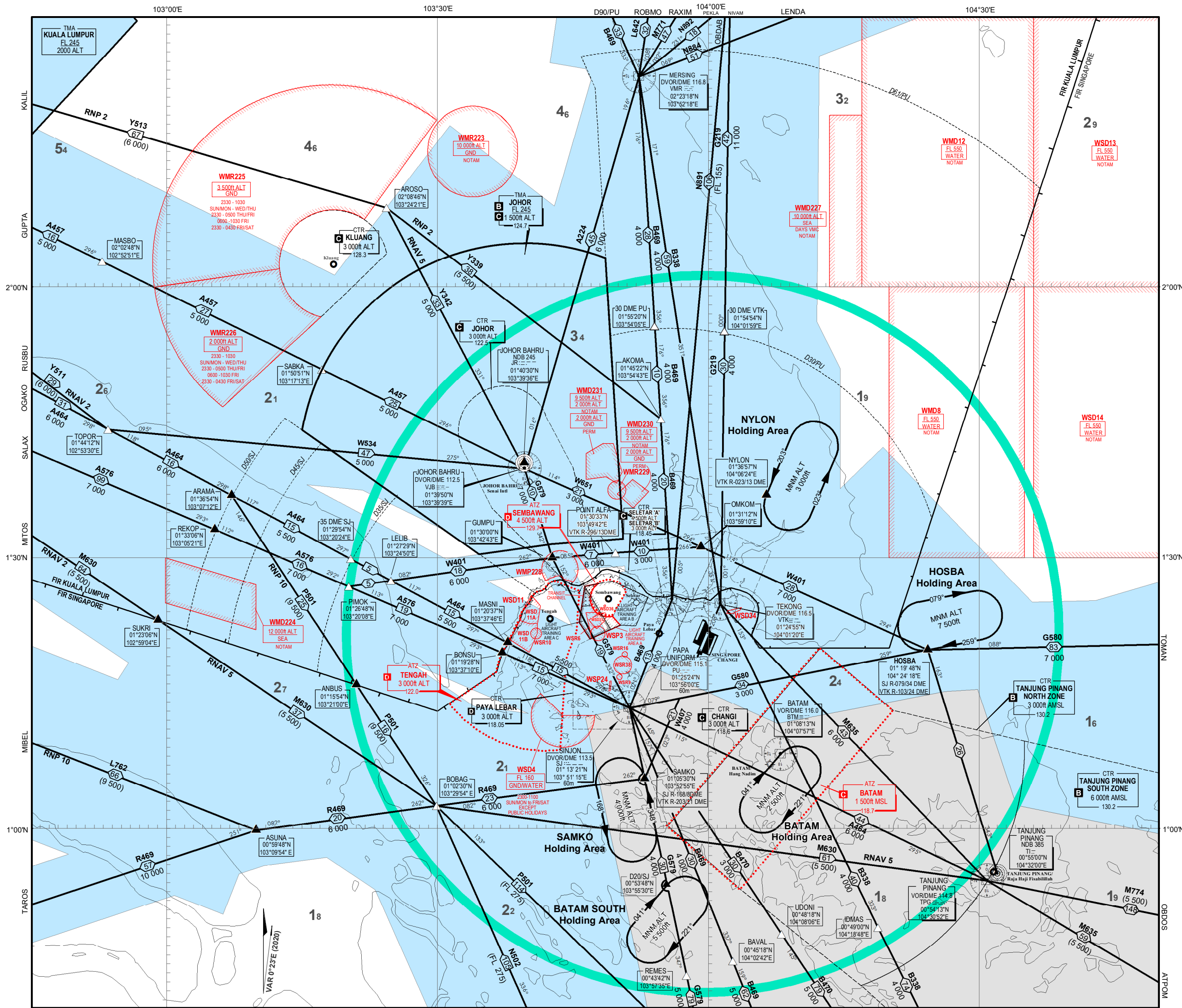


# AREA CHART - ICAO

SINGAPORE/JOHOR AIRSPACE COMPLEX  
LOW LEVEL HOLDING AREAS



LEGEND											
Terminal Control Area (TMA)	<table border="1"> <tr> <td>Name of TMA</td> <td>TMA JOHOR</td> </tr> <tr> <td>Airspace Classification</td> <td>FL 145</td> </tr> <tr> <td>Upper Limit</td> <td>1 500ft</td> </tr> <tr> <td>Lower Limit</td> <td>124.7</td> </tr> <tr> <td>Radio frequency(ies)</td> <td></td> </tr> </table>	Name of TMA	TMA JOHOR	Airspace Classification	FL 145	Upper Limit	1 500ft	Lower Limit	124.7	Radio frequency(ies)	
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Aerodrome Traffic Zone (ATZ)	<table border="1"> <tr> <td>Name of ATZ</td> <td>ATZ TENGAH</td> </tr> <tr> <td>Airspace Classification</td> <td>3 000ft</td> </tr> <tr> <td>Upper Limit</td> <td>122.0</td> </tr> <tr> <td>Radio frequency(ies)</td> <td></td> </tr> </table>	Name of ATZ	ATZ TENGAH	Airspace Classification	3 000ft	Upper Limit	122.0	Radio frequency(ies)			
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ATS Routes	<table border="1"> <tr> <td>Route designator</td> <td>B469</td> </tr> <tr> <td>Distance in nautical miles</td> <td>4 000/FL 160</td> </tr> <tr> <td>Minimum flight altitude (ft)/flight level</td> <td>(4 000)/(FL 160)</td> </tr> <tr> <td>Lower limit (ft)/flight level</td> <td></td> </tr> </table>	Route designator	B469	Distance in nautical miles	4 000/FL 160	Minimum flight altitude (ft)/flight level	(4 000)/(FL 160)	Lower limit (ft)/flight level			
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Reporting Point	<table border="1"> <tr> <td>Compulsory</td> <td>▲</td> </tr> <tr> <td>On request</td> <td>△</td> </tr> </table>	Compulsory	▲	On request	△						
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DME distance from SJ Navaid	D35/SJ										
Radio Navigation Aid	<table border="1"> <tr> <td>Name</td> <td>SINJON DVOR/DME 113.5</td> </tr> <tr> <td>Identification and frequency</td> <td>SJ 113.5</td> </tr> <tr> <td>Geographical Coordinates</td> <td>01°19'21"N 103°51'15"E</td> </tr> <tr> <td>Elevation of DME site</td> <td>60m</td> </tr> </table>	Name	SINJON DVOR/DME 113.5	Identification and frequency	SJ 113.5	Geographical Coordinates	01°19'21"N 103°51'15"E	Elevation of DME site	60m		
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Restricted Airspace (P - Prohibited, R - Restricted, D - Danger)	<table border="1"> <tr> <td>Identification of area</td> <td>WSD13</td> </tr> <tr> <td>Nationality letter</td> <td>FL 400</td> </tr> <tr> <td>Vertical limits</td> <td>WATER</td> </tr> <tr> <td>Activation by NOTAM</td> <td>NOTAM</td> </tr> </table>	Identification of area	WSD13	Nationality letter	FL 400	Vertical limits	WATER	Activation by NOTAM	NOTAM		
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**Area Minimum Altitude (AMA)**

Each quadrilateral contains an area minimum altitude (AMA) which represents the lowest altitude which may be used under instrument meteorological conditions (IMC). The AMA provides a minimum clearance of 1 000 feet (300m) above all terrain and obstacles in the quadrilateral. It is represented in thousands and hundreds of feet above mean sea level.

Example : 3 400 feet **34**

NOTE :- In computing the area minimum altitude, a margin of 200 feet (60m) for vegetation has been added for spot elevations.

**Speed Control Procedures**

Speed control procedures are in force unless notified otherwise by ATC or ATIS.

All arriving turbo-propeller and turbo-jet aircraft are to fly at not faster than indicated air speed 250 knots when within 40nm from Singapore Changi Airport or when at or below 10,000ft except all arriving aircraft into Singapore Changi Airport shall comply with the speed restrictions depicted on the transitions and RNAV STARs. Further speed reductions will be regulated by ATC as necessary.

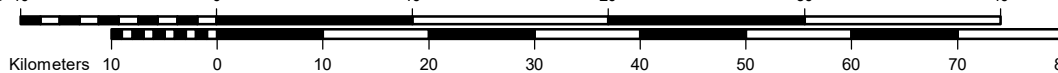
Pilots who may not be able to comply with the speed limits specified above for reasons of flight safety and/or weather should inform ATC and state the speed(s) acceptable.

AIRSPACE CLASSIFICATION IN THE SINGAPORE FIR		
Airspace	Levels	Classification
Controlled airspace	FL150 to FL460	A
	Surface to FL150	B
Controlled airspace more than 100 nm seaward from the shoreline	Lower limit to FL460	A
Control Zone (CTRs)	Changi CTR	C
	Paya Lebar CTR	D
	Seletar CTR	C
ATZs	Surface to upper limit	D
Uncontrolled airspace		G*

\* Aircraft operating in the Light Aircraft Training Areas A, B and C (please refer to page ENR 5.2-1) are required to have continuous two-way communications with the appropriate ATS authority.

SINGAPORE	D-ATIS	DEP	128.6
	ARR	128.025	
	DEP	120.3	
	ARR	119.3	
	APP	124.05	
	TWR	118.6	
		118.25	

**Note :**  
FOR DEPARTURE AND ARRIVAL ROUTES  
REFER TO AD-2-WSSS-SID-1 TO AD-2-WSSS-SID-18 AND  
AD-2-WSSS-STAR-1 TO AD-2-WSSS-STAR-9,  
AD-2-WSSS-STAR-11, AD-2-WSSS-STAR-13 TO AD-2-WSSS-STAR-21



**PROHIBITED, RESTRICTED AND DANGER AREAS**

	ACTIVITY	UPPER LIMIT LOWER LIMIT	REMARKS
WSP3	-	750ft ALT GND	Permanently Active as in ENR 5
WSD4	A/G and G/G Firing Range	FL 160 GND/WATER	Permanently Active as in ENR 5
WMD8	Naval Air/Air Firing Range	FL 550 WATER	Activation by NOTAM
WSD11	Small Arm Firing	1 300ft ALT GND	Permanently Active as in ENR 5
WSD11A	Artillery Firing	FL 125 GND	Activation by NOTAM
WSD11B	Artillery Firing	FL 125 GND	Activation by NOTAM
WMD12	Naval Anti-aircraft Firing	FL 550 WATER	Activation by NOTAM
WSD13	Naval Anti-aircraft Firing	FL 550 WATER	Activation by NOTAM
WSD14	Naval Anti-aircraft Firing & Live Air/Air Firing	FL 550 WATER	Activation by NOTAM
WSP24	-	800ft ALT GND/WATER	Permanently Active as in ENR 5
WSR6	Helicopter Operations	200ft ALT GND	Permanently Active as in ENR 5
WSR9	Helicopter Operations	200ft ALT GND	Permanently Active as in ENR 5
WSR16	Helicopter Operations	200ft ALT GND	Permanently Active as in ENR 5
WSD34	Rifle Range	500ft ALT GND	Permanently Active as in ENR 5
WSD35	Rifle Range	900ft ALT GND	Permanently Active as in ENR 5
WSD36	Rifle Range	750ft ALT GND	Permanently Active as in ENR 5
WSR10	-	5 500ft ALT GND	Permanently Active as in ENR 5
WSR38	-	10 000ft ALT GND	Permanently Active as in ENR 5
	Transit Channel	2 000ft ALT GND	Activated only for Military acft crossing
*	Light Aircraft Training Area A	4 500ft ALT GND/*2 000ft	Training & Local Flts in VMC only
*	Light Aircraft Training Area B	10 500ft ALT 4 500ft ALT	High Flying Training Ops in VMC only
*	Light Aircraft Training Area C	10 500ft ALT 4 500ft ALT	High Flying Training Ops in VMC only
WMR223	Parachute Dropping	10 000ft ALT GND	Permanently Active as in ENR 5
WMD224	Firing Range	12 000ft ALT SEA	Activation by NOTAM
WMR225	RMAF Helicopter Training Area	3 500ft ALT GND	Permanently Active as in ENR 5
WMR226	RMAF Helicopter Training Area	2 000ft ALT GND	Permanently Active as in ENR 5
WMD227	Radar Bombing Range	10 000ft ALT SEA	Activation by NOTAM
WMP228	Sultan's Palace	5 000ft ALT GND	Permanently Active as in ENR 5
WMR229	Helicopter Operations	1 500ft ALT GND	Permanently Active as in ENR 5
WMD230	Artillery Firing Range	2 000ft ALT GND	Permanently Active as in ENR 5
WMD231	Artillery Firing Range	2 000ft ALT GND	Permanently Active as in ENR 5

**SPECIAL NOTE :-**

**1. WEATHER BALLOONS**

BALLOONS WILL BE RELEASED FOR MET OBSERVATION AT THE CENTRE FOR CLIMATE RESEARCH SINGAPORE, UPPER AIR OBSERVATORY (012025N 1035317E), BEARING 244° MAG AND DISTANCE 1.5NM FROM SOUTHERN END OF PAYA LEBAR RWY 02.

(i) BALLOONS WILL BE RELEASED DAILY AT 2330UTC AND 1040UTC. CUT-OFF TIMINGS FOR THE RELEASE ARE AT 0030UTC AND 1230UTC RESPECTIVELY. RATE OF ASCENT IS 320M PER MIN. MAX HGT OF BALLOON 115 000FT (35 000M). THE BALLOON, UNCOLOURED AND 162CM IN DIAMETER, IS ATTACHED WITH RADIOSONDE EQUIPMENT. IT WILL BURST 1.5 TO 2HRS AFTER RELEASE AND RADIOSONDE EQUIPMENT WILL DECSEND WITHIN 60NM RADIUS.

(ii) A BALLOON WILL BE RELEASED BETWEEN 2330UTC AND 0030UTC ON EITHER THE 3rd OR 4th WEEK OF THE MONTH. RATE OF ASCENT IS 320M PER MIN. MAX HGT OF BALLOONS IS 115 000FT (35 000M). THE BALLOON, UNCOLOURED AND 191CM IN DIAMETER, IS ATTACHED WITH OZONESONDE/RADIOSONDE EQUIPMENT AND PARACHUTE. IT WILL BURST 1.5 TO 2HR AFTER RELEASE.

**2. AEROMODELLING AND KITE FLYING**

**(A) GENERAL WARNING**

- i) PILOTS FLYING AT LOW ALTITUDES SHOULD WATCH OUT FOR POSSIBLE HAZARDS SUCH AS MODEL AIRCRAFT AND KITES, ESPECIALLY WHEN FLYING NEAR PARKS AND OPEN GROUND.
- ii) THE LOCATION OF SOME OF THE PARKS IN SINGAPORE WHERE KITE AND AERO MODEL FLYING MAY OCCUR ARE SHOWN ON ENR 3.4-5. PILOTS SHOULD NOTE THAT THE CHART AT ENR 3.4-5 DOES NOT SHOW ALL THE PARKS IN SINGAPORE AND THAT HAZARDS SUCH AS KITE FLYING AND AERO MODEL FLYING MAY TAKE PLACE AT PARKS AND OPEN GROUND NOT INDICATED IN ENR 3.4-5.
- iii) ACCORDING TO THE SINGAPORE AIR NAVIGATION ORDER, 1985, KITE FLYING AND AERO MODEL FLYING ARE NOT PERMITTED ABOVE 200ft OR WITHIN 5km OF AN AERODROME. HOWEVER, PILOTS ARE ADVISED TO LOOK OUT FOR SUCH HAZARDS AT ALL TIMES AS MEMBERS OF THE PUBLIC MAY INADVERTENTLY FLY KITES OR AERO MODELS ABOVE THE HGT OF 200ft OR WITHIN 5km OF AN AERODROME.

\* In Transit Channel

\* AEROBATICS IS PROHIBITED IN LIGHT AIRCRAFT TRAINING AREAS A, B and C.