrival Airport Elev: 308 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	<b>371.0 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	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 308ft		
Athens (LGAV), Greece  To  Rodos (Rhodes) (LGRP), Greece	<b>Departure: LGAV 03L-21R, 03R-21L</b> Before take off, tune ADF to SPA VOR/DME (117.50). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To SYR NDB (417.0).</i> Turn and track 118° OB from SPA. SYR NDB signal should be received after +/- 15 minutes. Fly to NDB.			118	57.2
	<i>To MKO NDB (401.0).</i> Overhead SYR NDB, turn right to 084° and fly to NDB.			084	19.0
	<i>To LRO NDB (419.0).</i> Overhead MKO NDB, turn right and track 098° OB bearing from MKO. When signal fades out, maintain heading, tune ADF to LRO NDB and fly to NDB.			098	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 110°. After +/- 16 minutes flight, you should be close to the southern tip of Seski Island, the small Kouloundros Island behind.			110	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	1.8
	<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: 19 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: 19 ft		
Rodos (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	1.8
	<i>To KZO NDB (416.0).</i> Overhead ROS NDB, turn right and track 099° OB bearing from ROS. When signal fades out, maintain heading, tune ADF to KZO NDB and fly to NDB.			099	72.0
	<i>To FR NDB (297.0).</i> Overhead KZO NDB, turn left to 071° and fly to NDB.			071	29.0
	<i>To PHA NDB (328.0).</i> Overhead FR NDB, turn right and track 125° OB bearing from FR. Watch hdg. No Nav aids until across open water, about 70 NM of 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.			125	147.0
	<i>To LCA NDB (432.0).</i> Overhead PHA NDB, turn left and track 079° OB bearing from PHA. After +/- 10 minutes flight, tune ADF to LCA NDB and fly to NDB.			079	53.0
	<i>To LCLK.</i> Overhead LCA NDB, turn left to 043°.			043	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.				
	Length: 9,814 ft	Width: 148 ft	Surface: Asphalt		
Flight No: LM-08	Arrival Airport Elev: 8 ft	Estimated totals for this flight>>>			308.0 NM

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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	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: ft		
Larnaca ( <b>LCLK</b> ), Cyprus  To  Amman ( <b>OJAI</b> ), 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 to 223° and fly to LCA NDB.			223	5.1
	<i>To BAB NDB (312.0).</i> Overhead LCA NDB, turn left to 117°. Track 117° OB bearing from LCA NDB (ADF will point to 297°) over open water. After +/- 30 minutes flight, or when signal fades out, maintain heading, tune ADF to BAB NDB, and fly to NDB when signal is received.			117	112.0
	<i>To WP1.</i> Overhead BAB NDB, turn right and track 171° OB bearing from BAB, 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.			171	52.0
	<i>To JYO NDB (391.0).</i> Overhead LLIB, turn left to 153°. Maintain heading, tune ADF to JYO NDB and fly to NDB.			153	64.0
	<i>To OJAI.</i> Overhead JYO NDB, turn right to 188°.			188	17.3
	<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: 11,957 ft</b>	<b>Width: 200 ft</b>	<b>Surface: Asphalt</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>250.0 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.			081	5.2
	<i>To Fix 01.</i> Overhead QA NDB, turn right and track 103° OB bearing from QA NDB Waypoint reached when overhead Guriat (OEGT) Airport.			103	63.0
	<i>To AJF NDB (355.0).</i> Overhead Guriat, turn right to 119°. Maintain heading, tune ADF to AJF NDB. Watch hdg; no Nav aids across Desert, about 100 NM of Dead Reckoning between stations. Turn on ADF Morse Ident. When signal is received, fly to NDB.			119	174.0
	<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.			105	1.4
	Length: 12,002 ft	Width: 147 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>				244.0 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 ADF to AJF NDB (355.0). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To RAF VOR/DME (116.80).</i> Turn to intercept 089° OB bearing from AJF NDB, and track 089°. Watch heading. No Nav aids across Desert, about 90 NM of Dead Reckoning between stations. Turn on Nav Morse Ident. When NDB signal begins fading out, maintain heading. Tune NAV1 to RAF VOR and fly towards VOR when signal is received.			089	179.0
	<b>Approach: OERF 11-29</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Rafha Airport, runway in use, and land.			307	0.6
	<b>Length: 9,840 ft</b>	<b>Width: 148 ft</b>	<b>Surface: Asphalt</b>		
<b>Flight No: LM-11</b>	<b>Arrival Airport Elev: 1,474 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	
					<b>179.0 NM</b>

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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 (OKBK), 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 NR NDB (368.0).</i> After take off, turn to intercept 090° OB bearing from RAF VOR, turn and track it. Tune ADF to NR NDB. Watch hdg. No Nav aids across Desert, about 150 NM of Dead Reckoning between stations. Turn on Nav Morse Ident. When NDB signal is received, fly to NDB.			090	233.0
	<b>Approach: OKBK 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.			152	5.1
	<b>Length: 15R-33L 11,181 ft 15L-33R 11,509 ft</b>	<b>Width: 148 ft</b>	<b>Surface: Concrete Asphalt</b>		
<b>Flight No: LM-12</b>	<b>Arrival Airport Elev: 206 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	
					<b>238.0 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	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 206 ft		
Kuwait (OKBK), Kuwait  To  Dhahran (OEDR), Saudi Arabia	<b>Departure: OKBK 15R-33L, 15L-33R</b> Before take off, tune ADF to NR NDB (368.0). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>				
	<i>To WP1 (Coastline).</i> After take off, turn and intercept 140° OB from NR NDB. Fly to the coastline.			140	15.0
	<i>To TJ NDB.</i> Overhead WP1, turn right and fly to NDB.			152	78.0
	<i>To RT NDB (286.0).</i> Overhead TJ NDB, turn left to 133° and fly to NDB.			133	96.0
	<i>To OEDR.</i> Overhead RT NDB (OERT), turn right to 165°. Fly to airport.			165	27
	<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: 84 ft			Estimated totals for this flight>>>	217.0 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	<u>Flight Description</u>			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 NAV1 to SIA VOR/DME (117.60), and 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 130° to SIA VOR/DME. As soon as SI NDB signal is received, amend heading to SI.			130	33.0
	<i>To WK NDB (323.0).</i> Track 126° OB from SIA VOR until WK NDB is received. Fly to NDB.			126	69.0
	<i>To ZKU NDB (275.0).</i> Overhead WK NDB, track 101° OB from BD NDB. When signal fades out, tune ADF to ZKU NDB. When signal is received, fly to NDB.			101	83.0
	<i>To 2BD NDB (373.0).</i> Overhead ZKU NDB, turn left to 092°. Tune ADF to 2BD NDB and fly to NDB.			092	28.0
	<i>To AN NDB (412.0).</i> Overhead 2BD NDB, turn right and track 111° IB to AN NDB. Fly to NDB.			111	61.0
	<b>Approach: OMAA 13-31 (ILS both 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.			127	1.6
	Length: 13,463 ft	Width: 148 ft	Surface: Asphalt		
Flight No: LM-14	Arrival Airport Elev: 88 ft <span style="float: right;">Estimated totals for this flight&gt;&gt;&gt;</span>				275.0 NM



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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: 88 ft		
Abu Dhabi ( <b>OMAA</b> ), U.A.E.  To  Muscat ( <b>OOMS</b> ), Oman	<b>Departure: OMAA 13-31</b> Before take off, tune ADF to AIN NDB (412.0). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To AIN NDB (399.0).</i> After take off, turn to 100°. As soon as AIN signal is received, adjust heading and fly to NDB.			100	53.0
	<i>To MCT VOR/DME (114.50).</i> Overhead AIN NDB, turn right and track 103° OB from AIN NDB. When signal fades out, tune NAV1 to MCT VOR/DME (114.50) and set OBS to 103°. Fly to VOR.			103	151.0
	<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 Seeb Int'l Airport, runway in use, and land.			84	1.2
	Length: 08-26 11,769 ft 02-50 2,468 ft	Width: 148 ft 98 ft	Surface: Asphalt Clay		
Flight No: LM-15	Arrival Airport Elev: 48 ft                     Estimated totals for this flight>>>				205.0 NM

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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: 48 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). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To WP 01 (Land point).</i> Turn and intercept 049° OB from MCT. Maintain hdg over open water, Dead Reckoning, until land fall, making landfall at point of land. One degree heading error misses land point by 2.7 NM.			049	159.0
	<i>To JI NDB (330.0).</i> At WP1 land point, turn east to 099°. Tune ADF to JI NDB (330.0), and fly to JI NDB.			099	74.0
	<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.			241	0.7
	Length: 5,301 ft	Width: 151 ft	Surface: Clay		
Flight No: LM-16	Arrival Airport Elev: 184 ft			Estimated totals for this flight>>>	
					234.0 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 ( <b>OPJI</b> ), Pakistan  To  Karachi ( <b>OPKC</b> ), 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 right to 072°. Fly to NDB.			072	30.0
	<i>To PI NDB (400.0).</i> Overhead GD NDB, turn right to 085°. After 15 minutes flight from GD, tune ADF to PI NDB, then fly to NDB.			085	55.0
	<i>To OR NDB (380.0).</i> Overhead PI NDB, turn right to 085°. When PI NDB signal fades out, tune ADF to OR NDB and fly to NDB.			090	67.0
	<i>To KA NDB (244.0).</i> Overhead OR NDB, turn right to 102°. When OR NDB signal fades out, tune ADF to KA NDB and fly to NDB.			102	116.0
	<i>To KC NDB (271.0).</i> Overhead OR NDB, turn right to 102°. When OR NDB signal fades out, tune ADF to KA NDB and fly towards NDB.			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.			165	0.8
	<b>Length: 06-24 2,500 ft</b> <b>07L-25R 10,457</b> <b>07R-25L 11,159</b>	<b>Width: 150 ft</b> <b>151 ft</b> <b>148 ft</b>	<b>Surface: Grass</b> <b>Concrete</b> <b>Concrete</b>		
<b>Flight No: LM-17</b>	<b>Arrival Airport Elev: 100 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	
					<b>297.0 NM</b>

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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 ( <b>OPKC</b> ), Pakistan  To  Jodhpur ( <b>VIJO</b> ), India	<b>Departure: OPKC 06-24, 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 intercept 069° OB from KC NDB. Turn and track 069° OB from KO NDB. At your convenience (both NDB's have 75 NM range...), tune ADF to KD NDB and fly to NDB.			069	70.0
	<i>To KE NDB (410.0).</i> Turn right and track 080° OB from KD NDB. Tune ADF to KE NDB and fly to NDB.			080	77.0
	<i>To JJO VOR/DME (112.30).</i> Overhead KE, tune NAV1 to JJO VOR/DME and track 075° bearing and fly to VOR.			075	182.0
	<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.			355	1.7
	<b>Length: 9,596 ft</b>	<b>Width: 150 ft</b>	<b>Surface: Concrete</b>		
<b>Flight No: LM-18</b>	<b>Arrival Airport Elev: 717 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	<b>332.0 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	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 717 ft		
Jodhpur (VIJO), India  To  Delhi (VIDP), India	<b>Departure: VIJO 05-23</b> Before take off, tune NAV1 to JJO VOR/DME (112.30) and ADF to TRR NDB (266.0) . Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To TRR NDB (266.0).</i> After take off, turn and intercept 062° OB from JJO VOR and track 063° . maintain heading over desert, 75 NM Dead Reckoning until TRR NDB signal is received (NDB range 75 NM). Turn on ADF Morse Ident. Fly to NDB when signal is received.			062	153.0
	<i>To NUH NDB (325.0).</i> Overhead TRR, turn left and track 059° OB from TRR NDB. Start timer. After 20 minutes flight, tune ADF to NUH NDB and fly to NDB (both NDB's have 75 NM range).			059	88.0
	<i>To PL NDB (303.0).</i> Overhead NUH, turn left to 021°, fly to NDB.			021	29.0
	<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 Gandhi Int'l Airport, runway in use, and land.			288	4.8
	<b>Length: 09-27 9,278 ft 10-28 12,506 ft</b>	<b>Width: 150 ft</b>	<b>Surface: Asphalt</b>		
<b>Flight No: LM-19</b>	<b>Arrival Airport Elev: 777 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	<b>274.0 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	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 6,500 ft	Apt Elev: 777 ft		
Dehli (VIDP), India  To  Gwalior (VIGR), India	<b>Departure: VIDP 09-27, 10-28</b> Before take off, tune ADF to NUH NDB (325.0). Set altimeter. Take off and start climb to 6,500 ft.				
	<b>Enroute:</b>  <i>To NUH NDB.</i> After take off, turn to 191°, turn to actual heading to NUH and fly to NDB.			191	29.0
	<i>To AG NDB (249.5).</i> Overhead NUH NDB, turn left to 137°. Tune ADF to AG NDB and fly to NDB when signal is received.			137	77.0
	<i>To Gwalior.</i> Overhead AG NDB, turn right and track 165° OB from AG NDB. Start timer.			165	54.0
	At +/- 22/24 minutes flight from AG, you will see VIGR airport.				
	<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.				
	Length: 8,970 ft	Width: 151 ft	Surface: Concrete		
Flight No: LM-20	Arrival Airport Elev: 617 ft			Estimated totals for this flight>>>	160.0 NM

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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 (VIAL), 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 intercept to 086° OB from GWA, and track 086° OB until KA NDB signal is received, Turn on ADF Morse Ident. Fly to NDB.			086	118.0
	<i>To FR NDB (334.0).</i> Overhead KA NDB, turn to 100°. Tune ADF to FR NDB and fly to NDB.			100	54.0
	<i>To AP NDB (328.0).</i> Overhead FR NDB, Turn to 160°. Tune ADF to AP NDB and fly to NDB when signal is received.			160	50.0
	<b>Approach: VIAL 06-24</b> <i>To runway.</i> Overhead AP NDB, turn left to 128°. As soon as airport is in sight, adjust heading, fly to Allahabad Airport, runway in use, and land.			128	2.6
	Length: 06-24 4,800 ft 12-30 7,600 ft	Width: 150 ft	Surface: Concrete Asphalt		
Flight No: LM-21	Arrival Airport Elev: 332 ft			Estimated totals for this flight>>>	225.0 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	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 332 ft		
Allahabad (VIAL), India  To  Ranchi (VERC), India	<b>Departure: VIAL 06-24</b> Before take off, tune ADF to BN NDB (222.0). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To BN NDB (222.0).</i> After take off, turn, intercept and track 090° IB to BN NDB and fly to NDB when signal is received.  <i>To RC NDB (285.0).</i> Turn right and track 134° OB from BN NDB. When signal fades out, maintain hdg over desert and fly Dead Reckoning. Tune ADF to RC NDB. Turn on ADF Morse Ident. Fly to NDB when signal is received.			090	60.0
	<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
	<b>Length: 8,890 ft</b>			196	0.2
	<b>Width: 148 ft</b>				
<b>Flight No: LM-22</b>	<b>Surface: Asphalt</b>				
	<b>Arrival Airport Elev: 2,148 ft</b>				
	<b>Estimated totals for this flight&gt;&gt;&gt;</b>				<b>247.0 NM</b>



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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: 2,148 ft		
Ranchi (VERC), India  To  Calcutta (VECC), India	<b>Departure: VERC 13-31</b> Before take off, tune ADF to RC NDB (285.0). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To JS NDB (400.0).</i> After take off, turn, intercept and track 123° OB from RC NDB. At your convenience, tune ADF to JS NDB and fly to NDB when signal is received.			123	56.0
	<i>To TK NDB (390.0).</i> Turn and track 087° OB from JS NDB. Start timer. Maintain heading over desert, Dead Reckoning when no signal. Turn on ADF Morse Ident. After +/- 20 minutes flight, tune ADF to TK NDB. Fly to NDB.			087	102.0
	<i>To DU NDB (385.0).</i> Overhead TK NDB, turn right to 112° and fly to NDB.			112	26.0
	<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 7,859 ft 01R-19L 11,818 ft</b>	<b>Width: 150 ft</b>	<b>Surface: Asphalt</b>		
<b>Flight No: LM-23</b>	<b>Arrival Airport Elev: 23 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	
					<b>190.0 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	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 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> Track 088° OB from DU NDB. When signal fades out, tune ADF to BL NDB. Fly to NDB when signal is received.			088	102.0
	<i>To EG NDB (287.0).</i> Track 112° OB from BL NDB. When signal fades out, tune ADF to EG NDB. Fly to NDB when signal is received.			112	90.0
	<i>To CB NDB (396.0).</i> Turn right and track 171° OB from EG NDB. When signal fades out, tune ADF to CB NDB and fly towards NDB. Follow coastline south.			171	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	<u>Flight Description</u>			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 to intercpt and track 147° OB from CB NDB. Start timer. After +/-20 minutes flight, tune ADF to SW NDB. Fly to NDB when signal is received. Alternatively, follow coastline until SW NDB signal is received.			147	95.0
	<i>To KP NDB (250.0).</i> Turn left to 140°. Tune ADF to KP NDB and fly to NDB.			140	55.0
	<i>To TD NDB (270.0).</i> Overhead KP NDB, turn right to 144° OB from KP NDB. Start timer. Tune ADF to TD NDB (270.0), and fly towards NDB for 30 minutes.			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: 4,750 ft</b>	<b>Width: 100 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>224.0 NM</b>

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### 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 to intercept and track 165° OB from TD NDB. Start timer. After 20 minutes flight, tune ADF to PTN NDB. Fly to NDB when signal is received.			165	103.0
	<i>To MDS NDB (397.0).</i> Turn left and track 087° OB from PTN NDB. Reset timer. After 18 minutes flight, tune ADF to TD NDB. Fly to NDB when signal is received.			087	77.0
	<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.			032	2.4
	Length: 8,126 ft	Width: 200 ft	Surface: Concrete		
Flight No: LM-26	Arrival Airport Elev: 109 ft			Estimated totals for this flight>>>	182.0 NM

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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: 109 ft		
Yangoon (VYYY), Myanmar  To  Tak (VTPM), Thailand	<b>Departure: VYYY 03-21</b> Before take off, tune ADF to MDN NDB (204.0). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To MDN NDB.</i> After take off, fly to NDB.  <i>To PA NDB (365.0).</i> Track 092° OB from MDN NDB, then maintain heading. When MDN signal fades out, tune ADF to PA NDB. Fly to NDB.  <i>To MS NDB (316.0).</i> Turn right and track 103° OB from MDN NDB.. At your convenience, tune ADF to MS NDB. Fly to NDB.			050	1.8
				092	87.0
				103	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	0.3
	<b>Length: 4,958 ft</b>	<b>Width: 98 ft</b>	<b>Surface: Asphalt</b>		
<b>Flight No: LM-27</b>	<b>Arrival Airport Elev: 690 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	<b>140.0 NM</b>

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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	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 690 ft		
Tak (VTPM), Thailand  To  Bangkok (VTBD), Thailand	<b>Departure: VTPM 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 to intercept and track 131° OB from MS NDB. When MS signal fades out, tune ADF to TL NDB. Fly to NDB.  <i>To LB NDB (280.0).</i> Turn right to 140° and fly to LB NDB.			131	133.0
	<i>To KK NDB (276.0).</i> Turn right and track 183° OB from LB NDB. Start timer. After +/- 13 minutes flight, tune ADF to KK NDB. Fly to NDB when signal is received.			140	32.0
	<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.			183	56.0
	Length: 03L-21R 12,185 ft 03T-21L 11,526 ft			210	1.4
	Width: 197 ft 148 ft				
	Surface: Concrete Asphalt				
Flight No: LM-28	Arrival Airport Elev: 9 ft			Estimated totals for this flight>>>	
					223.0 NM

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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	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 6,500 ft	Apt Elev: 9 ft		
Bangkok (VTBD), Thailand  To  Prachuap (VTBP), Thailand	<b>Departure: VTBD 03L-21R, 03R-21L</b> Before take off, tune ADF to KK NDB (276.0). Set altimeter. Take off and start climb to 6,500 ft.				
	<b>Enroute:</b>  <i>To HN NDB (213.0).</i> After take off, track 207° OB from KK. When KK signal fades out, tune ADF to HN and fly to NDB.  <i>To PCK NDB (320.0).</i> Overhead HN NDB, turn left and track 190° OB from HN NDB. Start timer. 8 minutes after passing HN, tune ADF to PCK NDB and fly towards NDB.			207	87.0
	<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.			190	51.0
	<b>Length: 3,281 ft</b>			252	0.3
	<b>Width: 131 ft</b>				
<b>Flight No: LM-29</b>	<b>Arrival Airport Elev: 10 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	
					<b>138.0 NM</b>

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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: 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 to intercept and track 203° OB from PCK NDB. Once on track, tune ADF to CP NDB and fly to NDB.			203	69.0
	<i>To SR NDB (338.0).</i> Turn and track 188° OB from CP NDB. At 20 minutes from CP NDB, tune ADF to SR NDB and fly to NDB.			188	96.0
	<i>To NK NDB (289.0).</i> Turn left and track 127° OB from SR NDB. start Climb to 7,500 ft. Start timer. Tune ADF to NK NDB and fly to NDB.			127	59.0
	<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.			151	0.5
	Length: 6,947 ft	Width: 148 ft	Surface: Asphalt		
Flight No: LM-30	Arrival Airport Elev: 13 ft                     Estimated totals for this flight>>>				225.0 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	<u>Flight Description</u>			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 NK NDB (289.0). 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 to intercept and track 154° OB from NS NDB. Once levelled at cruise altitude, Tune ADF to SK NDB. Fly to NDB. (or follow coastline south until SK signal is received).  <i>To PT NDB (201.0).</i> Turn to 127° and fly to NDB (or follow coastline south).  <i>To NT NDB (383.0).</i> Turn to 114° and fly to NDB (or follow coastline south).  <i>To KB NDB (240.0).</i> Turn to 125° and fly to NDB (or follow coastline south).  <i>To TU NDB (312.0).</i> Overhead KB NDB, turn right to 133°. Fly towards NDB.			154	90.0
				127	40.0
				114	39.0
				125	37.0
				133	70.0
	<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.			229	0.2
	Length: 6,615 ft	Width: 150 ft	Surface: Asphalt		
Flight No: LM-31	Arrival Airport Elev: 19 ft <span style="float: right;">Estimated totals for this flight&gt;&gt;&gt;</span>				276.0 NM

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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	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 19 ft		
Kuala Terengganu (WMKN), Malaysia  To  Singapore (WSSL), Republic of Singapore	<b>Departure: WMKN 04-22</b> Before take off, tune ADF to TU NDB (312.0). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To VKE VOR/DME (117.10).</i> After take off, turn to intercept and track 159° OB from TU NDB. Fly to VOR (Kerteh Airport).  <i>To KN NDB (349.0).</i> Overhead WMKE, turn right to 195°. Descend to 6,500 ft, Turn on ADF Morse Ident. fly to NDB.  <i>To PK NDB (282.0).</i> Turn left to 152°. Climb to 7,500 ft and fly to NDB.  <i>To KK NDB (286.0).</i> Turn right and track 163° OB from PK NDB. Start timer. Fly over water, and when reaching coastline to land, tune ADF to KK NDB.  <i>To SEL NDB (220.0).</i> Turn right and track 230° OB from KK NDB. Fly to NDB			159  195  152  163  230	54.0  48.0  27.0  117.0  9.8
	<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.			80	0.2
	<b>Length: 5,373 ft</b>	<b>Width: 150 ft</b>	<b>Surface: Asphalt</b>		
	<b>Arrival Airport Elev: 35 ft</b>				
	<b>Estimated totals for this flight&gt;&gt;&gt;</b>				<b>255.0 NM</b>
<b>Flight No: LM-32</b>					

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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	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 35 ft		
Singapore (WSSL), Republic of Singapore  To  Palembang (WIPP), Indonesia	<b>Departure: WSSL 03-21</b> Before take off, tune ADF to BM NDB (370.0). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>				
	<i>To BM NDB.</i> After take off, turn to intercept 140° IB to BM NDB. Fly to NDB.			140	23.0
	<i>To TI NDB (385.0).</i> Turn left to 115°. Fly to NDB.			115	28.0
	<i>To NX NDB (365.0).</i> Turn and track 199° OB from TI NDB. Begin climb to 8,500 ft. Turn on ADF Morse Ident. When signal fades out over open water, fly Dead Reckoning. Tune ADF to NX NDB when signal is received. Fly to NDB.			199	162.0
	<i>To OW NDB (395.0).</i> Turn and track 141° OB from NX NDB. Start descend to 7,500 ft. After 20 minutes flight from NX NDB, tune ADF to OW NDB (395.0). Fly to NDB.			141	99.0
	<b>Approach: WIPP 11-29 (ILS Rwy 29, IPLB 110.50)</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Sultan M Badaruddin Li Airport, runway in use, and land.			68	1.5
	Length: 8,210 ft	Width: 148 ft	Surface: Asphalt		
<b>Flight No: LM-33</b>	<b>Arrival Airport Elev: 49 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	
					<b>313.0 NM</b>

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### 35. PALEMBANG TO JAKARTA

*Note : Runways allocated by the original documentation are Dep. WIPP Rwy 11, Arr. WIII Rwy 07L*

*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: 49 ft		
Palembang (WIPP), Indonesia  To  Jakarta (WIII), Indonesia	<b>Departure: WIPP 11-29</b> Before take off, tune ADF to WW NDB (380.0). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>  <i>To WP1 (Coastline).</i> After take off, turn to intercept and track 126° OB from WW NDBn right to 126°. Waypoint reached when reaching the coastline.			126	94.0
	<i>To WP2 (Isthmus).</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.			184	119.0
	<i>To Fix 03.</i> descend to 7,500 ft. Cross Isthmus, turn left to 109°. Follow north shore eastward until reaching 120° bearing to GL NDB.			109	30.0
	<i>To GL NDB (324.0).</i> Turn right to 120° Fly to GL NDB.			120	22.0
	<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.			074	5.4
	<b>Length: 11,803 ft</b>	<b>Width: 197 ft</b>	<b>Surface: Concrete</b>		
<b>Flight No: LM-34</b>	<b>Arrival Airport Elev: 34 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	
					<b>269.0 NM</b>

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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	<u>Flight Description</u>			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</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 091°. Fly to NDB.			091	10.8
	To AL NDB (215). Overhead TG NDB, turn right to 107°. Fly to NDB.			107	12.4
	To PW NDB (250). Overhead AL NDB, turn right to 132°. Fly to NDB.			132	33.0
	To OZ NDB (385). Overhead PW NDB, turn left to 085°. Fly to NDB.			085	14.0
	To CA NDB (365). Overhead OZ NDB, turn right and track 099° OB from OZ NDB until CA NDB signal is received. Fly to NDB.			099	53.0
	To OC NDB (350.0). Follow coastline eastward until Achmad Yani Apt, with OC NDB on field. When flying over the third landpoint from CA NDB, tune ADF to OC, and fly to NDB.			098	109.0
	To SO NDB (255.0). Overhead OC NDB, track 144° OB from OC NDB until SO NDB signal is received. Fly to NDB.			144	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.			108	0.5
	Length: 8,534 ft	Width: 148 ft	Surface: Asphalt		
<b>Flight No: LM-35</b>	<b>Arrival Airport Elev: 421 ft</b> <span style="float: right;"><b>Estimated totals for this flight&gt;&gt;&gt;</b></span>				<b>273.0 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	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 421 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 coastline (WP1).</i> After take off, turn to intercept 130° OB from SO NDB. Fly upto coastline.			130	77.0
	<i>To Land's End (WP2).</i> Turn east at coastline and follow south coastline to tip of island – Land's End.			097	172.0
	<i>To OR NDB (230.0).</i> Cross open water to Bali Int'l Airport. Tune ADF to OR NDB (230.0) and fly towards NDB.			086	35.0
	<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.			236	0.4
	Length: 9,829 ft	Width: 148 ft	Surface: Asphalt		
Flight No: LM-36	Arrival Airport Elev: 14 ft			Estimated totals for this flight>>>	285.0 NM

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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 (WADW), Indonesia	<b>Departure: WADD 09-27</b> Before take off, tune ADF to OR NDB (230.0). 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 OR NDB. Cross open water. Waypoint reached at Nusa Penida island land point.			089	17.0
	To WP2. Fly along southern coast of Island up to tip of island..			116	9.1
	To WP3. Cross open water to Lombok island land point.			090	15.4
	To WP4. Follow southern coastline to southern tip of the Taman Wisata Perairan Teluk Bumbang (a marine recreational park).			102	32.0
	To WP5. Cross open water to Sumbawa island land point.			096	21.0
	To WP6. Follow southern coastline to land point.			108	17.9
	To WP7. Follow southern coastline to land point.			078	52.0
	To WP8 (Tip of island). Follow southern coastline.			082	64.0
	To WP9. Cross open water. Check that ADF is tuned to NR NDB (295.0). Waypoint reached overhead Tambolaka Airport.			152	40.0
	To WP10. Follow northern coastline to most northern land point in sight.			077	42.0
	To WP11. Turn right to next land point. Tune ADF to NR NDB (295.0). Waypoint reached when ADF points to 150°.			126	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	13.4
	<b>Length: 5,201 ft</b>	<b>Width: 98 ft</b>	<b>Surface: Asphalt</b>		
<b>Flight No: LM-37</b>	<b>Arrival Airport Elev: 33 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	
					<b>343.0 NM</b>

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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: 33 ft		
Waingapu (WADW), Indonesia  To  Kupang (WATT), Indonesia	<b>Departure: WADW 15-33</b> Before take off, tune ADF to NR NDB (295.0). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>Enroute:</b>				
	To WP1 (coastline). Turn right to 092°. Fly to coastline.			092	14.4
	To WP2 (tip of Sumbawa island). Fly south-east along coastline to tip of Island.			138	28.0
	To WP3 (northern tip of Sawu island). Cross open water.			108	67.0
	To WP4 (southern tip of Semaui island). Cross open water. Check that ADF is tuned to OK NDB (385.0).			085	84.0
	To WP5. Turn left to 052° to first land point in sight at Timor island, or until ADF points to 070°.			052	11.9
	<b>Approach: WATT 07-25</b> To runway. Turn right and track 070° IB to OK NDB. As soon as airport is in sight, adjust heading, fly to El Tari Airport, runway in use, and land.			073	10,7
	Length: 8,207 ft	Width: 148 ft	Surface: Asphalt		
Flight No: LM-38	Arrival Airport Elev: 335 ft			Estimated totals for this flight>>>	215.0 NM



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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	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 335 ft		
Kupang (WATT), Indonesia  To  Darwin (YPDN), Australia	<b>Departure:</b> Before take off, tune ADF to OK NDB (385.0). Set altimeter. Take off and start climb to 7,500 ft.				
	<b>En route:</b>  <i>To WP1 (Indonesia coastline).</i> After take off, turn to intercept and track 106° OB from OK NDB. Waypoint reached when crossing the coastline.  <i>To BGT NDB (308.0).</i> 423 NM Open Water to cross to reach Australia coastline. Start timer. Continue tracking 106° OB from OK NDB until signal fades, then about 346 NM Dead Reckoning before BGT NDB (in Australia) signal is received. When OK NDB signal fades out, tune ADF to BGT NDB, maintaining 106° heading.			106	21.0
	<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.			106	423.0
	<b>Length: 11-29 11,008 ft 18-36 5,025 ft</b>			107	1.2
	<b>Width: 197 ft 98 ft</b>				
<b>Surface: Asphalt</b>					
<b>Flight No: LM-39</b>	<b>Arrival Airport Elev: 103 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	
					<b>446.0 NM</b>

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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	<u>Flight Description</u>			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 ADF to HWS NDB (257.0). Set altimeter. Take off and start climb to x,xxx ft.				
	<b>Enroute:</b>  <i>To HWS NDB.</i> After take off, turn and fly to NDB.  <i>Towards NGU NDB (233.0).</i> Track 119° OB from HWS NDB. Start timer. About 160 NM Dead Reckoning on same heading before NGU NDB signal is received.			105	10.3
	<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.			119	255.0
	<b>Length: 5,021 ft</b>	<b>Width: 98 ft</b>	<b>Surface: Gravel</b>	071	0.5
<b>Flight No: LM-40</b>	<b>Arrival Airport Elev: 45 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	
					<b>265.0 NM</b>

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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	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: 7,500 ft	Apt Elev: 45 ft		
Ngukurr (YNGU), Australia  To  Mornington Isl. (YMTI), Australia	<b>Departure: YNGU 11-29</b> Before take off, tune ADF to NGU NDB (233.0). 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 108° OB from NGU NDB. Watch heading. Waypoint reached at the northern tip of the island located in the middle of river's mouth.			108	61.0
	<i>To WP2.</i> Turn to 116°. Follow coastline South East and East. On the way, you will cross the Sir Edward Pellew group of islands (North-East of Borrooloola). Waypoint reached at Calvert River mouth.			116	136.0
	<i>To WP3.</i> Turn right to 125°, following coastline South East and East. Waypoint reached at Massacre Inlet mouth.			125	44.0
	<i>To MTI NDB (416.0).</i> Turn left to 079° and fly towards Mornington Island Airport, in front of Denham Island northern tip.			079	49.0
	<b>Approach: YMTI 09-27, 12-30</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 4,986 ft 12-30 2,485 ft	Width: 98 ft 59 ft	Surface: Asphalt Gravel		
<b>Flight No: LM-41</b>	<b>Arrival Airport Elev: 33 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	
					<b>290.0 NM</b>

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### 43. MORNINGTON ISLAND TO CLONCURRENCY

*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	<u>Flight Description</u>			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, 12-30</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>  <i>To BKT NDB (236.0).</i> Turn to intercept and track 157° IB to BKT NDB. Fly to NDB.  <i>Towards CCY NDB (264.0).</i> Track 157° OB from BKT NDB until signal fades. Start timer. About 40 NM Dead Reckoning before CCY NDB signal is received. Fly to NDB.			157	68.0
	<b>Approach: YCCY 06-24, 12-30</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Cloncurry Airport, runway in use, and land.			157	183.0
	<b>Length: 06-24 3,796 ft 12-30 6,571</b>	<b>Width: 59 ft 98 ft</b>	<b>Surface: Asphalt</b>	119	0.3
<b>Flight No: LM-42</b>	<b>Arrival Airport Elev: 616 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	
					<b>252.0 NM</b>

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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	<u>Flight Description</u>			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>  <i>To WTN NDB (386.0).</i> Turn to intercept and track 119° OB from CCY NDB until signal fades, then about 30 NM Dead Reckoning before WTN NDB signal is received. Fly to NDB.  <i>Towards LRE NDB (353.0).</i> Track 126° OB from WTN NDB. Start timer. After 20 minutes flight from WTN, tune ADF to LRE NDB. Fly towards NDB			119	176.0
	<b>Approach: YLRE 04-22, 09-27</b> <i>To runway.</i> As soon as airport is in sight, adjust heading, fly to Longreach Airport, runway in use, and land.			126	92.0
	<b>Length: 04-27 6,360 ft 09-27 2,950 ft</b>	<b>Width: 98 ft 59 ft</b>	<b>Surface: Asphalt Gravel</b>		
	<b>Flight No: LM-43</b>				
	<b>Arrival Airport Elev: 627 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	
					<b>269.0 NM</b>

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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: 627 ft		
Longreach (YLRE), Australia  To  Charleville (YBCB), 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 BCK NDB (416.0).</i> Turn to intercept and track 126° OB from LRE NDB. Both NDB's having same range, you can switch to BCK NDB when leveling at cruise altitude.  <i>Towards CV NDB (269.0).</i> Track 151° OB from BCK NDB until signal fades. Start timer. Tune ADF to CV NDB, and fly towards CV NDB.			126	87.0
	<b>Approach: YBCB 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.			151	128.0
	<b>Length: 12-30 5,006 ft</b> <b>18-36 3,512 ft</b>	<b>Width: 98 ft</b> <b>75 ft</b>	<b>Surface: Asphalt</b>		
<b>Flight No: LM-44</b>	<b>Arrival Airport Elev: 1,003 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	<b>215.0 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	<u>Flight Description</u>			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: ft	Apt Elev: ft		
Charleville (YBCB), 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 x,xxx ft.				
	<b>Enroute:</b>  <i>To BRW NDB (416.0).</i> Turn to intercept and track 163° OB from CV NDB until signal fades, then about 65 NM Dead Reckoning before NYN NDB signal is received. Fly to NDB.  <i>To NYN NDB (404.0).</i> Turn left and track 158° OB from BRW NDB until signal fades. Start timer. 15 to 20 minutes after passing BRW NDB, tune ADF to NYN NDB and fly towards NDB.			163	215.0
	<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.			158	97.0
	<b>Length: 05-23 5,386 ft 18-36 3,492 ft</b>	<b>Width: 98 ft</b>	<b>Surface: Asphalt Grass</b>		
<b>Flight No: LM-45</b>	<b>Arrival Airport Elev: 569 ft</b>			<b>Estimated totals for this flight&gt;&gt;&gt;</b>	<b>312.0 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	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: ft	Apt Elev: 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 NYN NDB (404.0). Set altimeter. Take off and start climb to x,xxx ft.				
	<b>Enroute:</b>  <i>To CDO NDB (401.0).</i> After take off, turn to intercept and track 168° OB from NYN NDB. At 20 minutes flight from take off, tune ADF to CDO NDB. Fly to NDB. Stop and reset timer.			168	91.0
	<i>To WWL NDB (389.0).</i> Turn and track 170° OB from CDO NDB. Fly to NDB.			170	52.0
	<i>To TEM NDB (209.0).</i> Overhead WWL, turn left to 139°. Fly to NDB.			139	34.0
	<i>To WG NDB (221.0).</i> Overhead TEM, turn right to 172°. Fly to NDB..			172	44.0
	<i>Towards AY NDB (236.0).</i> Overhead WG, turn to 191°. Start timer. Tune ADF to AY NDB. Fly towards NDB.			191	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: 6,229 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>				280.0 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	Flight Description			Course (Leg) Deg	Distance (Leg) NM
	Dep. Rwy : check WX	Init. Alt: ft	Apt Elev: ft		
Albury (YMAY), Australia  To  Melbourne (YMML), Australia	Departure: YMAY 07-25 Before take off, tune ADF to COR NDB (380.0). Set altimeter. Take off and start climb to x,xxx ft.				
	Enroute:				
	To COR NDB (380.0). After take off, turn to intercept 267° IB to COR NDB. Fly to NDB.			267	30.0
	To SHT NDB (212.0). Overhead COR NDB turn to 228°. Fly to NDB.			228	54.0
	To MNG NDB (254.0). Overhead SHT NDB, turn left to 188°. Fly to NDB.			188	30.0
	To BOL NDB (362.0). Overhead MNG NDB turn to 196°.			196	39.0
	To ROC NDB (338.0). Overhead BOL NDB, turn left to 160°. Fly to NDB.			160	7.8
	Approach: YMML 09-27 (ILS Rwy 27, IMW 109.30) , 16-34 (ILS Rwy 16, IMS 109.70) To runway. As soon as airport is in sight, adjust heading, fly to Melbourne Int'l. Airport, runway in use, and land.			157	5.0
	Length: 09-27 7,490 ft 16-34 12,014	Width: 148 ft	Surface: Asphalt		
Flight No: LM-47	Arrival Airport Elev: 434 ft			Estimated totals for this flight>>>	
					165.0 NM