

GEN 3.4 COMMUNICATION SERVICES

3.4.1 RESPONSIBLE SERVICE

3.4.1.1 The Civil Aviation Authority of Singapore (CAAS) is responsible for the provision of telecommunication and navigation facility services in Singapore.

3.4.1.2 Enquiries, suggestions or complaints regarding any telecommunication and navigation facility services should be referred to the Director-General of Civil Aviation.

Post:

Director-General of Civil Aviation
Civil Aviation Authority of Singapore
60 Airport Boulevard, #04-01, Changi Airport Terminal 2
Singapore 819643

Tel: (65) 65421122

Fax: (65) 65421231

AFS: WSSSYAYX

3.4.1.3 The service is provided in accordance with the provisions contained in the following ICAO documents:

Annex 10	– <i>Aeronautical Telecommunications</i>
Doc 8400	– <i>Procedures for Air Navigation Services - ICAO Abbreviations and Codes (PANS-ABC)</i>
Doc 8585	– <i>Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services</i>
Doc 7030	– <i>Regional Supplementary Procedures</i>
Doc 7910	– <i>Location Indicators</i>
Doc 9880	– <i>Manual on Detailed Technical Specifications for the Aeronautical Telecommunications Network (ATN) using ISO / OSI standards and protocols</i>

3.4.1.4 Differences to these provisions are detailed in subsection GEN 1.7.

3.4.2 AREA OF RESPONSIBILITY

3.4.2.1 Communication services are provided for the entire SINGAPORE FIR.

3.4.2.2 For the following airspace within Jakarta FIR, aeronautical telecommunication services (CNS) will be jointly provided by Indonesia and Singapore:

The area bounded by 031727N 1052959E 012450N 1061648E 001030N 1045656E 000000N 1050340E 000000N 1044330E thence around the arc of a circle radius 90 NM centred on 011324N 1035124E to 013430N 1022353E 011300N 1033000E 011408N 1033142E 011200N 1033900E 011046N 1034015E 010800N 1034500E 011500N 1040000E 011800N 1043000E 012921N 1043441E 011947N 1044606E 021838N 1052205E 023641N 1051311E 024348N 1050854E 025010N 1051210E 031453N 1052619E 031727N 1052959E excluding the Tanjungpinang Terminal Control Area (TMA) and Control Zone (CTR).

Vertical limit: SFC to FL370

3.4.3 TYPES OF SERVICE

3.1 Radio navigation services

3.1.1 The following types of radio aids to navigation are available:

LF/MF non-directional beacon (NDB)
Instrument landing system (ILS)
Doppler VHF omni-directional radio range (DVOR)
Distance measuring equipment (DME)
Long range primary and secondary surveillance radar
Primary and secondary approach radar
Airport surface detection equipment (ASDE)

3.2 Voice/data link services

3.2.1 *Voice service*

The aeronautical stations maintain a continuous watch on their stated frequencies during the published hours of service unless otherwise notified.

An aircraft should normally communicate with the air-ground control radio station that exercises control in the area in which the aircraft is flying. Aircraft should maintain a continuous watch on the appropriate frequency of the control station and should not abandon watch, except in an emergency, without informing the control radio station.

3.2.2 Enroute Communications Organisation

- a) The radio frequencies for enroute communications are listed in subsection ENR 2.1
- b) The Singapore HF network provides an umbrella communication coverage for the FIR and may be contacted if communication cannot be maintained on the primary channel.
- c) Aircraft approaching or departing from an airport is required to communicate with that airport on the appropriate surface movement, tower or approach control frequency.
- d) ADS-C and / or CPDLC services are available to suitably equipped aircraft operating outside radar cover and not in ADS-B exclusive airspace within the Singapore FIR. The hours when ADS-C and CPDLC services are available and the logon requirements are listed in ENR 2.1. Full details of the services are published in ENR 1.1 paragraphs 9.1 to 9.6.

3.2.3 Data link Service

The messages to be transmitted over the Aeronautical Fixed Service (AFS) are accepted only if:

- a) the messages satisfy the requirements of ICAO Annex 10, Volume II, Chapter 3, paragraph 3.3;
- b) the messages are prepared in the form specified in ICAO Annex 10;
- c) the text of an individual message does not exceed 1800 characters.

3.2.4 General Aircraft Operating Agency Messages

General aircraft operating agency messages (with priority indicator "KK") are only accepted for transmission to countries which have agreed to accept Class B2 traffic. Details of telecommunication charges for Class B2 traffic to countries with which Singapore has agreement for handling of such traffic are given below:

List of States/Regions to which Class B2 traffic will be accepted (rate of charge will be S\$0.30 per word):

Australia, Brunei, Hong Kong, Indonesia (AFS stations), Kampuchea Democratic, Malaysia (Peninsular Malaysia, Sabah and Sarawak), Myanmar, Netherlands, New Zealand, Philippines (Manila), Singapore, Taiwan, Thailand and Vietnam.

3.3 Broadcasting service

3.3.1 The following broadcasts are available for the use of aircraft in flight:

- a) HF RTF Volmet Broadcasts (page GEN 3.5-7 refers)
- b) VHF ATIS Broadcasts (page GEN 3.4-3 refers)

COMPUTERISED ATIS BROADCASTS			
Station	Callsign Identification	Frequency MHz	Hours UTC
1	2	3	4
SINGAPORE / Singapore Changi	Changi Airport Departure Information	128.6	H24 (broadcasting with half hourly updated MET INFO)
	Changi Airport Arrival Information	128.025	
SINGAPORE/ Seletar	Seletar Airport Information	128.425	H24 (broadcasting with hourly updated MET INFO)
Remarks			
<p>Alphabetical Reference All ATIS broadcasts will include Alphabetical Reference for identification in the ATIS message.</p> <p>Updating of Data H + 00 to H + 10 and H + 30 to H + 40.</p> <p>Range 100NM</p> <p>Height A110</p> <p>Power 50W</p> <p>Note to D-ATIS users Pilots are advised to use AEEC 623 format with Cyclic Redundancy Check (CRC) for D-ATIS service to ensure data integrity. For aircraft formats without CRC (e.g. AEEC 620 format or AEEC 623 format without CRC), pilots are advised to verify the D-ATIS message received with the voice broadcasted ATIS message or to use only voice broadcasted ATIS service.</p>			

ATIS BROADCASTS			
<i>Station</i>	<i>Callsign Identification</i>	<i>Freq MHz</i>	<i>Hours UTC</i>
SINGAPORE/ Paya Lebar	Paya Lebar Information	148.90	Sun-Mon to Thu-Fri between 2300-1100; Fri-Sat between 2300-0500. During public holidays and outside the above times prior permission required from RSAF HQ via Paya Lebar Ops.
SINGAPORE/ Tengah	Tengah Information	142.55	Sun-Mon to Thu-Fri between 2300-1100; Fri-Sat between 2300-0500. During public holidays and outside the above times prior permission required from RSAF HQ via Tengah Ops.
SINGAPORE/ Sembawang	Sembawang Information	149.25	Sun-Mon to Thu-Fri between 2300-1100; Fri-Sat between 2300-0500. During public holidays and outside the above times prior permission required from RSAF HQ via Sembawang Ops.

3.4 Language Used

The language used is English.

3.5 Obtaining Detailed Information

3.5.1 Details of the various facilities available for the en-route traffic can be found in section ENR 4.

3.5.2 Details of the facilities available at the individual aerodromes can be found in the relevant sections of AD. In cases where a facility is serving both the en-route traffic and the aerodromes, details are given in the relevant sections of ENR and AD.

3.6 REQUIREMENTS AND CONDITIONS

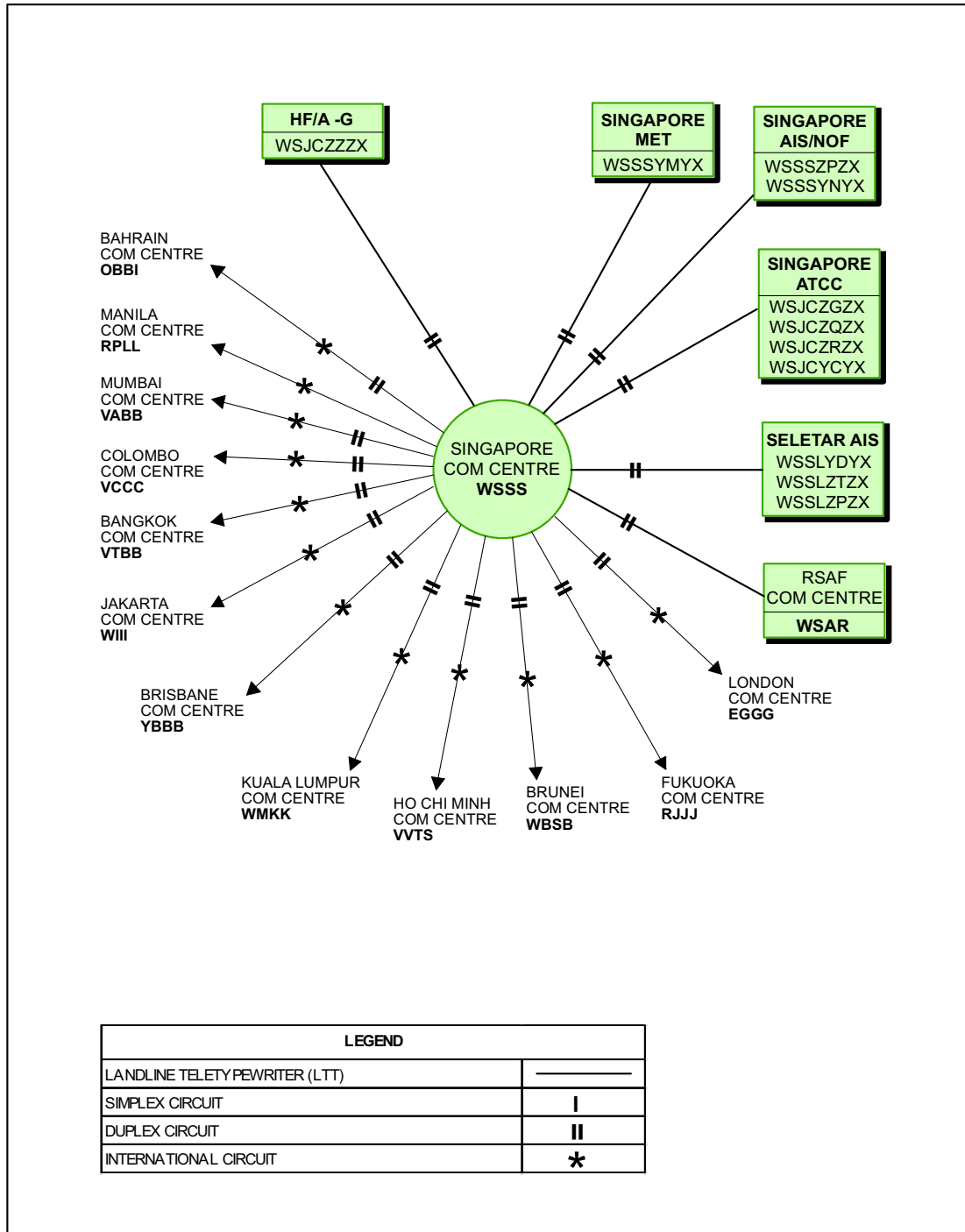
3.6.1 The requirements of the Civil Aviation Authority of Singapore and the general conditions under which the communication services are available for international use, as well as the requirements for the carriage of radio equipment, are contained in the Air Navigation Order of Singapore.

4 MISCELLANEOUS

NIL

AERONAUTICAL FIXED SERVICES - INTERNATIONAL AND DOMESTIC CIRCUITS										
STATION			CORRESPONDENT		TYPE OF CHANNEL	RADIO FREQUENCIES		TYPE OF TRAFFIC	HOURS (UTC)	REMARKS
NAME	LOCATION INDICATOR	CALLSIGN FOR RADIO CIRCUITS	NAME	CALLSIGN FOR RADIO CIRCUITS		TRANS KHZ	REC KHZ			
1	2	3	4	5	6	7	8	9	10	11
SINGAPORE	WSSS		BANGKOK		LTTdx			AFS	H24	
	WSSS		BAHRAIN		LTTdx			AFS	H24	
	WSSS		BRUNEI		LTTdx			AFS	H24	
	WSSS		COLOMBO		LTTdx			AFS	H24	
	WSSS		HO CHI MINH		LTTdx			AFS	H24	
	WSSS		JAKARTA		LTTdx			AFS	H24	
	WSSS		KUALA LUMPUR		LTTdx			AFS	H24	
	WSSS		LONDON		LTTdx			AFS	H24	
	WSSS		MANILA		LTTdx			AFS	H24	
	WSSS		BRISBANE		LTTdx			AFS	H24	
	WSSS		FUKUOKA		LTTdx			AFS	H24	
	WSSS		MUMBAI		LTTdx			AFS	H24	
SINGAPORE ACC			JOHOR BAHRU KUALA LUMPUR		LTTdx			ATS	H24	Direct ATS Speech Circuit
			KUCHING		LTTdx			ATS	During aerodrome hours of operation	Direct ATS Speech Circuit
			KOTA KINABALU		LTTdx			ATS	H24	Direct ATS Speech Circuit
			JAKARTA		LTTdx			ATS	H24	4-party Speech Circuit
			PEKAN BARU		LTTdx			ATS	0001-1100	4-party Speech Circuit
			MANILA		LTTdx			ATS	H24	Direct ATS Speech Circuit
			MEDAN		LTTdx			ATS	2300-1400	4-party Speech Circuit
		BATAM		LTTdx			ATS	0100-0800	Direct ATS Speech Circuit	
Note: For local circuits connecting different offices to a Com Centre, see diagrams GEN 3.4-7 and 3.4-9										

**AERONAUTICAL FIXED SERVICES -
AERONAUTICAL FIXED TELECOMMUNICATIONS NETWORK (AFTN)
AIR TRAFFIC SERVICES (ATS) MESSAGE HANDLING SERVICES (AMHS)**



AERONAUTICAL FIXED SERVICES - TELEPHONE

