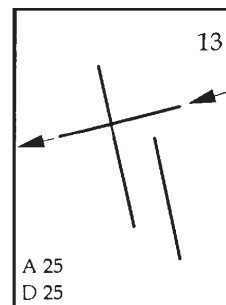


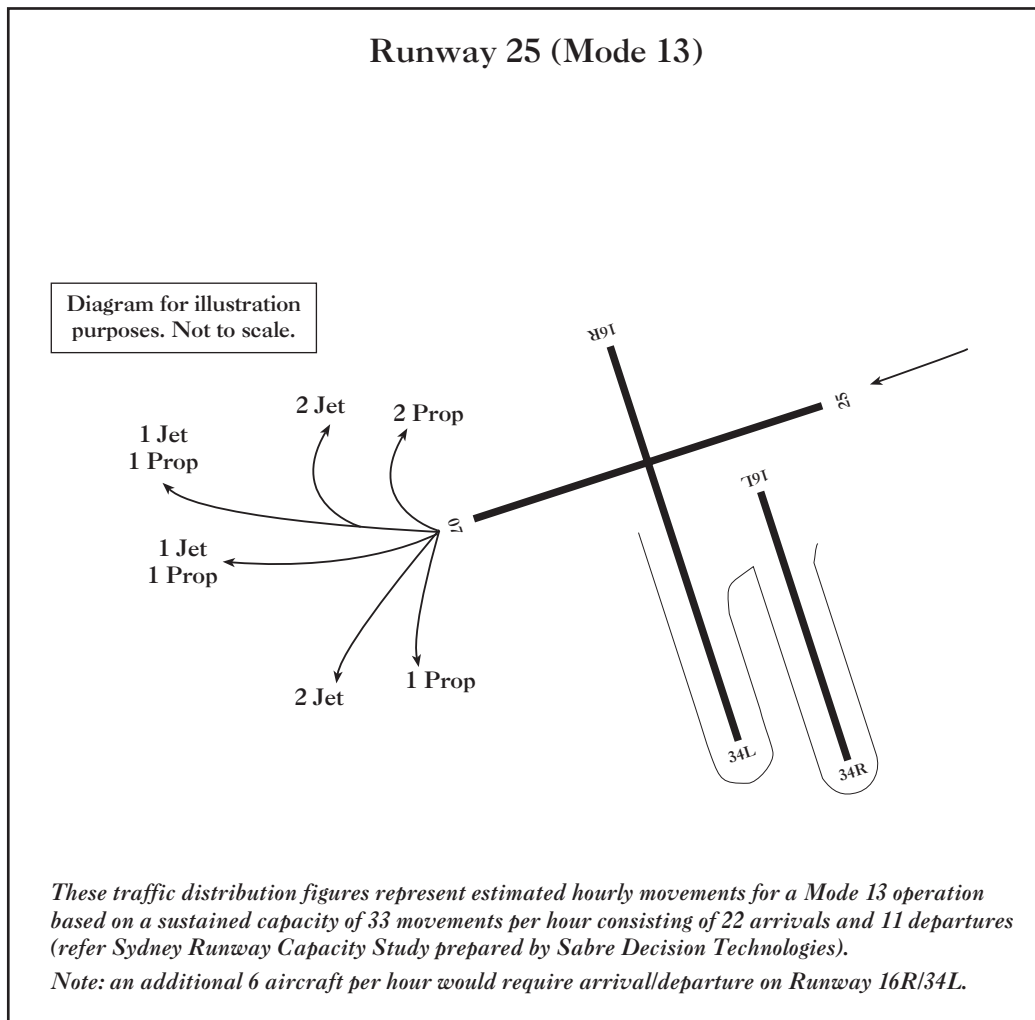
## Mode 13

### Method of operation

Departures over the north-west, west and south-west from Runway 25. Departures to the north from Runway 34L or to the south from Runway 16L for those aircraft requiring the use of the long runway.



Arrivals from the east on Runway 25.

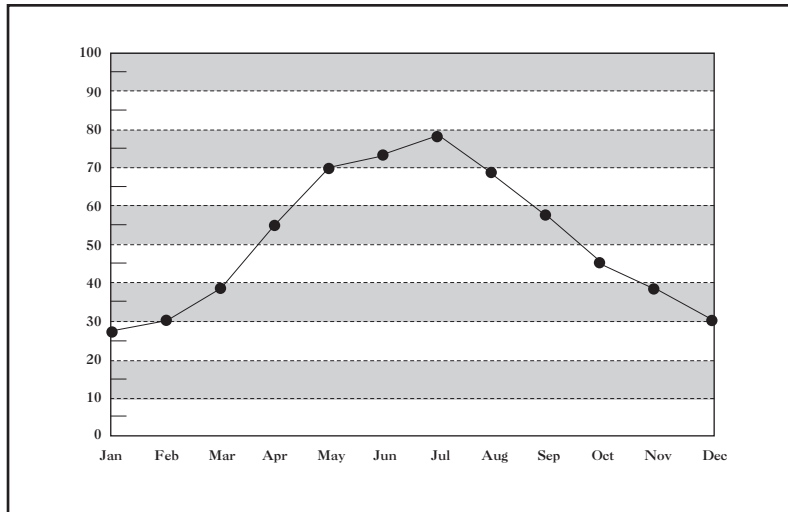


### Availability of configuration

Operationally acceptable in wind conditions from south through west to north.

The Bureau of Meteorology (BOM) wind data for the 55 years to December 1995 indicates that:

- the all months average availability would be 75 per cent.
- the average monthly availability ranges from 57 per cent in December and January to 57 per cent in May and July.



The graph indicates the 55 year average availability from January to December.

Where nil downwind criteria is specified the average of all months availability is 59 per cent

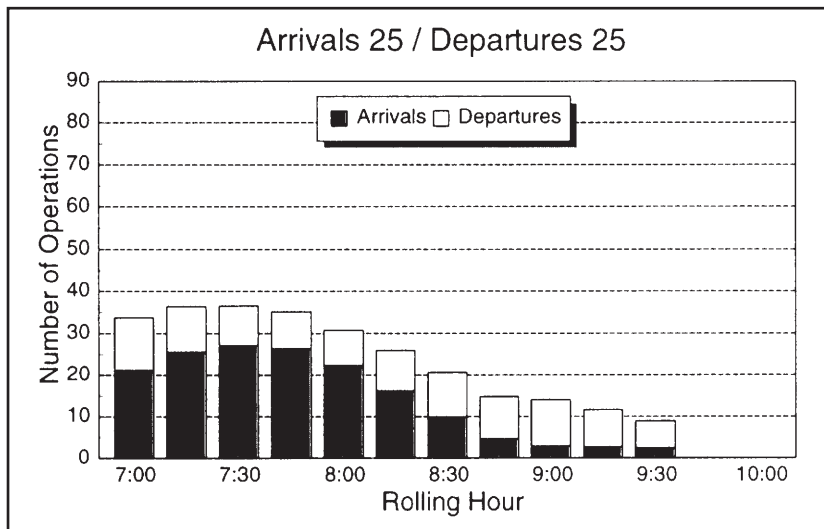
### Operational capacity

Sabre observed a sustained capacity of 33 operations per hour consisting of 22 arrivals and 11 departures. Peak observed capacity of 37 operations

Sabre found that the smaller separation time for subsequent departures on 25 (than on 07) due to the availability of fanned departure headings did not improve the capacity over Mode 12 due to the infrequency of back-to-back departures. The arrivals and departures are balanced 50/50 in this case. If more departures and less arrivals were operated, the hourly sustainable capacity should improved beyond 33 operations.

Sabre modelling evaluation found this Mode will not attain 80 operations per hour with only one runway in use.

Graph below presents the simulation results for a rolling hour period.



*Operational complexity*

Current operational use not complex because of single runway in use.

*Constraints to optimisation of capacity*

Taxiway congestion at the departure end of the runway will result as traffic levels increase.

Single runway operation requires spacing of arriving traffic to allow for departures.

*Environmental implications*

*Arrivals 25*

The number of people exposed to noise of 70 dB(A) or more for B747-200 aircraft is a total of 44,200.

At the outer tip of the contour for each particular type of aircraft the noise reaching the ground will be close to 70 dB(A) and the aircraft will be at the following heights.

B747-200	3,400ft	at	Over Water
B747-400	3,100ft	at	Over Water
B767	2,900ft	at	Over Water
Saab 340	850ft	at	Coogee

*Departures 25*

The number of people exposed to noise of 70 dB(A) or more for B747-200 aircraft is a total of 787,200.

At the outer tip of the contour for each particular type of aircraft the noise reaching the ground will be close to 70 dB(A) and the aircraft will be at the following heights.

B747-200	10,000ft	at	Belrose (north), Heathcote/Royal National Park (south), over water/Middle Harbour (east), Horsley Park (west), Toongabbie (northwest) & Parklea (northwest-early turn)
B747-400	6,500ft	at	Lindfield (north), Royal National Park (south), North Sydney (east), Cabramatta (west), Merrylands (northwest) & Northmead (northwest-early turn)

B767	6,000ft	at	Tennyson (north), Sutherland (south), Gladesville (north), Bankstown Aerodrome (west), Yagoona (northwest) & Silverwater (northwest-early turn)
Saab 340	3,000ft	at	Arncliffe (north), Brighton le Sands (south), Arncliffe (east), Arncliffe (west) & Arncliffe (northwest)

For further details refer to Appendix 9

### *Conclusions*

This mode results in aircraft noise to the east and west of the airport, but provides relief to the north. It does not meet the objective of maximising flight over water or non populous areas and has limited potential because of the capacities of the single runway. There are other modes providing relief to the north giving higher movement rates and which also involve overwater flight for some aircraft. These would be preferable if wind conditions allowed.

### *Proposed use*

This Mode is proposed for including in the plan for use when wind conditions require, such as when a crosswind on the parallel runways is 25 knots or more.

Occasional use of Runways 16R or 34L when required for departing and arriving heavy jets.



**SYDNEY MODE 13 DEPARTURES 25 ARRIVALS 25**  
**(LONG HAUL JET DEPARTURES/ARRIVALS 16R OR 34L)**



MP 96/544.8.13  
 November 1996

■ Built-up-area (1993)

Note: Tracks shown are indicative

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DEPARTURES		ARRIVALS	
	Jet track		Jet track
	Non-Jet track		Non-Jet track
	Dual track		Dual track

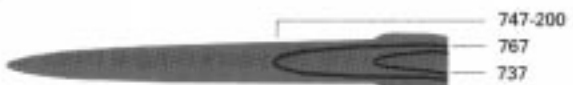


# SYDNEY NOISE IMPRINT MODE 13 JET DEPARTURES 25 ARRIVALS 25



November 1996 MP 90/544.8.13 © Commonwealth of Australia

0 km E  
Scale approx



The diagram above indicates that a 767, 737 and similar aircraft leave a significantly smaller imprint than 747-200 series aircraft

- Noise imprint Arrivals (70dBA or above based on a single movement of a 747-200 series aircraft)
- Noise imprint Departures (70dBA or above based on a single movement of a 747-200 series aircraft)
- Built-up-area (1993)

Note: The noise imprints shown are based on a single aircraft movement on the centreline of the indicative flight track