GEN (GENERAL)
GEN 0
GEN 0.1 PREFACE

1 Civil Aviation Authority

The Aeronautical Information Publication is published under the authority of the South African Civil Aviation Authority.

2 Applicable ICAO documents

The AIP is prepared in accordance with the Standards and Recommended Practices (SARP's) of Annex 15 to the Convention on International Civil Aviation, the Aeronautical Information Services Manual (ICAO Doc 8126) and the, Procedures for Air Navigation Services - Aeronautical Information Management (ICAO Doc 10066). Charts contained in the AIP are produced in accordance with Annex 4 to the Convention on International Civil Aviation and the Aeronautical Chart Manual (ICAO Doc 8697). Significant differences from ICAO Standards, Recommended Practices and Procedures are given in subsection
GEN 1.7.

3 Publication Media

3.1 The South African Aeronautical Information Publication (AIP) is available in printed format as well as online.The printed version is available from the South African Civil Aviation Authority, Section Aeronautical Information Services, Publications office. Contact details: +27 860 267 435, email: ais@caa.co.za

A PDF version of the AIP is available on the SACAA web-site at www.caa.co.za/Industry/ Aeronautical Information.

4 The AIP structure and established regular amendment interval

4.1 The AIP structure and regular amendment intervals

The AIP forms part of the Aeronautical Information Product, details of which are given in subsection GEN 3. 1. The principal AIP structure is shown in graphic form after paragraph 4 below. The AIP is made up of three Parts, General (GEN),
En route (ENR) and Aerodromes (AD), each divided into sections and subsections as applicable, containing various types of information subjects.

4.1.1 Part I - General (GEN)

Part 1 consists of five sections containing information as briefly described hereafter.

GEN 0. Preface; Record of AIP Amendments; Record of AIP Supplements; Checklist of AIP pages; List of hand amendments to the AIP; and the Table of Contents to Part 1.

GEN 1. National regulations and requirements - Designated authorities; Entry, transit and departure of aircraft; Entry, transit and departure of passengers and crew; Entry, transit and departure of cargo; Aircraft instruments, equipment and flight documents; Summary of national regulations and international agreements/ conventions; and Differences from ICAO Standards, Recommended Practices and Procedures.

GEN 2. Tables and codes - Measuring system, aircraft markings, holidays; Abbreviations used in AIS publications; Chart symbols; Location indicators; List of radio navigation aids; Conversion tables; and Sunrise/Sunset tables.

GEN 3. Services - Aeronautical information services; Aeronautical charts; Air traffic services; Communication services; Meteorological services; and Search and rescue.

GEN 4. Charges for aerodromes/heliports and air navigation services - Aerodrome/heliport charges; and Air navigation services charges.

4.1.2 **Part 2 - En route (ENR)**

Part 2 consists of seven sections containing information as briefly described hereafter.

ENR 0. Preface; Record of AIP Amendments; Record of AIP Supplements; Checklist of AIP pages; List of hand amendments to the AIP; and the Table of Contents to Part 2.

ENR 1. General rules and procedures - General rules; Visual flight rules; Instrument flight rules; ATS airspace classification; Holding, approach and departure procedures; Radar services and procedures; Altimeter setting procedures; Regional supplementary procedures; Air traffic flow management; Flight planning; Addressing of flight plan messages; Interception of civil aircraft; Unlawful interference; and Air traffic incidents.

ENR 2. Air traffic services airspace - Detailed description of Flight information regions (FIR); Upper flight information regions (UIR); Terminal control areas (TMA); and Other regulated airspace.

ENR 3. ATS routes - Detailed description of Lower ATS routes; Upper ATS routes; Area navigation routes; Helicopter routes; Other routes; and En route holding.

Note - Other types of routes which are specified in connection with procedures for traffic to and from aerodromes/heliports are described in the relevant sections and subsections of Part 3 - Aerodromes.

ENR 4. Radio navigation aids/systems - Radio navigation aids - en-route; Special navigation systems; Name-code designators for significant points; and Aeronautical ground lights - en-route.

ENR 5. Navigation warnings - Prohibited, restricted and danger areas; Military exercise and training areas; Other activities of a dangerous nature; Air navigation obstacles - en-route; Aerial sporting and recreational activities; and Bird migration and areas with sensitive fauna.

ENR 6. En-route charts - En-route Chart - ICAO and index charts.

4.1.3 **Part 3 - Aerodromes (AD)**

Part 3 consists of four sections containing information as briefly described hereafter.

AD 0. Preface; Record of AIP Amendments; Record of AIP Supplements; Checklist of AIP pages; List of hand amendments to the AIP; and the Table of Contents to Part 3.

AD 1. Aerodromes/Heliports - Introduction - Aerodrome/heliport availability; Rescue and fire fighting services and Snow plan; Index to aerodromes and heliports; and Grouping of aerodromes/heliports.

AD 2. Aerodromes - Detailed information about aerodromes, including helicopter landing areas, if located at the aerodromes, listed under 24 subsections.

AD 3. Heliports - Detailed information about heliports (not located at aerodromes), listed under 23 subsections.

4.2 Regular amendment interval

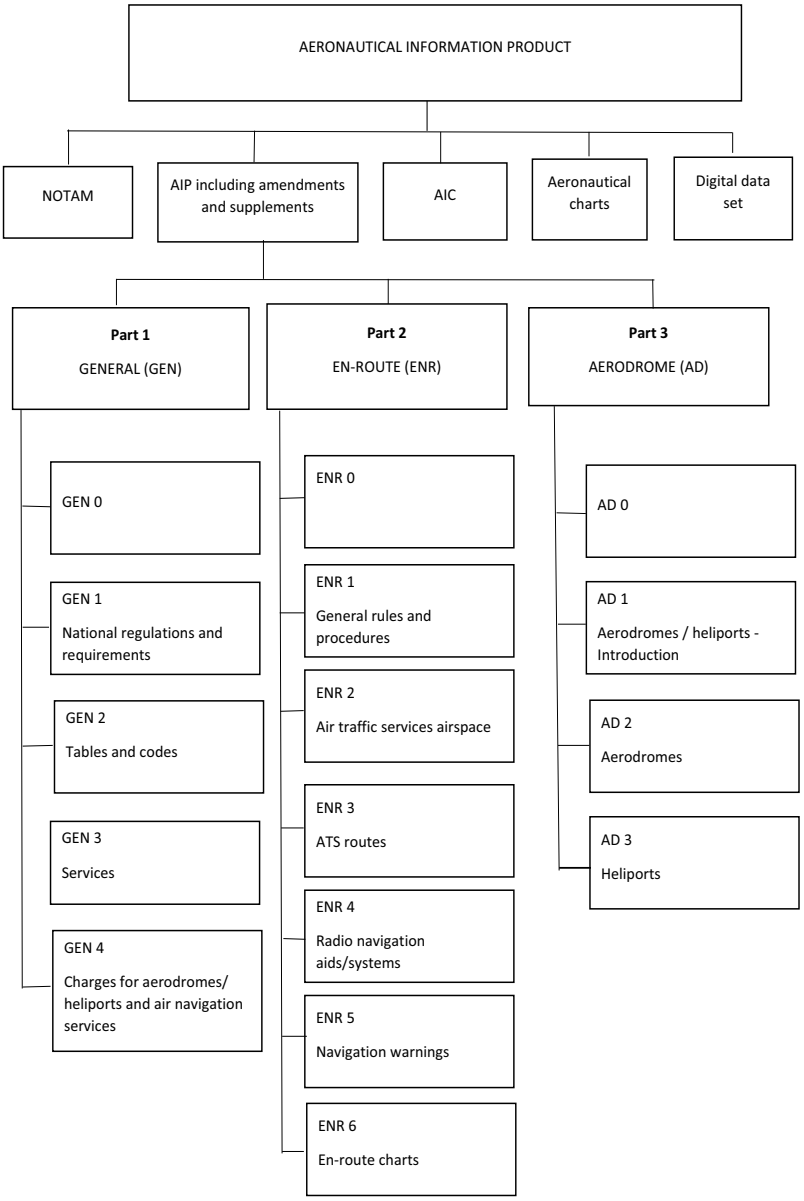
Regular amendments to the AIP will be issued once every three months. The publication dates will be on:-

15 January, 15 April, 15 July, 15 October

5 Service to contact in case of detected AIP errors.

In the compilation of the AIP, care has been taken to ensure that the information contained therein is accurate and complete. Any errors and omissions which may nevertheless be detected, as well as any correspondence concerning the Aeronautical Information Product, should be referred to:

AIS Headquarters:
South African Civil Aviation Authority Aeronautical Information Services
Private Bag x 73
HALFWAY HOUSE
1685
Republic of South Africa
TEL: +27 860 267 435
Website: www.caa.co.za


AERONAUTICAL INFORMATION PRODUCT
NOTAM
AIP including amendments and supplements
AIC
Aeronautical charts
Digital data set
Part 1
GENERAL (GEN)
Part 2
EN-ROUTE (ENR)
Part 3
AERODROME (AD)
GEN 0
GEN 1
National regulations and requirements
GEN 2
Tables and codes
GEN 3
Services
GEN 4
Charges for aerodromes/ heliports and air navigation services
ENR 0
ENR 1
General rules and procedures
ENR 2
Air traffic services airspace
ENR 3
ATS routes
ENR 4
Radio navigation aids/systems
ENR 5
Navigation warnings
ENR 6
En-route charts
AD 0
AD 1
Aerodromes / heliports - Introduction
AD 2
Aerodromes
AD 3
Heliports

GEN 0.2 Record of AIP amendments

AIP AMENDMENT				AIRAC AIP AMENDMENT			
NR/Year	*Publication date*	*Date inserted*	*Inserted by*	*NR/Year*	*Publication date*	*Effective date*	*Inserted by*
A001	APR 97						
A002	JUL 97						
A003	OCT 97						
A004	APR 98						
A005	JUL 98						
A006	OCT 98						
A007	JAN 99						
A008	APR 99						
A009	JUL 99						
A010	OCT 99						
A011	JAN 00						
A012	APR 00						
A013	JUL 00						
A014	OCT 00						
A015	JAN 01						
A016	APR 01						
A017	JUL 01						
A018	OCT 01						
A019	JAN 02						
A020	APR 02						
A021	JUL 02						
A022	OCT 02						
A023	JAN 03						
A024	APR 03						
A025	JUL 03						
A026	OCT 03						
A027	JAN 04						
A028	APR 04						
A029	JUL 04						

AIP AMENDMENT					AIRAC AIP AMENDMENT			
NR/Year	*Publication date*	*Date inserted*	*Inserted by*		*NR/Year*	*Publication date*	*Effective date*	*Inserted by*
A030	OCT 04							
A031	JAN 05							
A032	APR 05							
A033	JUL 05							
A034	OCT 05							
A035	JAN 06							
A036	APR 06							
A037	15 JUL 06							
A038	15 OCT 06							
A039	15 JAN 07							
A040	15 APR 07							
A041	15 JUL 07							
A042	15 OCT 07							
1/08	15 JAN 08							
2/08	15 APR 08							
3/08	15 JUL 08							
4/08	15 OCT 08							
1/09	15 JAN 09							
2/09	15 APR 09							
3/09	15 JUL 09							
4/09	15 OCT 09							
1/10	15 JAN 10							
2/10	15 APR 10							
3/10	15 JUL 10							
4/10	15 OCT 10							
1/11	15 JAN 11							
2/11	15 APR 11							
3/11	15 JUL 11							
4/11	15 OCT 11							
1/12	15 JAN 12							
2/12	15 APR 12							

AIP AMENDMENT			
NR/Year	*Publication date*	*Date inserted*	*Inserted by*
3/12	15 JUL 12		
4/12	15 OCT 12		
1/13	15 JAN 13		
2/13	15 APR 13		
3/13	15 JUL 13		
4/13	15 OCT 13		
1/14	15 JAN 14		
2/14	15 APR 14		
3/14	15 JUL 14		
4/14	15 OCT 14		
1/15	15 JAN 15		
2/15	15 APR 15		
3/15	15 JUL 15		
4/15	15 OCT 15		
1/16	15 JAN 16		
2/16	15 APR 16		
3/16	15 JUL 16		
4/16	15 OCT 16		
1/17	15 JAN 17		
2/17	15 APR 17		
3/17	15 JUL 17		
4/17	15 OCT 17		
1/18	15 JAN 18		
2/18	15 APR 18		
3/18	15 JUL 18		
4/18	15 OCT 18		
1/19	15 JAN 19		
2/19	15 APR 19		
3/19	15 JUL 19		
4/19	15 OCT 19		
1/20	15 JAN 20		

AIRAC AIP AMENDMENT			
NR/Year	*Publication date*	*Effective date*	*Inserted by*

AIP AMENDMENT			
NR/Year	*Publication date*	*Date inserted*	*Inserted by*
2/20	15 APR 20		
3/20	15 JUL 20		
4/20	15 OCT 20		
1/21	15 JAN 21		
2/21	15 APR 21		
3/21	15 JUL 21		
4/21	15 OCT 21		
1/22	15 JAN 22		
2/22	15 APR 22		
3/22	15 JUL 22		
4/22	15 OCT 22		
1/23	15 JAN 23		
2/23	15 APR 23		
3/23	15 JUL 23		
4/23	15 OCT 23		
1/24	15 JAN 24		
2/24	15 APR 24		
3/24	15 JUL 24		
4/24	15 OCT 24		
1/25	15 JAN 25		
2/25	15 APR 25		
3/25	15 JUL 25		
4/25	15 OCT 25		
1/26	15 JAN 26		
2/26	15 APR 26		
3/26	15 JUL 26		
4/26	15 OCT 26		

AIRAC AIP AMENDMENT			
NR/Year	*Publication date*	*Effective date*	*Inserted by*

GEN 0.3 RECORD OF AIP SUPPLEMENTS

NR/ Year	*Subject*	*AIP section(s) affected*	*Period of validity*	*Cancellation record*
S063/22	FAPE Name change		11 AUG 2022 - PERM	
S064/22	FAEL Name change		11 AUG 2022 - PERM	
S098/24	Interim Kruger Radar Services		04 NOV 2024 - 04 NOV 2026	
S019/25	NAVAID Replacement Programme		20 MAR 2025 - 30 SEP 2027	
S041/25	Charts		15 MAY 2025 - PERM	
S062/25	FARB Facilities		10 JUL 2025 - 21 JAN 2026	
S070/25	AIMU Facilities		07 AUG 2025 - 18 FEB 2026	
S072/25	FAKM Facilities		07 AUG 2025 - 18 FEB 2026	
S073/25	FAWK Facilities		07 AUG 2025 - 18 FEB 2026	
S074/25	FALM Facilities		07 AUG 2025 - 18 FEB 2026	
S076/25	FALS Facilities		07 AUG 2025 - 18 FEB 2026	
S077/25	FAGM Facilities		07 AUG 2025 - 18 FEB 2026	
S080/25	FAPE Facilities		04 SEP 2025 - 18 MAR 2026	
S081/25	FAHS Facilities		04 SEP 2025 - 18 MAR 2026	
S082/25	FALW Facilities		04 SEP 2025 - 18 MAR 2026	

NR/ Year	*Subject*	*AIP section(s) affected*	*Period of validity*	*Cancellation record*
S084/25	Central Summer Gliding Area		01 OCT 2025 - 15 MAR 2026	
S089/25	FACT Facilities		02 OCT 2025 - 15 APR 2026	
S091/25	Charts		02 OCT 2025 - PERM	
S092/25	FASK Facilities		02 OCT 2025 - 15 APR 2026	
S093/25	FAPN Facilities		02 OCT 2025 - 15 APR 2026	
S094/25	FALA Facilities		02 OCT 2025 - 15 APR 2026	
S095/25	FAPM Facilities		02 OCT 2025 - 15 APR 2026	
S096/25	FAPP RWY Rehabilitation		27 OCT 2025 - 31 JUL 2026	
S097/25	FAVV Facilities		02 OCT 2025 - 15 APR 2026	
S100/25	FACT RWY and Taxilane Rehabilitation		02 OCT 2025 - 18 MAY 2026	
S102/25	FALE Facilities		30 OCT 2025 - 15 APR 2026	
S106/25	FAMM Facilities		27 NOV 2025 - 13 MAY 2026	
S109/25	Hand Amendments to Charts		27 NOV 2025 - 13 MAY 2026	
S110/25	Charts		27 NOV 2025 - PERM	
S111/25	RNAV Routes and Waypoints		27 NOV 2025 - PERM	
S112/25	Letdown Procedure		27 NOV 2025 - PERM	

GEN 0.4 CHECKLIST OF AIP PAGES

PAGE	DATE	PAGE	DATE
GEN - (General)		0.4-21	15 JAN 26
GEN 0		0.4-22	15 JAN 26
0.1-1	15 OCT 25	0.4-23	15 JAN 26
0.1-2	15 OCT 25	0.4-24	15 JAN 26
0.1-3	15 OCT 25	0.4-25	15 JAN 26
0.1-4	15 OCT 25	0.4-26	15 JAN 26
0.2-1	15 APR 16	0.4-27	15 JAN 26
0.2-2	15 APR 16	0.4-28	15 JAN 26
0.2-3	15 JAN 26	0.5-1	15 OCT 23
0.2-4	15 JAN 26	0.5-2	15 OCT 23
0.3-1	15 JAN 26	0.5-3	15 OCT 23
0.3-2	15 JAN 26	0.5-4	15 OCT 23
0.4-1	15 JAN 26	0.5-5	15 JAN 24
0.4-2	15 JAN 26	0.5-6	15 JAN 24
0.4-3	15 JAN 26	0.5-7	15 JAN 24
0.4-4	15 JAN 26	0.5-8	15 JAN 24
0.4-5	15 JAN 26	0.6-1	15 JAN 25
0.4-6	15 JAN 26	0.6-2	15 JAN 25
0.4-7	15 JAN 26	0.6-3	15 JAN 25
0.4-8	15 JAN 26	0.6-4	15 JAN 25
0.4-9	15 JAN 26	0.6-5	15 JAN 25
0.4-10	15 JAN 26	**GEN 1**	
0.4-11	15 JAN 26	1.1-1	15 APR 24
0.4-12	15 JAN 26	1.1-2	15 APR 24
0.4-13	15 JAN 26	1.1-3	15 OCT 16
0.4-14	15 JAN 26	1.2-1	15 JUL 24
0.4-15	15 JAN 26	1.2-2	15 JUL 24
0.4-16	15 JAN 26	1.2-3	15 OCT 25
0.4-17	15 JAN 26	1.2-4	15 OCT 25
0.4-18	15 JAN 26	1.2-5	15 JUL 24
0.4-19	15 JAN 26	1.2-6	15 JUL 24
0.4-20	15 JAN 26	1.3-1	15 OCT 22

PAGE	DATE	PAGE	DATE
1.3-2	15 OCT 22	1.7-24	15 OCT 23
1.3-3	15 OCT 22	1.7-25	15 OCT 23
1.3-4	15 OCT 22	**GEN 2**	
1.4-1	15 JAN 15	2.1-1	15 APR 16
1.4-2	15 JAN 15	2.1-2	15 APR 16
1.5-1	15 JAN 15	2.1-3	15 JAN 26
1.6-1	15 JUL 19	2.1-4	15 JAN 26
1.6-2	15 JUL 19	2.2-1	15 JAN 20
1.6-3	15 JUL 19	2.2-2	15 JAN 20
1.6-4	15 JUL 19	2.2-3	15 JAN 20
1.7-1	15 JAN 23	2.2-4	15 JAN 20
1.7-2	15 JAN 23	2.2-5	15 JAN 23
1.7-3	15 JAN 23	2.2-6	15 JAN 23
1.7-4	15 JAN 23	2.2-7	15 JAN 25
1.7-5	15 OCT 23	2.2-8	15 JAN 25
1.7-6	15 OCT 23	2.2-9	15 JAN 25
1.7-7	15 OCT 23	2.2-10	15 JAN 25
1.7-8	15 OCT 23	2.2-11	15 JAN 25
1.7-9	15 OCT 23	2.2-12	15 JAN 25
1.7-10	15 OCT 23	2.2-13	15 JAN 25
1.7-11	15 OCT 23	2.2-14	15 JAN 25
1.7-12	15 OCT 23	2.2-15	15 APR 25
1.7-13	15 OCT 23	2.2-16	15 APR 25
1.7-14	15 OCT 23	2.2-17	15 APR 25
1.7-15	15 OCT 23	2.2-18	15 APR 25
1.7-16	15 OCT 23	2.2-19	15 APR 25
1.7-17	15 OCT 23	2.2-20	15 APR 25
1.7-18	15 OCT 23	2.2-21	15 APR 25
1.7-19	15 OCT 23	2.2-22	15 APR 25
1.7-20	15 OCT 23	2.2-23	15 APR 25
1.7-21	15 OCT 23	2.2-24	15 APR 25
1.7-22	15 OCT 23	2.2-25	15 APR 25
1.7-23	15 OCT 23	2.3-1	15 JUL 19

PAGE	DATE	PAGE	DATE
2.3-2	15 JUL 19	2.4-10	15 JAN 26
2.3-3	15 JUL 19	2.5-1	15 OCT 22
2.3-4	15 JUL 19	2.5-2	15 OCT 22
2.3-5	15 JUL 19	2.5-3	15 JAN 26
2.3-6	15 JUL 19	2.5-4	15 JAN 26
2.3-7	15 JUL 19	2.5-5	15 JAN 26
2.3-8	15 JUL 19	2.5-6	15 JAN 26
2.3-9	15 JUL 19	2.5-7	15 JAN 26
2.3-10	15 JUL 19	2.5-8	15 JAN 26
2.3-11	15 JUL 19	2.6-1	15 JUL 17
2.3-12	15 JUL 19	2.6-2	15 JUL 17
2.3-13	15 JUL 19	2.7-1	15 JUL 17
2.3-14	15 JUL 19	2.7-2	15 JUL 17
2.3-15	15 JUL 19	2.7-3	15 JUL 17
2.3-16	15 JUL 19	2.7-4	15 JUL 17
2.3-17	15 JUL 19	2.7-5	15 JUL 17
2.3-18	15 JUL 19	**GEN 3**	
2.3-19	15 JUL 19	3.1-1	15 OCT 25
2.3-20	15 JUL 19	3.1-2	15 OCT 25
2.3-21	15 JUL 19	3.1-3	15 OCT 25
2.3-22	15 JUL 19	3.1-4	15 OCT 25
2.3-23	15 JUL 19	3.1-5	15 OCT 25
2.3-24	15 JUL 19	3.1-6	15 OCT 25
2.3-25	15 JUL 19	3.1-7	15 JAN 26
2.4-1	15 JUL 25	3.1-8	15 JAN 26
2.4-2	15 JUL 25	3.2-1	15 JAN 24
2.4-3	15 JUL 25	3.2-2	15 JAN 24
2.4-4	15 JUL 25	3.2-3	15 JAN 24
2.4-5	15 JAN 26	3.2-4	15 JAN 24
2.4-6	15 JAN 26	3.2-5	15 JAN 26
2.4-7	15 JAN 26	3.2-6	15 JAN 26
2.4-8	15 JAN 26	3.2-7	15 JAN 26
2.4-9	15 JAN 26	3.2-8	15 JAN 26

PAGE	DATE	PAGE	DATE
3.2-9	15 JAN 26	3.5-6	15 JUL 17
3.2-10	15 JAN 26	3.5-7	15 JUL 17
3.2-11	15 OCT 25	3.5-8	15 JUL 17
3.2-12	15 OCT 25	3.5-9	15 OCT 22
3.2-13	15 JAN 26	3.5-10	15 OCT 22
3.2-14	15 JAN 26	3.5-11	15 JUL 17
3.2-15	15 JUL 25	3.5-12	15 JUL 17
3.2-16	15 JUL 25	3.6-1	15 JAN 21
3.2-17	15 APR 18	3.6-2	15 JAN 21
3.3-1	15 JAN 15	3.6-3	15 JAN 21
3.3-2	15 JAN 15	3.6-4	15 JAN 21
3.3-3	15 OCT 22	3.6-5	15 JAN 21
3.3-4	15 OCT 22	3.6-6	15 JAN 21
3.3-5	15 OCT 22	3.6-7	15 JAN 21
3.3-6	15 OCT 22	3.6-8	15 JAN 21
3.3-7	15 JAN 15	3.6-9	15 JUL 23
3.3-8	15 JAN 15	3.6-10	15 JUL 23
3.3-9	15 JAN 15	3.6-11	15 JUL 23
3.4-1	15 OCT 16	3.6-12	15 JUL 23
3.4-2	15 OCT 16	3.6-13	15 JAN 21
3.4-3	15 OCT 16	3.6-14	15 JAN 21
3.4-4	15 OCT 16	3.6-15	15 JAN 21
3.4-5	15 OCT 16	3.6-16	15 JAN 21
3.4-6	15 OCT 16	3.6-17	15 OCT 24
3.4-7	15 OCT 16	3.6-18	15 OCT 24
3.4-8	15 OCT 16	3.6-19	15 OCT 24
3.4-9	15 OCT 16	**GEN 4**	
3.4-10	15 OCT 16	4.1-1	15 JUL 19
3.5-1	15 JUL 17	4.2-1	15 APR 19
3.5-2	15 JUL 17	4.2-2	15 APR 19
3.5-3	15 JUL 17	4.2-3	15 APR 19
3.5-4	15 JUL 17	4.2-4	15 APR 19
3.5-5	15 JUL 17	4.2-5	15 APR 19

PAGE	DATE	PAGE	DATE
4.2-6	15 APR 19	1.3-17	15 JAN 15
4.2-7	15 APR 19	1.3-18	15 JAN 15
ENR - (En-Route)		1.3-19	15 JAN 15
ENR 0		1.3-20	15 JAN 15
0.6-1	15 OCT 25	1.3-21	15 JAN 15
0.6-2	15 OCT 25	1.3-22	15 JAN 15
0.6-3	15 JAN 25	1.3-23	15 JAN 15
0.6-4	15 JAN 25	1.3-24	15 JAN 15
0.6-5	15 JAN 25	1.3-25	15 JUL 23
ENR 1		1.3-26	15 JUL 23
1.1-1	15 JAN 21	1.3-27	15 JAN 15
1.1-2	15 JAN 21	1.3-28	15 JAN 15
1.1-3	15 JAN 21	1.3-29	15 APR 22
1.2-1	15 JAN 24	1.3-30	15 APR 22
1.2-2	15 JAN 24	1.3-31	15 JAN 15
1.2-3	15 JAN 24	1.4-1	15 OCT 18
1.2-4	15 JAN 24	1.4-2	15 OCT 18
1.3-1	15 JAN 15	1.4-3	15 OCT 18
1.3-2	15 JAN 15	1.5-1	15 OCT 22
1.3-3	15 JAN 15	1.5-2	15 OCT 22
1.3-4	15 JAN 15	1.5-3	15 APR 15
1.3-5	15 JAN 15	1.5-4	15 APR 15
1.3-6	15 JAN 15	1.5-5	15 APR 15
1.3-7	15 JAN 15	1.5-6	15 APR 15
1.3-8	15 JAN 15	1.5-7	15 JAN 26
1.3-9	15 JAN 15	1.5-8	15 JAN 26
1.3-10	15 JAN 15	1.5-9	15 APR 24
1.3-11	15 JAN 15	1.5-10	15 APR 24
1.3-12	15 JAN 15	1.5-11	15 APR 24
1.3-13	15 JAN 15	1.5-12	15 APR 24
1.3-14	15 JAN 15	1.5-13	15 APR 24
1.3-15	15 JAN 15	1.5-14	15 APR 24
1.3-16	15 JAN 15	1.5-15	15 JAN 26

PAGE	DATE	PAGE	DATE
1.5-16	15 JAN 26	1.6-4	15 OCT 22
1.5-17	15 JAN 26	1.6-5	15 JUL 22
1.5-18	15 JAN 26	1.6-6	15 JUL 22
1.5-19	15 OCT 25	1.6-7	15 JAN 26
1.5-20	15 OCT 25	1.6-8	15 JAN 26
1.5-21	15 OCT 25	1.6-9	15 JUL 22
1.5-22	15 OCT 25	1.7-1	15 OCT 22
1.5-23	15 OCT 25	1.7-2	15 OCT 22
1.5-24	15 OCT 25	1.7-3	15 OCT 22
1.5-25	15 OCT 25	1.7-4	15 OCT 22
1.5-26	15 OCT 25	1.7-5	15 APR 16
1.5-27	15 OCT 25	1.7-6	15 APR 16
1.5-28	15 OCT 25	1.7-7	15 APR 16
1.5-29	15 OCT 25	1.7-8	15 APR 16
1.5-30	15 OCT 25	1.8-1	15 OCT 16
1.5-31	15 OCT 25	1.8-2	15 OCT 16
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GEN 1 NATIONAL REGULATIONS AND REQUIREMENTS
GEN 1.1 DESIGNATED AUTHORITIES

The authority responsible for civil aviation in the Republic of South Africa is the Civil Aviation Authority.
The requirements for entry and departure of aircraft engaged in international flights, and the standard procedure for clearance of these aircraft at all international airports, are given for the information and guidance of operators conducting international flights.
The postal and telegraphic addresses of the designated authorities concerned with the entry, transit and departure of international air navigation, and for the collection of fees there from, are as follows:-

1 Civil Aviation

Postal address:
Civil Aviation Authority
Private Bag X73
Halfway House
Midrand
1685
Republic of South Africa

Aeronautical Fixed Service: FAHQYAYX
Telephone: +27 11 545 1000
Telefax: +27 11 545 1465
Website: www.caa.co.za
E-mail: mail@caa.co.za

2 Meteorology

Postal Address:
The Chief Executive Officer
South African Weather Services
Private Bag X097
Pretoria
0001
Republic of South Africa

Aeronautical Fixed Service: FAPRYMYZ
Telephone: +27 12 367 6000
Telefax: +27 12 367 6200
E-mail: bheki.mkhize@weathersa.co.za

3 Customs

Postal Address:
Revenue Services
General Manager: Customs
Private Bag X923

Pretoria
0001
Republic of South Africa

Telephone: +27 12 422 4000 or +27 80 000 7277
Telefax: +27 12 422 6848 or +27 12 422 5181
Website: www.sars.gov.za

4 Immigration

Postal Address:
Department of Home Affairs, Chief Directorate: Immigration Services
Private Bag X114
Pretoria
0001
Republic of South Africa

Telegraphic address: INTERIOR
Telephone: +27 12 810 8011
Telefax: +27 12 325 3351

5 Health

Postal Address:
The Director-General: Health
Private Bag X828
Pretoria
0001
Republic of South Africa

Telephone: +27 12 312 0000
Telefax: +27 12 326 4395

6 En-route and aerodrome/heliport charges

Postal Address:
Chief Financial Officer
Air Traffic and Navigation Services Company SOC LTD
Private Bag X15
Kempton Park
1620
Republic of South Africa

Telephone: +27 11 607 1000
Telefax: +27 11 607 1570

Postal Address:
Airports Company Limited
P.O.Box 75480
Garden view
2047
Republic of South Africa

Telephone: +27 11 453 9116
Telefax: +27 11 453 9353/4

7 Agricultural quarantine

Postal Address:
Director-General: Agriculture
Private Bag X250
Pretoria
0001
Republic of South Africa

Telegraphic Address: LANDBOU
Telephone: +27 12 319 6000
Telefax: +27 12 319 6370

8 Aircraft accidents investigation

Civil Aviation Authority
Accident Investigation
Private Bag X73
Halfway House
Midrand
1685
Republic of South Africa

Aeronautical Fixed Service: FAHQYAIA
Telephone: +27 11 545 1000
Telefax: +27 11 545 1466

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GEN 1.2 ENTRY, TRANSIT AND DEPARTURE OF AIRCRAFT

Regulations and requirements for advance notification and applications for permission concerning entry, transit and departure of aircraft on international flight.

1 General

All flights into, from or over the Republic of South Africa must be carried out in accordance with the Civil Aviation Regulations, 2011.

No aircraft originating outside the Republic of South Africa shall be allowed to enter and transit South African airspace or land at any South African aerodrome without an approved flight plan, a valid Foreign Operators Permit (FOP) and landing or overflight permit.

For all general flights exempted from an FOP, a landing permit application should be submitted to the Department of Transport three (3) working days prior to the flight operation date.

2 Scheduled Flights

2.1 General

A Foreign airline operating International Scheduled flights to the Republic of South Africa must be designated under the provisions of a bilateral air services agreement to which the State of the airline concerned and the Republic of South Africa are contracting parties and must also be in possession of a valid Foreign Operators Permit issued by the Chairperson of the International Air Services Council, in respect of such flights.

Commercial scheduled foreign operators need to comply with the following when submitting the air operator security program. A foreign air operator providing scheduled international commercial air transport operations in the Republic shall establish, implement and maintain a written supplementary station procedure that meets the national security requirements.

2.2 Documentary requirements for clearance of aircraft

2.2.1 It is a requirement that the under-mentioned documents be submitted by operators, for clearance on entry and departure of their aircraft to and from the Republic of South Africa. All documents listed below must follow the ICAO standard format as set forth in the relevant Appendices to Annex 9 and are acceptable when furnished in English or Afrikaans and completed in legible handwriting.

2.2.2 Aircraft documents required (Arrival/Departure)

Required by	General Declaration	Passenger Manifest	Cargo manifest
Passport Control	Two (Arrival/ Departure)	On request	
Customs	One (Arrival)	On request	On request
Health	One (Arrival)		

Passport Control/Immigration

1) Incoming passengers can only be cleared by Passport Control/Immigration if a general declaration is presented timeously.
2) The following additional information pertaining to the general declaration and cargo manifest is required:

i) General Declaration

a) Particulars in respect of stores and cargo are required.
b) Crew members names.

ii) Cargo Manifest (if requested)

a) The cargo manifest must be supported by air waybills or consignment notes, and receipt of consignment in the absence of which it will be required that the names and addresses of consignees be stated thereon. Information concerning the nature of the goods must be furnished.

2.3 Public health measures applied to aircraft

The following public health measures are required to be carried out in respect of aircraft entering the Republic of South Africa:

a) The pilot in command of an aircraft must, on landing at the first airport, complete and deliver a General Declaration to the Port Health Officer of that airport.
b) At least thirty minutes before arrival the aircraft must be disinfected if arriving from an endemic yellow fever area or a malaria area. This action must be properly recorded in the Health section of the General Declaration. The insecticide to be used must conform to the specifications of the World Health Organisation.
c) Any illness or condition, on board an aircraft, must be recorded on the General Declaration and reported to the Port Health Officer, including but not limited to severe vomiting, diarrhoea and high fever.
d) A certificate of vaccination is required from passengers in the case of yellow fever, when arriving from infected or endemic areas.

3 Non-scheduled flights

3.1 Procedures

Any aircraft of another Contracting State which engages in the carriage, to or from the Republic of South Africa, of passengers, cargo or mail for remuneration or hire on other than scheduled international air services must apply to the Chairperson of the International Air Services Licensing Council for the issuance of a Foreign Operators Permit. These exclude South African operated foreign registered aircraft.

Non-scheduled foreign commercial air transport operators carrying up to 8 passengers or less than 1000KG do not require a foreign operators permit, however operators are required to obtain an overflight and landing clearance from the Department of Transport:
Owen Rikhotso
Tel:+2772 623 4370 Email: Rikhotso@dot.gov.za
Tshifhiwa Ramulifho
Tel:+2773 307 7242 Email: Mahafhat@dot.gov.za

A Foreign Operator's Permit is not required in respect of a class IV international air services, if:

a) not more that eight passengers or 1000KG of cargo or mail is transported on the inbound flight as well as the outbound flight; and
b) no passengers, cargo or mail is taken on at any point in the territory of the Republic for discharge at any other point in the territory of the Republic, except those passengers or that cargo or mail referred to in subparagraph a).However, a landing clearance issued by the Department of Transport.is required.

3.2 Prohibited or Emergency Landings

3.2.1 An aircraft engaged in either a flight in accordance with the provisions of paragraph 3.1 and paragraph 3.4 or of an authority granted by the Director of Civil Aviation in terms of those paragraphs, shall not, land in the Republic of South Africa before landing at the terminal aerodrome for that flight or land in the Republic of South Africa after taking off from that terminal aerodrome, except in an emergency.

3.2.2 The provisions or paragraph 3.4.1 (a), (b) and (c) shall apply mutatis mutandis to the pilot-in-command of any aircraft who is required to comply with the provisions of paragraph 3.2.1 but who is forced by an emergency to land at or take-off from a place other than the terminal aerodrome and similarly shall apply mutatis mutandis to any passenger or member of the crew of such aircraft.

3.2.3 Any aircraft originating outside the South African border and declaring any emergency shall be quarantined and only be allowed to disembark once approval has been obtained from the relevant border management agencies. Any violation of the above by any aircraft operator is punishable by law.

3.3 Applications for a Foreign Operators Permit

a) Foreign Operators Permit are issued by the South African Civil Aviation Authority. All FOP applications must be submitted electronically on the eServices portal, which is on the SACAA website.Contact details are as follows:
Sibusiso Mngomezulu
Tel: +2772 178 8631 Email: mngomezulus@caa.co.za
Itumeleng Mogashoa
Tel: +2776 943 2494 Email: mogasoai@caa.co.za

b) (1) An application for a Foreign Operators Permit or an amendment thereof must be made on a form as prescribed.
(2) If an applicant wishes to operate more than one class of international air services, the applicant must make a separate application in respect of each separate class.
(3) Upon the granting of an amendment to a Foreign Operators Permit, the permit holder must submit the original permit to the Director of Civil Aviation for cancellation, whereupon a new permit is issued.
(4) In order to satisfy the Chairperson of the International Air Services Licensing Council that an applicant is fit and able to operate the international air service, the Director may require the applicant to submit the following -

a) (i) A plan setting out in detail the manner in which the applicant will ensure that a safe and reliable international air service is operated;
(ii) proof that he complies with all the other requirements mentioned in section 25(2) of the International Air Services Act, 1993 (Act No. 60 of 1993);
b) a certified true copy of the existing valid foreign licence held by the applicant pertaining to the international air service for which application is being made for a permit or amendment of a permit;
c) a certified true copy of the memorandum and articles of association or any other founding document of the applicant if the applicant is not a natural person;
d) a valid guarantee, security or insurance policy in respect of the obligations and liabilities of the applicant which may arise from the operation of the international air service concerned;
e) any other document in support of the applicants ability to operate the international air service concerned.
f) An application fee must accompany the application for a Foreign Operators Permit.
g) Applications for Foreign Operator Permits (FOP's) will be published in Government Gazette for a period of 21 days (inclusive of weekends and public holidays) in line with Section 24 of the International Air Services Act of 1990.
h) The following flights are exempt from obtaining foreign operators permits and should apply for a landing clearance:: Military, General, MEDEVAC, Police, Business, Private, State/head/VIP/VVIP.

3.4 Ports of Entry for aircraft.

In terms of the provisions of the Aliens Control Act,96 (Act 96 of 1991) no person may enter or depart from the Republic of South Africa except through a port of entry, unless authority has been granted to such person to enter or depart from the Republic of South Africa at any other place. The aerodromes listed in par 3.4.1. have all been declared ports of entry, where immigration officers of the Department of Home Affairs grant passport control clearances. The pilot-in-command must ensure that all crew and passengers report to an immigration officer on entry and departure.

3.4.1 Ports of Entry

a) Cape Town International Airport, Cape Town.
b) O R Tambo International Airport, Johannesburg;
c) Bram Fischer International Airport, Bloemfontein;
d) Lanseria International Airport, Johannesburg;
e) Chief Dawid Stuurman International Airport, Port Elizabeth;
f) King Shaka International Airport, Durban;
g) Polokwane International Airport, Polokwane;
h) Kruger Mpumalanga International Airport, Nelspruit;
i) Upington International Airport, Upington;
j) Pilanesberg International Airport, Pilanesberg.

4 Private flights

4.1 Advance notification of arrival

The information contained in the flight plan is accepted as adequate notification of the arrival of incoming aircraft.

4.2 Documentary requirements for clearance of aircraft

Same requirements as for scheduled flights.

4.3 Public health measures applied to aircraft

Same requirements as for scheduled aircraft.

5 Foreign military aircraft

No foreign military aircraft shall fly over or land in the Republic except on the express invitation or with the express permission of the Minister; but any such aircraft so flying over or landing in the Republic shall be exempt from these regulations to such extent and on conditions as are specified in the invitation.

5.1 Documentary requirements of clearance of aircraft

Same requirements as for scheduled aircraft.

5.2 Public health measures applied to aircraft

Same requirements as for scheduled aircraft.

6 Report of Arrival of Aircraft

Except with the special permission of the Commissioner for Customs and Excise, the pilot-in-command of every aircraft entering the Republic of South Africa must make his first landing at a place appointed as a customs and examination station at that aerodrome: provided that these provisions shall not apply if the pilot-in-command is forced by stress of weather, accident or other circumstances beyond the control of the

pilot-in-command, to land at a place not so appointed and he reports the circumstances of this arrival to a member of the police force and as early as possible makes a report to the customs authorities at the place at which such aircraft was next due to land.

The pilot-in-command of any aircraft arriving in the Republic of South Africa whether with or without goods or passengers, shall within 3 hours after landing at any place appointed as a customs and excise airport, but in any event before the landing or embarkation of passengers and crew or the landing and loading of any goods, make due report in writing to the customers authorities at that airport.

7 Report of departure of aircraft

7.1 The pilot-in-command of any aircraft bound from any place within to any place outside the Republic of South Africa is required to report at a customs and excise airport and submit a report outwards in the prescribed form together with a full account of the cargo laden and all non-duty-paid imported or locally manufactured goods shipped as stores on board that aircraft.

7.2 The pilot-in-command of a foreign departing aircraft may not cause or permit the aircraft to depart from a customs and excise airport without first obtaining a certificate of clearance of transfer for the intended flight and the pilot-in-command may not after departure land at any place in the Republic of South Africa other than a customs and excise airport unless forced to do so by stress of weather, accident or other circumstances beyond the control of the pilot-in-command.

7.3 If an aircraft in respect of which a clearance has been issued does not depart from the customs and excise aerodrome within 36 hours of the time when clearance was issued or within such further time as may be allowed by the customs authorities, such clearance lapses and the pilot-in-command shall obtain fresh clearance before causing or permitting the aircraft to depart.

Where a departure aerodrome has no facilities for the transmission of flight plan information, aircraft will be permitted to enter Lesotho and land at Maseru, Moshoeshoe Airport. However, the pilot-in-command shall be required to transmit on the appropriate radio frequency to Maseru Airport Flight Information Unit the requirements as contained in ENR 1.10 soon after the establishment of radio communication contact with Maseru Tower.

Where it is intended to operate to any domestic aerodrome in Lesotho aircraft shall first land at Maseru, Moshoeshoe Airport for Customs, Immigration and Health clearances and to obtain special permit to operate to such domestic airport.

GEN 1.3 ENTRY, TRANSIT AND DEPARTURE OF PASSENGERS AND CREW

1 Customs requirements:

1.1 Arrivals

1.1.1 Baggage or other articles belonging to disembarking passengers or crew shall be presented to the customs authorities for inspection which will be carried out on a selective basis. All accompanied baggage will be cleared on the basis of oral declaration. Unaccompanied baggage shall be treated as cargo.

1.1.2 Every article imported for trade or commercial purposes is taxed according to the South African Customs and Excise tariff and should be declared separately.

1.1.3 Not more than R500 in South African bank notes may be imported whilst the importation of unwrought, unworked or semi-manufactured gold is subject to a permit issued by the South African Treasury.

1.2 The importation of the following articles is prohibited or restricted: meat; live animals; drugs, e.g. opium, cocaine, morphine, marijuana (Indian hemp); flick knives and dangerous weapons; indecent, obscene or objectionable books, periodicals, photographs, films and other articles; agricultural products or any plants, seeds or bulbs, e.t.c.

1.2.1 Certain rebates and duty free allowances are in force and particulars may be obtained from any South African diplomatic mission or on arrival.

1.3 Departures

1.3.1 No customs formalities are normally required on departure.

1.3.2 Visitors leaving the Republic of South Africa within 12 months of arrival may export R500 in South African bank notes and any amount of foreign bank notes provided such bank notes were originally brought into the Republic of South Africa by them, or represent the proceeds or instruments or exchange brought into and exchanged in the Republic of South Africa by them.

1.3.3 The exportation of gold in any form is subject of a permit issued by the South African Treasury, S.A. Reserve Bank or a commercial bank.

1.4 Customs and excise aerodrome

The following have been appointed as customs and excise aerodromes:
Cape Town International Airport, Cape Town;
O R Tambo International Airport, Johannesburg;
Bram Fischer International Airport, Bloemfontein;
Lanseria International Airport, Johannesburg;
Chief Dawid Stuurman International Airport, Port Elizabeth;
King Shaka International Airport, Durban;

Polokwane International Airport, Polokwane;
Kruger Mpumalanga International Airport, Nelspruit;
Upington International Airport, Upington;
Pilanesberg International Airport, Pilanesberg.

International flights may divert to Bram Fischer Airport, Bloemfontein when necessary. International flights so diverted and everything aboard them will remain “in transit” until the aircraft proceeds to its original destination. No passenger will be permitted to leave the flight at Bram Fischer Airport.

2 Immigration requirements

2.1 Visas are normally not required of passengers arriving and departing on the same through flight or transferring to another flight at the same airport. Transit passengers wishing to leave the transit areas must obtain visas.

2.2 To gain entry into the Republic of South Africa, a visitor or a person seeking admission for a temporary stay, must comply with the requirements of the Aliens Control Act, 96 (Act 96 of 1991). He must inter alia be in possession of a valid passport, duly visaed for entry into the Republic of South Africa if not exempt from the visa requirements of the Republic of South Africa, and must satisfy the passport control officer at the port of entry that he is in possession of a fully paid up return or onward ticket and that he has sufficient means to sustain himself for a reasonable period after his arrival, that he has never been refused entry into, deported from, or ordered to leave the Republic of South Africa, that he has never been convicted of any crime in any country and is not suffering from tuberculosis, any other infectious or contagious disease or any mental or physical deficiency.

A person who cannot comply with the aforementioned requirements, may be refused entry. Public and private conveyors will be penalised for conveying any person not been in possession of the necessary documentation and non-compliance with the relevant entry requirements.

2.3 The crew members licence or certificate is accepted in lieu of passport or visa for temporary admission into the Republic of South Africa in respect of flight crew member on a scheduled service who retains his licence in his possession when embarking or disembarking, who remains at the aerodrome where the aircraft has stopped or within the confines of the cities adjacent thereto, and who departs on the same aircraft or on the next regularly scheduled flight out of the Republic of South Africa. A crew member who enters the Republic of South Africa as a passenger in order to join an aircraft must be in possession of passport, duly visaed where required.

2.4 Passengers arriving or departing must complete an arrival/departure form (BI-55) which must be handed to the passport control officer.

2.5 Passport and Visas

The requirements are as follows:-

a) Republic of South Africa citizens: a valid Republic of South Africa passport or travel document,

b) a citizen of the United Kingdom and Colonies or the Republic of Ireland: a valid passport- no visa is required, provided the visa exemption has not been withdrawn.

c) a citizen of Switzerland or of Liechtenstein: a valid passport- no visa is required for temporary visits.

d) Nationals of Botswana and Eswatini: a valid passport or travel document- no visa is required for visits of 90 days or less; Lesotho - no visa is required for visits of 30 days or less; provided that the visa exemption has not been withdrawn.

e) Other foreign nationals or stateless persons: a valid passport or valid recognised travel document duly visaed for entry into the Republic of South Africa.

2.6 Temporary residence permits

The necessary permits or visas for the purpose of entry should be obtained before entry to the Republic of South Africa. Upon arrival temporary residence permits are issued to foreign visitors, at a port of entry, by Immigration Officers, appointed by the Department of Home Affairs. This specifies their purpose and duration of entry. The conditions stipulated in the permit must strictly be adhered to and the holder thereof may not without the authority of the Department of Home Affairs alter the purpose for which he/she was admitted, accept or change employment, engage in any business or profession or remain in the country later than the expiry date of the permit.

2.7 Employment

Without special permission from the Director-General for the Interior aliens are not allowed to accept employment. A person coming to the Republic of South Africa on contract or for employment must produce a work permit to the passport control officer.

2.8 Departure

A person leaving the country must be in possession of a valid passport. A Republic of South Africa citizen who is also a national of another country and who is in possession of a foreign passport, must in addition travel on the Republic of South Africa passport, together with a letter of exemption, issued in terms of the South African Citizenship Act, 88 (Act 88 of 1995) by the Department of Home Affairs.

3 Public health requirements

Disembarking passengers must be in possession of a valid international certificate of vaccination against;

a) Yellow fever when coming from yellow fever endemic areas;

b) Cholera when coming from infected areas.

All parties are please to take note that the implementation of the Immigration Act, 13 (Act 13 of 2002) may influence the present requirements and procedures.

GEN 1.4 ENTRY, TRANSIT AND DEPARTURE OF CARGO

1 Customs requirements concerning cargo and other articles

Every article imported for trade or commercial purposes is taxed according to the South African Customs and Excise Tariff and should be declared separately.

Not more than R500 in South African bank notes may be imported whilst the importation of unwrought, unworked or semi-manufactured gold is subject to a permit issued by the South African Treasury.

The importation of the following articles is prohibited or restricted: live animals; any animal product (e.g. meat, biltong, milk e.t.c); drugs, e.g. opium, cocaine, morphine, marijuana (Indian hemp); flick knives and dangerous weapons; indecent, obscene or objectionable books, periodicals, photographs, films and other articles; agricultural products or any plants, seeds, bulbs, etc

2 Agricultural quarantine requirements

In terms of the Animal Diseases Act, 1984 (Act 35 of 1984) no person may import into the Republic any animal, parasite, infectious or contaminated thing except under the authority of a veterinary permit and in compliance with any condition imposed in such permit, issued by the Director of Veterinary Services. This restriction also applies in respect of such imports from Botswana, Lesotho and Swaziland.

Requirements for the importation and the application for a veterinary import permit for livestock, biological products, vaccines and animal materials can be obtained from:
Director of Veterinary Services
Private Bag X138
Pretoria
0001
Telegraphic address; PRIVET
Telephone: +27 12 319 7514
Telefax: +27 12 329 829

Animal in the above context means any mammal, bird (poultry), fish, reptile, or amphibian vertebrate including their carcass.

Permits and requirements for import of plants, plant products, pathogens, exotic animal, infectious thing, insects, growth mediums, honey, beeswax or used apiary equipment except on the authority of a permit and can be obtained from:

Director
Directorate of Plant Health
Private Bag X14
Gezina
0001

Contact Person: Jeremiah Manyuwa
Telephone: +27 12 319 6102
Telefax: +27 12 319 6370

The above listed material may be imported from inter alia neighbouring states and must be cleared by a plant inspector of the Department of Agriculture. The imported products may only be removed from the aerodrome after written permission is received from the plant inspector.

Visit the Department of Agriculture, Forestry and Fisheries website at www.nda.agric.za for contact details of Plant Health Inspectors.

GEN 1.5 AIRCRAFT INSTRUMENTS, EQUIPMENT AND FLIGHT DOCUMENTS

1 General

1.1 Commercial air transport aircraft operating in the Republic of South Africa must adhere to the provisions of South African Civil Aviation Regulations, 2011 as specified below:

1.2 The flight documents to be carried for all flights within the Republic are governed in the following Parts of the Civil Aviation Regulations, 2011, as listed below;

a) Sub-part 3 of Part 91.
b) Sub-part 4 of Part 121
c) Sub-part 4 of Part 127.
d) Sub-part 4 of Part 135

1.3 Flight Folios

Regulation 91.03.5(1) of Part 91 - General operating and flight rules, requires the owner or operator of a South African registered aircraft to carry a full flight folio at all times. Requirements of the flight folio are contained in sub-regulation (2) to (5) of the said regulation. In terms of regulations 121.04.1(1), 127.041(1) and 135.04.1(1) of the Civil Aviation Regulations 2011, the operator of a large commercial air transport aeroplane, the owner of a commercial air transport helicopter engaged in a scheduled public air transport service, and the operator of a small commercial air transport aeroplane, respectively shall ensure that copies are retained in a safe place at the first point of departure in respect of each flight undertaken by the aeroplane, helicopter.

2 Equipment to be carried by all types of flights

The instruments and equipment to be carried for all flights within the Republic are governed in the following Parts of the Civil Aviation Regulations, 2011, as listed below;

a) Sub-part 4 of Part 91
b) Sub-part 5 of Part 121
c) Sub-part 5 of Part 127

3 Communication and Navigation Equipment

The communication and navigation equipment to be carried for all flights within the Republic are governed in the following Parts of the Civil Aviation Regulations, 2011, as listed below;

a) Sub-part 5 of Part 91

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GEN 1.6 SUMMARY OF NATIONAL REGULATIONS AND INTERNATIONAL AGREEMENTS/CONVENTIONS

The following is a list of civil aviation legislation, air navigation regulations, e.t.c., in force in the Republic of South Africa. It is essential that persons engaged in air operations in this territory be acquainted with the relevant regulations. Copies of the documents can be obtained from:

Government Printer
Bosman Street
Pretoria
(Private Bag X85, Pretoria 0001); or

The South African Civil Aviation Authority (SACAA) website at www.caa.co.za

ACTS	
TITLE	**CONTENTS**
Carriage by Air Act, 1946 (Act 17 of 1946)	Act to give effect to a Convention for the unification of certain rules relating to international carriage by air; to make provision for applying the rules contained in the said Convention, subject to exceptions, adoptions and modifications, to carriage by air which is not international carriage within the meaning of the Convention; and for matters incidental thereto.
Civil Aviation Act, 2009 (Act 13 of 2009)	Act to repeal, consolidate and amend the aviation laws giving effect to certain International Aviation Convention and to provide for control and regulation of aviation in the Republic. To establish a SACAA and an Independent Aviation Safety Investigation Board. To give effect to certain International Conventions and to provide for effective control of safety and security of aircraft, airports, e.t.c.
Air Services Licensing Act, 1990 (Act 115 of 1990)	Act to provide for the establishment of an Air Service Licensing Council; for the licensing and control of domestic air services; and for matters connected therewith.
Airports Company Act, 1993 (Act 44 of 1993)	Act to provide for the establishment of a public company and the transfer of the States shares in the company; to regulate certain activities at the company airports; and to provide for matters connected therewith.
Air Traffic and Navigation Services Company Act, 1993 (Act 45 of 1993)	Act to provide for the transfer of certain assets and functions of the State to a public company to be established and for matters connected therewith.
Convention on the International Recognition of Rights in Aircraft Act, 1993 (Act 59 of 1993)	Act to provide for the application in the Republic of the Convention on the International Recognition of Rights to make special provision for the hypothecation of aircraft and shares in aircraft; and to provide for matters connected therewith.

ACTS	
TITLE	**CONTENTS**
International Air Services Act, 1993 (Act 60 of 1993)	Act to provide for the establishment of an International Air Services Council; for the regulation and control of international air services; and for matters connected therewith.
South African Civil Aviation Authority Levies Act, 1998 (Act 41 of 1998)	Act to provide for the imposition of levies by the South African Civil Aviation Authority; and to provide for matters connected therewith.
Convention on International interests in mobile equipment Act, 2007 (Act 4 of 2007)	Act to enact the convention on International interest in Mobile Equipment and the protocol to the Convention on International Interests in Mobile Equipment on matters specific to aircraft equipment into law.

REGULATIONS	
TITLE	**CONTENTS**
Domestic Air Services Regulations, 1991	Definitions, classes of air services, types of air services, categories of aircraft, insurance, manner and form of application for a licence, requirements for the operation of an air service in a safe and reliable manner. Manner and form of application for an operating certificate, contents of notices of application, operations manual, Form of temporary licence, form of licence, form of operating licence, form of surrender of licence, form of summons, manner and form of notification. Contents of representations, submissions of statistical information, register of licences, register of operating certificates, fees, passenger air transport tickets, airway bills, passenger lists, inspections.
International Air Services Regulations, 1994.	Definitions, classes of international air services, types of international air services, categories of aircraft, insurance, application for a licence. Requirements in respect of aircraft, other than South African aircraft, concerning application for exemption. Contents of notice of issuing or amendment of licence, application for permit, requirements in respect of international air service concerning application for permit or amendment thereof. Tour operators permit, period of validity, period of validity of permit, application for operating certificate, contents of notice of application for licence or amendment thereof. Contents of notice or issuing or amendment of licence, contents of notice of application for permit of amendment thereof. Contents of notice of issuing or amendment of permit. Operations manual, form of temporary licence, form of licence, form of permit, form of operating certificate, form of summons. Manner and form of notification, contents of representations, furnishing of statistical information.

REGULATIONS	
TITLE	**CONTENTS**
Civil Aviation Regulations, 2011.	Definitions and Abbreviations, Procedures for Making Regulations and Technical Standards, Granting Exemptions and Notifying Differences, Aviation Accidents and Incidents, Powers and Duties of Authorised Officers, Inspectors and Authorised Persons, Certification Procedures for Products and Parts, Airworthiness: Non-type Certificated Aircraft, Engine Emission Certification, Noise Certification, General Maintenance Rules, Maintenance Rules - Non-type Certificated Aircraft, Registration and Marking, Leasing of Aircraft, Flight Simulator Training Devices, Pilot Licensing, National Pilot Licensing, Flight Engineer Licensing, Cabin Crew Licensing, Air Traffic Service Personnel Licensing, Aircraft Maintenance Engineer Licensing, Medical Certification, Glider Pilot Licence, Free Balloon Pilot Licence, General Aviation and Operating Flight Rules, Conveyance of Dangerous Goods, Corporate Operations, Operation of Non-type Certificated Aircraft, Commercial Operation of Non-type Certificated Aircraft, Operation of Parachutes and Drop Zones, Air Cargo Security, Aviation Security Training Organisations, Aviation Security Screener Certification, Aviation Security, Aircraft Passenger Identification, Aviation Pandemic Preparedness Plan, Air Transport Operations-Carriage on Aeroplanes of more than 19 Passengers or Cargo, Commercial helicopter operations: passengers, cargo and mail, Helicopter Aerial Work and Certain Other Air Service Operations, Foreign air operations, Helicopter External-Load Operations, Air Transport Operations - Carriage of less than 20 Passengers or Cargo, Air Transport Operations -Commercial Operations of Free Balloons, Agricultural Operations, Air Ambulance Operations, Aerodromes and Heliports, Safety Management System, Aviation Training Organisations, Aircraft Maintenance Organisations, Design Organisations for Products, Parts and Appliances, Manufacturing Organisations, Aviation Recreation Organisations, Aeronautical Telecommunication Service Providers (Electronic Services Organisations), Airspace and Air Traffic Services, Flight Procedure Design, Meteorological Information Services, Aeronautical Information Services, Allocation of Radio Telephony (RTF) Call Signs, 3-Letter Aircraft Designators and Location Indicators, Instrument Flight Procedures and ICAO Aeronautical Charts, Enforcement, Fees and Charges, Administration
The Mortgaging of Aircraft Regulations, 1997	Definitions, deed of mortgage, discharge of mortgage, declaration of transmission of rights in mortgage, certificate of mortgage, register of aircraft mortgages, fees, powers of attorney and completion of documents, short title and commencement.

DETERMINATIONS	
South African Civil Aviation Authority Levies Act, 1998.	Determination to impose a fuel levy on the sale of aviation fuel.

TITLE	CONTENTS
Airport Slot Coordination Regulations, 2012	Definitions, Designation of coordinated airports, Designation of schedules facilitated airports, Withdrawal of designation of a coordinated or a schedules facilitated airport, Relaxation of the designation of an airport, Temporary designation of an airport, Coordinated airports and special events, Appointment of the coordinator, Functions of the coordinator, The schedules facilitation function, Directives, Prohibition on acting as a coordinator or schedules facilitator, Appointment of the Slot Coordination Committee of South Africa, Removal of members of the committee, Functions of the committee, Meetings of the committee, Sub-committees, The determination of coordination parameters, Prohibition on using a coordinated airport without a slot, Requests for the allocation of slots, Preferences in the allocation of slots, Historic slots, Slot requests submitted after the initial submission deadline, Waiting list, Allocation of slots in respect of a designated period, Rules and guidelines on slot allocation, Provision of information on slot allocation The nature of slots, Other conditions of use, Changes to ad hoc slots, Types of misuse of slots, Misuse of slots, Publication of penalty, The withdrawal of slots, Provision of information to the coordinator, Exchange of information, Exclusion of liability, Short title and commencement.

GEN 1.7 Differences from ICAO Standards, Recommended Practices and Procedures

A list of significant differences between national regulations and practices of the State and related ICAO provisions, including:

1) provision affected (Annex as amended, paragraph); and
2) difference in full text.

1 Annex 1 - Personnel Licensing

CHAPTER 1

Paragraph reference: 1.2.

1.2.1
South Africa's regulation is more exacting in that the South African Civil Aviation Regulations, 2011, 61.01.02(1) states that no person may act as a pilot of a South African registered aircraft, except in the case of dual instruction with an appropriately rated flight instructor, unless such person holds a valid pilot licence with applicable ratings issued, revalidated or re issued by the Director or by an appropriate authority validated by the Director in terms of The Civil Aviation Regulations, 2011, Part 61 or Part 62: Provided that a student pilot licence may have been issued without a class rating or type rating.

1.2.1.1
South Africa has not implemented a multi-crew pilot and flight navigator license.

1.2.2.2
South Africa's regulation is more exacting in that the South African Civil Aviation Regulations, 2011, 61.01.13(4) states that before the Director validates or converts a foreign licence or rating for a commercial air transport operation or a PPL with Instrument Rating (PPL/IR), he or she must confirm the validity of the foreign licence or rating with the appropriate authority of the issuing Contracting State.

1.2.2.3
South Africa's regulation is more exacting in that the South African Civil Aviation Regulations, 2011, 61.01.13(5) requires that certain theoretical knowledge examinations and a skills tests are required before a licence may be validated.

1.2.5.2.2
South Africa's regulation is less exacting in that the South African Civil Aviation Regulations, 2011, 67.00.6 (1)(d) requires that commercial pilots over the age of 40

years, in a single pilot operation do not have their medical assessment validity reduced to 6 months unless there is a risk factor where 6 monthly reports must be issued.

1.2.5.2.4
South Africa's regulation is more exacting in that the South African Civil Aviation Regulations, 2011, 67.00.6 (3)(b) requires that the holders of Class 2 and 3 medical certificates who have passed their 40th birthday have the period of validity for their medical assessment reduced to 12 months and 67.00.6 (4)(b) states that the period of validity of Class 4 medical certificates are reduced to 36 months when the pilot has passed his or her 40th birthday.

1.2.5.2.5
South Africa's regulation is more exacting in that the South African Civil Aviation Regulations, 2011, 67.00.6 (3)(b) requires that the holders of Class 2 and 3 medical certificates who are over 40 years of age are required to submit a medical every twelve months. There is currently no such restriction on the holder of a Class 4 medical certificate, however, this will be amended during 2013 to fall in line with the previous provision.

1.2.9.2
South Africa's regulation is more exacting in that the South African Civil Aviation Regulations, 2011, 65.01.8 requires that Air traffic service personnel shall have sufficient ability in reading, speaking and understanding the English language to enable them to adequately carry out their responsibilities as air traffic service personnel and have attained a minimum of ICAO level 4 in their English language proficiency examination.

CHAPTER 2

Paragraph reference: 2.1

2.1.9.2
South Africa's regulation is more exacting in that the South African Civil Aviation Regulations, 2011, Part 61 make no allowance for crediting of co-pilot flight time in aircraft certified for single pilot operation, and flown with a co-pilot, unless this is in a part 121, 135 or 127 operation, which requires 2 pilots (at night or IFR): therefore, in a corporate flight or private flight, even though operated as a multi-crew operation, no co-pilot time can be logged towards a higher licence.

2.1.9.4
South Africa’s regulation is more exacting in that the South African Civil Aviation Regulations, 2011, Part 61 makes provision for a student pilot attending an integrated course to be credited with PIC instrument time when flying under supervision provided all logbook entries are certified by the instructor supervising the flight.

Paragraph reference: 2.2

2.2.2.1
South Africa's regulation is more exacting in that the South African Civil Aviation Regulations, 2011, 61.02.5(d) states that a student pilot is not allowed to fly solo on an international flight.

Paragraph reference: 2.3

2.3.2.2
South Africa's regulation is more exacting in that the South African Civil Aviation Regulations, 2011, 61.10.1(2) state that a night rating is required to exercise the privileges of a licence by night. The night rating includes theoretical knowledge and instrument instruction as well as a skills test to be completed and that a night rating issued.

2.3.3.1.1
South Africa’s regulation is more exacting in that the South African Civil Aviation Regulations, 2011 indicates that an applicant for a Private Pilot License (A) must complete not less than 45 hours of total flight time in an aeroplane.

2.3.4.1.1
South Africa’s regulation is more exacting in that the South African Civil Aviation Regulations, 2011 indicates that an applicant for a Private Pilot License (H) must complete not less than 50 hours of total flight time in a helicopter.

2.3.4.1.2 South Africa’s regulation is more exacting in that the South African Civil Aviation Regulations, 2011 indicates that an applicant for a Private Pilot License (H) must complete not less than 15 hours of solo flight time in a helicopter.

Paragraph reference 2.4

2.4.6
South Africa has not implemented the licensing requirements for the issuance of an airship category rating.

Paragraph reference 2.6

2.6.4.1.1
South Africa’s regulation is more exacting in that the South African Civil Aviation Regulations, 2011 indicates an applicant for the issuance of an Airline Transport Pilot License (H) is required to have completed not less than 1500 hours flight time as a pilot of helicopters.

Paragraph reference 2.10

2.10.1.1
South Africa's regulation is more exacting in that the South African Civil Aviation Regulations, 2011 indicates an applicant for the issuance of a free balloon pilot license shall not be less than 17 years old.

2.10.1.3.3 1
South Africa's regulation is more exacting in that the holder of a free balloon license cannot exercise their privileges of the license at night.

Paragraph reference: 2.9

2.9.1.5
South Africa's regulation is more exacting in that the South African Civil Aviation Regulations, 2011, 61.00.7 requires that a commercial glider pilot have a Class 1 medical certificate and that a recreational glider pilot have a Class 2 medical certificate.

CHAPTER 4

Paragraph reference: 4.2

4.2.1.1
South Africa's regulation is more exacting in that the South African Civil Aviation Regulations, 2011, 61.02.1 states that for aircraft maintenance engineers wishing to be issued with Category A, C, W & X rating age shall be 19 years or older and for Category B & D ratings shall be 21 years or older.

Paragraph reference: 4.3

4.3.1
Student air traffic controller not implemented. South African has implemented air traffic service assistant ratings. South African Civil Aviation Regulations, 2011, Part 65, subparts 3 -7.

Paragraph reference: 4.4

4.4.1.1
South Africa's regulation is different in character in that the South African Civil Aviation Regulations, 2011, 65.02.1(a) states that the applicant for an air traffic service licence

requires age to be not less than 18 years of age; a licence may be issued without ratings. Also see subparts 3 – 7.

Paragraph reference 4.6

4.6.1
South Africa does not license Flight Operations Officers or issue a flight dispatcher license.

2 Annex 2- Rules of the Air: Tenth Edition

CHAPTER 3

Paragraph reference: 3.6

3.6.2.2
South Africas Regulation is less protective in that the South African Civil Aviation Regulations, 2011. Regulation 91.03.4 9(12) (c) states that if the estimated time at the next applicable reporting point, flight information regional boundary, or aerodrome of intended landing, whichever comes first, is found to be in error in excess of three minutes from that notified to the responsible ATSU, a revised estimated time shall be notified to such ATSU as soon as possible; or... ICAO requires two minutes.

3 Annex 3 - Meteorological Services for International Air Navigation

CHAPTER 1. DEFINITIONS

Reference: 1.1

Aerodrome elevation. The elevation of the highest point of the landing area.

Remarks: Practiced but not yet transposed into national regulations.

ICAO meteorological information exchange model (IWXXM). A data model for representing aeronautical meteorological information.

Remarks: Practiced but not yet transposed into national regulations.

International airways volcano watch (IAVW). International arrangements for monitoring and providing warnings to aircraft of volcanic ash in the atmosphere.

Note. — The IAVW is based on the cooperation of aviation and non-aviation operational units using information derived from observing sources and networks that are provided by

States. The watch is coordinated by ICAO with the cooperation of other concerned international organizations.
Remarks: State is not a designated IAVW

CHAPTER 1. DEFINITIONS

Reference: 1.2

For the purpose of this Annex, the following terms are used with a limited meaning as indicated below:
a) to avoid confusion in respect of the term “service” between the meteorological service considered as an administrative entity and the service which is provided, “meteorological authority” is used for the former and “service” for the latter;
b) “provide” is used solely in connection with the provision of service;
c) “issue” is used solely in connection with cases where the obligation specifically extends to sending out the information to a user;
d) “make available” is used solely in connection with cases where the obligation ends with making the information accessible to a user; and
e) “supply” is used solely in connection with cases where either c) or d) applies.

Remarks: Practiced but not yet transposed into national regulations.

CHAPTER 2. GENERAL PROVISIONS

Paragraph reference: 2.2.7

Owing to the variability of meteorological elements in space and time, to limitations of observing techniques and to limitations caused by the definitions of some of the elements, the specific value of any of the elements given in a report shall be understood by the recipient to be the best approximation of the actual conditions at the time of observation.

Note. — Guidance on the operationally desirable accuracy of measurement or observation is given in Attachment A.

Remarks: Practiced but not yet transposed into national regulations.

Paragraph reference: 2.2.8

Owing to the variability of meteorological elements in space and time, to limitations of forecasting techniques and to limitations caused by the definitions of some of the elements, the specific value of any of the elements given in a forecast shall be understood by the recipient to be the most probable value which the element is likely to assume during the period of the forecast. Similarly, when the time of occurrence or change of an element is

given in a forecast, this time shall be understood to be the most probable time.

Note.— Guidance on the operationally desirable accuracy of forecasts is given in Attachment B.

Remarks: Practiced but not yet transposed into national regulations.

Paragraph reference: 2.2.9

The meteorological information supplied to the users listed in 2.1.2 shall be consistent with Human Factors principles and shall be in forms which require a minimum of interpretation by these users, as specified in the following chapters.

Note.— Guidance material on the application of Human Factors principles can be found in the Human Factors Training Manual (Doc 9683).

Remarks: Practiced but not yet transposed into national regulations.

CHAPTER 3. GLOBAL SYSTEMS, SUPPORTING CENTRES AND METEOROLOGICAL OFFICES

Paragraph reference: 3.3.3

The aerodromes for which landing forecasts are required shall be determined by regional air navigation agreement.

Remarks: Practiced but not yet transposed into national regulations.

CHAPTER 4. METEOROLOGICAL OBSERVATIONS AND REPORTS

Paragraph reference: 4.3.3

At aerodromes that are not operational throughout 24 hours in accordance with 4.3.1, METAR shall be issued prior to the aerodrome resuming operations in accordance with regional air navigation agreement.

Remarks: Practiced but not yet transposed into national regulations.

CHAPTER 5. AIRCRAFT OBSERVATIONS AND REPORTS

Paragraph reference: 5.3.4

In the case of the requirement to report during the climb-out phase, an aircraft shall be designated, at approximately hourly intervals, at each aerodrome to make routine observations in accordance with 5.3.1.

Remarks: Not yet transposed into national regulations.

Paragraph reference: 5.4

Aircraft not equipped with air-ground data link shall be exempted from making routine aircraft observations.

Remarks: Implemented in practice but not yet transposed into national regulations.

Paragraph reference: 5.6

When other meteorological conditions not listed under 5.5, e.g. wind shear, are encountered and which, in the opinion of the pilot-in-command, may affect the safety or markedly affect the efficiency of other aircraft operations, the pilot-in-command shall advise the appropriate air traffic services unit as soon as practicable.

Note. — Icing, turbulence and, to a large extent, wind shear are elements which, for the time being, cannot be satisfactorily observed from the ground and for which in most cases aircraft observations represent the only available evidence.

Remarks: Implemented in practice but not yet transposed into national regulations.

CHAPTER 6. FORECASTS

Paragraph reference: 6.5.2

When the density of traffic operating below flight level 100 warrants the issuance of AIRMET information in accordance with 7.2.1, area forecasts for such operations shall be prepared in a format as agreed between the meteorological authorities in the States concerned. When abbreviated plain language is used, the forecast shall be prepared as a GAMET area forecast, employing approved ICAO abbreviations and numerical values; when chart form is used, the forecast shall be prepared as a combination of forecasts of upper wind and upper-air temperature, and of SIGWX phenomena. The area forecasts shall be issued to cover the layer between the ground and flight level 100 (or up to flight level 150 in mountainous areas, or higher, where necessary) and shall contain information on en-route weather phenomena hazardous to low-level flights, in support of the issuance of AIRMET information, and additional information required by low-level flights.

Remarks: Practice but not yet transposed into national regulations.

CHAPTER 9. SERVICE FOR OPERATORS AND FLIGHT CREW MEMBERS

Paragraph reference: 9.1.2

Meteorological information supplied to operators and flight crew members shall cover the

flight in respect of time, altitude and geographical extent. Accordingly, the information shall relate to appropriate fixed times, or periods of time, and shall extend to the aerodrome of intended landing, also covering the meteorological conditions expected between the aerodrome of intended landing and alternate aerodromes designated by the operator.

Remarks: Practiced but not yet transposed into national regulations.

CHAPTER 9. SERVICE FOR OPERATORS AND FLIGHT CREW MEMBERS

Paragraph reference: 9.1.3

Meteorological information supplied to operators and flight crew members shall be up to date and include the following information, as agreed between the meteorological authority and the operators concerned:
a) forecasts of:
1) upper wind and upper-air temperature;
2) upper-air humidity;
3) geopotential altitude of flight levels;
4) flight level and temperature of tropopause;
5) direction, speed and flight level of maximum wind;
6) SIGWX phenomena; and
7) cumulonimbus clouds, icing and turbulence;

Note 1.— Forecasts of upper-air humidity and geopotential altitude of flight levels are used only in automatic flight planning and need not be displayed.

Note 2.— Forecasts of cumulonimbus clouds, icing and turbulence are intended to be processed and, if necessary, visualized according to the specific thresholds relevant to user operations.

b) METAR or SPECI (including trend forecasts as issued in accordance with regional air navigation agreement) for the aerodromes of departure and intended landing, and for take-off, en-route and destination alternate aerodromes;
c) TAF or amended TAF for the aerodromes of departure and intended landing, and for take-off, en-route and destination alternate aerodromes;
d) forecasts for take-off;
e) SIGMET information and appropriate special air-reports relevant to the whole route;

Note.— Appropriate special air-reports will be those not already used in the preparation of SIGMET.

f) volcanic ash and tropical cyclone advisory information relevant to the whole route;
g) as determined by regional air navigation agreement, GAMET area forecasts and/or area forecasts for low-level flights in chart form prepared in support of the issuance of AIRMET information, and AIRMET information for low-level flights relevant to the whole route;

h) aerodrome warnings for the local aerodrome;
i) meteorological satellite images;
j) ground-based weather radar information; and
k) space weather advisory information relevant to the whole route.

Remarks: Practiced but not yet transposed into national regulations.

Paragraph reference: 9.1.9

When necessary, the meteorological authority of the State providing service for operators and flight crew members shall initiate coordinating action with the meteorological authorities of other States with a view to obtaining from them the reports and/or forecasts required.

Remarks: Practiced but not yet transposed into national regulations.

Paragraph reference: 9.1.10

Meteorological information shall be supplied to operators and flight crew members at the location to be determined by the meteorological authority, after consultation with the operators concerned and at the time agreed between the aerodrome meteorological office and the operator concerned. The service for pre-flight planning shall be confined to flights originating within the territory of the State concerned. At an aerodrome without an aerodrome meteorological office at the aerodrome, arrangements for the supply of meteorological information shall be as agreed between the meteorological authority and the operator concerned.

Remarks: Practiced but not yet transposed into national regulations.

Paragraph reference: 9.2.1

Briefing and/or consultation shall be provided, on request, to flight crew members and/or other flight operations personnel. Its purpose shall be to supply the latest available information on existing and expected meteorological conditions along the route to be flown at the aerodrome of intended landing, alternate aerodromes and other aerodromes as relevant, either to explain and amplify the information contained in the flight documentation, or as agreed between the meteorological authority and the operator concerned, in lieu of flight documentation.

Remarks: Practiced but not yet transposed into national regulations.

CHAPTER 11. REQUIREMENTS FOR AND USE OF COMMUNICATIONS

Paragraph reference: 11.1.1

Suitable telecommunications facilities shall be made available to permit aerodrome meteorological offices and, as necessary, aeronautical meteorological stations to supply the required meteorological information to air traffic services units on the aerodromes for which those offices and stations are responsible, and in particular to aerodrome control towers, approach control units and the aeronautical telecommunications stations serving these aerodromes.

Remarks: Practiced but not yet transposed into national regulations.

Paragraph reference: 11.1.2

Suitable telecommunications facilities shall be made available to permit meteorological watch offices to supply the required meteorological information to air traffic services and search and rescue services units in respect of the flight information regions, control areas and search and rescue regions for which those offices are responsible, and in particular to flight information centres, area control centres and rescue coordination centres and the associated aeronautical telecommunications stations.

Remarks: Practiced but not yet transposed into national regulations.

Paragraph reference: 11.1.3

Suitable telecommunications facilities shall be made available to permit world area forecast centres to supply the required world area forecast system products to aerodrome meteorological offices, meteorological authorities and other users.

Remarks: Practiced but not yet transposed into national regulations.

Paragraph reference: 11.1.4

Telecommunications facilities between aerodrome meteorological offices and, as necessary, aeronautical meteorological stations and aerodrome control towers or approach control units shall permit communications by direct speech, the speed with which the communications can be established being such that the required points may normally be contacted within approximately 15 seconds.

Remarks: Practiced but not yet transposed into national regulations.

Paragraph reference: 11.1.8

Suitable telecommunications facilities shall be made available to permit meteorological

offices to exchange operational meteorological information with other meteorological offices.

Remarks: Practiced but not yet transposed into national regulations.

Paragraph reference: 11.2
Meteorological bulletins containing operational meteorological information to be transmitted via the aeronautical fixed service or the public Internet shall be originated by the appropriate meteorological office or aeronautical meteorological station.

Note. — Meteorological bulletins containing operational meteorological information authorized for transmission via the aeronautical fixed service are listed in Annex 10, Volume II, Chapter 4, together with the relevant priorities and priority indicators.

Remarks: Practiced but not yet transposed into national regulations.

Paragraph reference: 11.4

The content and format of meteorological information transmitted to aircraft and by aircraft shall be consistent with the provisions of this Annex.

Remarks: Practiced but not yet transposed into national regulations.

Paragraph reference: 11.5

D-VOLMET shall contain current METAR and SPECI, together with trend forecasts where available, TAF and SIGMET, special air-reports not covered by a SIGMET and, where available, AIRMET.

Note.— The requirement to provide METAR and SPECI may be met by the data link-flight information service (D-FIS) application entitled “Data link-aerodrome routine meteorological report (D-METAR) service”; the requirement to provide TAF may be met by the D-FIS application entitled “Data link-aerodrome forecast (D-TAF) service”; and the requirement to provide SIGMET and AIRMET messages may be met by the D-FIS application entitled “Data link-SIGMET (D-SIGMET) service”. The details of these data link services are specified in the Manual of Air Traffic Services Data Link Applications (Doc 9694).

Remarks: Practiced but not yet transposed into national regulations.

4 Annex 4 - Aeronautical Charts

CHAPTER 1. Definitions, Applicability and Availability

1.1 The following definitions are different from those published in the Annex:
Minimum Obstacle Clearance Altitude. The lowest altitude which may be used which will provide a minimum clearance of 1500ft (450m) above all objects located in an area contained within a sector of a circle 25NM (46km) radius centered on a radio aid to navigation, significant point, the Aerodrome Reference Point (ARP) or the Heliport Reference Point (HRP).

Prohibited Area. An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of civilian aircraft within the designated airspace is not permitted at any time under any circumstances.

CHAPTER 13. AERODROME/HELIPORT CHART —

13.5True and Magnetic North arrows and magnetic variation to the nearest degree and annual change of the magnetic variation shall be shown.

Partially implemented since November 2019.

13.6.1 This chart shall show: c) elevations and geoid undulations, to the nearest half-metre or foot, of the precision approach runway threshold, the geometric centre of the touchdown and lift-off area, and at the highest elevation of the touchdown zone of a precision approach runway;

Partially implemented since November 2019.

5 Annex 5 - Units of Measurement to be Used in Air and Ground Operations

NIL

6 Annex 6 - Operation of Aircraft

CHAPTER 6

PART 1

Paragraph reference: 6.2

6.2.2
South Africa's regulation is more exacting in that the South African Civil Aviation Regulations, 2011 Part 91.04.13 (5) states that "no owner or operator of an aircraft used in general aviation operations for which the maximum certificated passenger seating is 20 or more on which is carried a cabin attendant shall operate the aircraft unless such aircraft is equipped with universal precaution kits." Technical standard

91.04.13 stipulates that such owner or operator shall ensure each aircraft carries on board at least two universal precaution kits. ICAO requires two only for aeroplanes authorized to carry more than 250 passengers.

Paragraph reference: 6.7

6.7.3

South Africa's regulation is less protective in that the South African Civil Aviation Regulations, 2011. Regulation 91.04.29 states "No person shall operate a pressurized aeroplane, for which the individual certificate of airworthiness was first issued on or after 1 January 1990, above 25 000 ft unless such aeroplane is equipped with a device to provide positive warning to the flight crew of any dangerous loss of pressurization." ICAO requires aeroplanes newly introduced into service on or after 1 July 1962.

6.7.4

South Africa's regulation is less protective in that the South African Civil Aviation Regulations, 2011. Regulation 91.04.29 states "No person shall operate a pressurized aeroplane, for which the individual certificate of airworthiness was first issued on or after 1 January 1990, above 25 000 ft unless such aeroplane is equipped with a device to provide positive warning to the flight crew of any dangerous loss of pressurization." ICAO requires the date to be after 1 July 1962.

Paragraph reference: 6.15

6.15.4

South Africa's regulation is more exacting in that the South African Civil Aviation Regulations, 2011. Regulation 121.05.5(3) All turbine-engined aeroplanes authorised under this Part (Part 121) to carry passengers shall be equipped with a TAWS which has a predictive terrain avoidance function.

ICAO only requires turbine powered aeroplanes above 5 700 kg to have forward looking (predictive) TAWS

South Africa's regulation is less protective in that the South African Civil Aviation Regulations, 2011. Regulation 135.05.5(1)(2)(3) All turbine-engine aeroplanes of a maximum certificated take-off mass in excess of 15 000 kg, for which the individual certificate of airworthiness is first issued on or after 1 July 1979, shall be equipped with TAWS.
(2) All turbine-engine aeroplanes of a maximum certificated take-off mass in excess of 5 700 kg or authorised to carry more than nine passengers for which the individual certificate of airworthiness is first issued on or after 1 January 2010, shall be equipped with a TAWS which has a predictive terrain avoidance functions.
(3) All turbine-engine aeroplanes of a maximum certificated take-off mass in excess of 5 700 kg or authorised to carry more than nine passengers, shall be equipped with a TAWS which has a predictive terrain avoidance function.

ICAO 6.15.5 Recommendation. - All turbine-engine aeroplanes of a maximum certificated take-off mass of 5 700 kg or less and authorised to carry more that five but not more than nine passengers should be equipped with a ground proximity warning system which provides the warnings of 6.15.8 a) and c), warning of unsafe terrain clearance and a forward looking terrain avoidance function.

Paragraph reference: 6.18

6.18.2
South Africa's regulation is more exacting in that the South African Civil Aviation Regulations, 2011. Regulation 135.05.8(1). The operator of a large turbine-engine aeroplane shall not operate the aeroplane unless - (a) such aeroplane is equipped with a serviceable ACAS meeting ACAS II specifications, as prescribed in technical standard 91.04.31 of Document SA-CATS 91; and ICAO Annex 6 Part 1, 6.18.2 From 1 January 2005, all turbine-engined aeroplanes of a maximum certificated take-off mass in excess of 5 700 kg or authorised to carry more than 19 passengers shall be equipped with an airborne collision avoidance system (ACAS II)

SACAR 135.05.8 Says all aeroplanes above 5 700 kg regardless of passenger seats shall have ACAS II.

Paragraph reference: 6.18

6.18.3
South Africa's regulation is less protective in that the South African Civil Aviation Regulations, 2011. Regulation 91.04.28 Except as otherwise provided for in Part 121 and Part 135, no person may operate a turbine-engine aeroplane of a maximum certificated take-off mass in excess of 15 000 kg or authorised to carry more than 30 passengers, for which the individual certificate of airworthiness was first issued after 1 January 2007, unless such aeroplane is equipped with an ACAS that meets the specifications prescribed in Document SA-CATS 91,

ICAO recommends all aeroplanes be fitted with ACAS II.

CHAPTER 2

PART 2

Paragraph reference: 2.4.12

2.4.12.1
South Africa's regulation is less protective in that the South African Civil Aviation Regulations, 2011. Regulation 91.04.23 (3) (listed a-j) conditions exempt aeroplanes from having to carry a ELT, and 406 MHz ELT's are not mandatory. Whereas ICAO,

states in Annex 6 Part 2 2.4.12.1
Recommendation.— All aeroplanes should carry an automatic ELT.

CHAPTER 3

PART 2

Paragraph reference: 3.6.3.1.1.3
South Africa's regulation is less protective in that the South African Civil Aviation Regulations, 2011. Regulation 91.04.10(2)(b)states "No owner or operator shall operate an aircraft engaged in international general aviation operations which is an aeroplane with an MCM exceeding 5 700 kg for which the individual certificate of airworthiness was first issued on or after 1 January 2005 unless such aeroplane is equipped with a Type IA FDR that complies with the requirements prescribed in Document SA-CATS 91 whereas ICAO CoA first issued on or after 1 January 1989 should be equipped with a Type II FDR.

Paragraph reference: 3.6.10.3
South Africa's regulation is less protective in that the South African Civil Aviation Regulations, 2011.

Regulation 91.04.28 "Except as otherwise provided for in Part 121 and Part 135, no person may operate a turbine-engine aeroplane of a maximum certificated take-off mass in excess of 15 000 kg or authorised to carry more than 30 passengers, for which the individual certificate of airworthiness was first issued after 1 January 2007, unless such aeroplane is equipped with an ACAS that meets the specifications prescribed in Document SA-CATS 91, ICAO 3.6.10.3 Recommendation - All turbine-engine aeroplanes of a maximum certificated take-off mass in excess of 5 700 kg but not exceeding 1 500 kg, or authorised to carry more than 19 passengers, for which the individual airworthiness certificate is first issued after 1 January 2008, should be equipped with an airborne collision avoidance system (ACAS II).

CHAPTER 3

PART 3

Paragraph reference: 3.4

3.4.1
South Africa's regulation is more exacting in that the South African Civil Aviation Regulations, 2011. Regulation 127.08.10 states "The operator of a Class 3 helicopter carrying passengers shall not operate such helicopter under IMC or above more than three eights of clouds within a radius of five nautical miles of the helicopter unless the latest weather reports or forecasts and any combination of them indicate that the weather along the planned route (including take-off and landing) with due regard for the provision of Regulation 127.08.12 allows flight under VFR an existing ceiling prescribed minimum heights established in terms of Regulation 127.07.6, and that the weather is focused to remain so until at least one hour after the estimated time of

arrival at the destination aerodrome or alternate aerodrome". In other words, South Africa does not allow Class 3 helicopter operations under IMC. Whereas in 3.4.1 ICAO allows for Class 3 helicopters operations under IMC to be conducted only over a surface environment.

CHAPTER 2

PART 2

Paragraph reference: 2.2.5

2.2.5.3
South Africa's regulation is more exacting in that the South African Civil Aviation Regulations,2011. Regulation 12.02.1(1) states, "The PIC of an aircraft involved in an accident within the Republic, or if he or she is killed or incapacitated, a flight crew member, or if there are no surviving flight crew members or if they are incapacitated, the operator or owner, as the case may be, shall, as soon as possible but at least within 24 hours since the time of the accident, notify -
(a) the Director;
(b)An ATSU; or
(c) The nearest police station, of such accident.
ICAO standard 2.2.5.3 requires "the nearest appropriate authority" to be notified.

CHAPTER 2

PART 3

Paragraph reference: 2.6

2.6.2.1
South Africa's regulation is more exacting in that the South African Civil Aviation Regulations, 2011. Regulation 91.7.7(8) requires the cloud base to be 400ft above the operating minima associated with instrument approach procedure. Meteorological conditions at the alternate will exist from two hours before to two hours after the estimated time of arrival. ICAO standard 2.6.2.1 requires the alternate heliport to be at or above the heliport operating minima.

CHAPTER 2

PART 3

Paragraph reference: 2.7

2.7.3
South Africa's regulation is more exacting in that the South African Civil Aviation Regulations, 2011. Regulation 91.7.7(9) requires "Suitable offshore alternates for helicopters may be subject to the following -
(a) The offshore alternates shall be used only after passing a PNR. Prior to a PNR, onshore alternates shall be used;

(b) Mechanical reliability of critical control systems and critical components shall be considered and taken into account when determining the suitability of the alternate;
(c)One-engine inoperative performance capability shall be attainable prior to arrival at the alternate;
(d) To the extent possible, deck availability shall be guaranteed; and
(e) Weather information must be reliable and accurate ICAO recommends offshore alternates not to be used when it is possible to carry enough fuel to have an onshore alternate. Offshore alternates should not be used in a hostile environment.

PANS - Training Doc 9868

NIL

7 Annex 7- Aircraft Nationality and Registration Marks

NIL

8 Annex 8- Airworthiness of Aircraft

CHAPTER 3
Paragraph 3.1

The Standards of this chapter are applicable in respect of all aircraft, except 3.3 and 3.4 which are not applicable in respect of all aircraft that are of a type of which the prototype was submitted to appropriate national authorities for certification before 13 June 1960.

RSA still issues Certificates of Airworthiness for aircraft that were type certificated prior to 13 June 1960, as long as it is still supported by the State of Design.

CHAPTER 4
Paragraph 4.2.1.5

The State of Design shall ensure that sensitive aviation security information is not transmitted when distributing mandatory continuing airworthiness information.

South Africa is yet to incorporate this annex provision into national regulations.

Paragraph 4.2.1.6

The State of Design shall ensure that sensitive aviation security information is securely transmitted to the appropriate authority in the States of Registry in accordance with Annex 17

South Africa is yet to incorporate this annex provision into national regulations.

Paragraph 4.2.4.3

The State of Registry shall ensure that sensitive aviation security information is not transmitted when distributing mandatory continuing airworthiness information.

South Africa is yet to incorporate this annex provision into national regulations.

Paragraph 4.2.4.4

The State of Registry shall ensure that sensitive aviation security information is securely transmitted to the appropriate authority in the State of Design in accordance with Annex 17

South Africa is yet to incorporate this annex provision into national regulations.

CHAPTER 2
Paragraph 2.2.3

Performance data shall be determined and scheduled in the flight manual so that its application by means of the operating rules to which the aeroplane is to be operated in accordance with 5.2 of Annex 6, Part I, will provide a safe relationship between the performance of the aeroplane and the aerodromes and routes on which it is capable of being operated. Performance data shall be determined and scheduled for the following stages for the ranges of mass, altitude or pressure-altitude, wind velocity, gradient of the take-off and landing surface for landplanes; water surface conditions, density of water and strength of current for seaplanes; and for any other operational variables for which the aeroplane is to be certificated

South Africa has adopted USA FAR Airworthiness design standards, which does not fully comply with ICAO standards.

CHAPTER 4
Paragraph 4.2

Special consideration shall be given to design features that affect the ability of the flight crew to maintain controlled flight.

South Africa has adopted USA FAR Airworthiness design standards, which do not fully comply with ICAO standards.

Paragraph 4.5

Electrical bonding and protection against lightning and static electricity shall be such as to:
a) protect the aeroplane, its systems, its occupants and those who come in contact with the aeroplane on the ground or water from the dangerous effects of lightning discharge and electrical shock; and
b) prevent dangerous accumulation of electrostatic charge.

South Africa has adopted USA FAR Airworthiness design standards, which do not fully comply with ICAO standards.

CHAPTER 6
Paragraph 6.4

The lights required by Annex 2 — Rules of the Air to be displayed by aeroplanes in flight or operating on the movement area of an aerodrome shall have intensities, colours, fields of coverage and other characteristics such that they furnish the pilot of another aircraft or personnel on the ground with as much time as possible for interpretation and for subsequent manoeuvre necessary to avoid a collision. In the design of such lights, due account shall be taken of the conditions under which they may reasonably be expected to perform these functions.

South Africa has adopted USA FAR Airworthiness design standards, which does not fully comply with ICAO standards.

9 Annex 9- Facilitation

CHAPTER 2

Paragraph 2.4

Contracting States shall not prevent an aircraft from calling at any international airport for public health reasons unless such action is taken in accordance with the International Health Regulations (2005) of the World Health Organization (WHO).

Partially Implemented - South Africa applies the World Health Regulations although not yet incorporated in Domestic Law.

Paragraph 2.43

Contracting States that require aircraft operators to apply for prior authorization shall:
a) establish procedures whereby such application will be dealt with promptly;
b) make such permission effective for a specific length of time or number of flights wherever possible; and
c) impose no fees, dues or charges for the issue of such permission.

More Exacting - There is prescribed application fee for commercial operations

CHAPTER 3

Paragraph 3.5

Contracting States shall ensure that no documents other than those provided for in this chapter shall be required by visitors for the entry into and departure from their territories.

More Exacting - South Africa requires a traveler who is a minor to produce a document showing the details of parents as well as a consent form from any of the parents not accompanying the minor.

CHAPTER 4

Paragraph 4.22

Contracting States that require documents for export clearance shall normally limit their requirement to a simplified export declaration.

Less Protective - Provision is made for simplified clearance in section 39D of the Customs and Excise Act, No.91 of 1964; however this provision is not yet effective

CHAPTER 8

Paragraph 8.47

Contracting States shall establish legislation, regulations and/or policies in support of assistance to aircraft accident victims and their families.

Less Protective – No Provision in place, under development

CHAPTER 9

Paragraph 9.1

Contracting States requiring the exchange of Advance Passenger Information (API)/ interactive API (iAPI) and/or Passenger Name Record (PNR) data from aircraft operators shall create a Passenger Data Single Window facility for each data category, or both data categories combined, that allows parties involved to lodge standardized information with a common data transmission entry point to fulfil all related passenger and crew data requirements for that jurisdiction.

Less Protective – No mechanism implemented yet

CHAPTER 10

Paragraph 10.1

In cases where proof of vaccination or prophylaxis is required by national authorities under the International Health Regulations (2005), Contracting States shall accept the International Certificate of Vaccination or Prophylaxis prescribed by the World Health Organization (WHO) in the International Health Regulations (2005).

Partially Implemented - South Africa fully implements the International Health Regulations although not yet incorporated in domestic law.

10 Annex 10- Aeronautical Telecommunications

Volume 1 - 3.1.3.9.3

South Africa uses a 2 letter International Morse Code and places the letter "I" as the third letter of the identification signal of ILS installation at various aerodromes.

Less Protective – Regulation amendment expected November 2023 which will result in a Different Means of Compliance filed.

11 Annex 11- Air Traffic Services

Chapter 2
Paragraph 2.11.3.3

An upper limit of a control area shall be established when either:
a) air traffic control service will not be provided above such upper limit; or
b) the control area is situated below an upper control area, in which case the upper limit shall coincide with the lower limit of the upper control area.

When established, such upper limit shall coincide with a VFR cruising level of the tables in Appendix 3 to Annex 2.

Done in practice but not included in regulations.

Chapter 3
paragraph 3.3.5.2

Where RCP/RSP specifications are applied, programmes shall be instituted for monitoring the performance of the infrastructure and the participating aircraft against the appropriate RCP and/or RSP specifications, to ensure that operations in the applicable airspace continue to meet safety objectives. The scope of monitoring programmes shall be adequate to evaluate communication and/or surveillance performance, as applicable.

Not implemented

Regional Supplementary Procedures - Doc 7030 PART 2 – COMMUNICATIONS

Paragraph 2.1 Under selected TMA’s in RSA (Special Rules Areas), the frequency 123.450 MHz is not applied. Paragraph reference: 3.1 PART 1 - RULES OF THE AIR, ATS

AND SAR Aircraft on VFR flights, and aircraft on IFR flights outside controlled airspace, are not required to maintain a watch on a radio station furnishing communications for the unit providing FIS in the FIR and are not required to file with that station information as to their position.

12 Annex 12- Search and Rescue

NIL

13 Annex 13- Aircraft Accident and Incident Investigation

NIL

14 Annex 14- Aerodromes

Volume 1

Chapter 1

Reference: Definition Arresting system. A system designed to decelerate an aeroplane overrunning the runway.

Mitigation: The State does not utilise arresting system. The State is implementing RESA requirements in the regulations.

Chapter 5

Paragraph 5.2.4.2

Recommendation. — A threshold marking should be provided at the threshold of a paved non-instrument runway where the code number is 3 or 4 and the runway is intended for use by other than international commercial air transport.

Mitigation: The State has adopted the standard to provide threshold marking on all paved runways of all codes.

Paragraph 5.2.4.3

A threshold marking should be provided, so far as practicable, at the thresholds of an unpaved runway. Note: The Aerodrome Design Manual (Doc 9157), Part 4, shows a form of marking which has been found satisfactory for the marking of downward slopes immediately before the threshold.

Mitigation: The State has adopted the standard on the use of edge markers to depict the start and end of unpaved runway.

Paragraph 5.2.6.5

On a non-precision approach runway where the code number is 2, an additional pair of touchdown zone marking stripes should be provided 150 m beyond the beginning of the aiming point marking.

Mitigation: The State does not have International Airports with Code 2 runways.

15 Annex 15- Aeronautical Information Services

NIL

16 Annex 16- Environmental Protection

NIL

17 Annex 17- Security

N/A

18 Annex 18- The Safe Transport of Dangerous Goods by Air

NIL

19 Annex 19- Safety Management

Chapter 3

Paragraph reference 3.4.2.

South Africa's State Safety Programme has not established the acceptable level of safety performance to be achieved.

Chapter 5

Paragraph reference: 5.3.5

Promotion of a positive safety culture has not yet formally started.

20 ICAO DOC 8168 - Aircraft Operations

Volume I- Flight Procedures

Part I Section 4 Chapter 2

Paragraph Reference: 2.3

2.3 MINIMUM SECTOR ALTITUDES (MSA)/TERMINAL ARRIVAL ALTITUDES (TAA)

Minimum sector altitudes are established for each aerodrome and provide at least 1500ft (450m) obstacle clearance within 46km (25NM) of the radio navigation aid associated with the approach procedure for that aerodrome.
RNAV based Minimum sector altitudes or Terminal arrival altitudes are established for each aerodrome and provide at least 1000 ft (300m) obstacle clearance within 46km (25 NM) of the significant point, the aerodrome reference point (ARP) or the heliport reference point (HRP) associated with the approach procedure for that aerodrome.

Volume II - Construction of visual and instrument flight procedures

Part I Section 4 Chapter 8

Paragraph Reference: 8.1.1

8.1.1 Minimum sector altitudes shall be established for each aerodrome where instrument approach procedures have been established. Each minimum sector altitude shall be calculated by:
a) taking the highest elevation in the sector concerned;
b) adding a clearance of at least:
i) 1500 ft (450m) for a Minimum sector altitude based on a radio navigation aid, or
ii) 1000 ft (300m) for a Minimum sector altitude based on a significant point, the aerodrome reference point (ARP) or the heliport reference point (HRP) (commonly referred to as an "RNAV MSA").
c) rounding the resulting value up to the next higher 100-ft increment, as appropriate.

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GEN 2 TABLES AND CODES

GEN 2.1 MEASURING SYSTEM, AIRCRAFT MARKINGS, HOLIDAYS

1 Units of measurement

The units of measurement used in connection with all aspects of civil aviation air and ground operations in the Republic of South Africa are in accordance with the Civil Aviation Regulations, 2011, Part 1, sub-part 2 Units of measurement.

ampere (A) is the constant electric current which, if maintained in two straight parallel conductors of infinite length, of negligible circular cross-section, and placed 1 metre apart in vacuum, would produce between these conductors a force equal to 2 x newton per metre of length;

becquerel (Bq) is the activity of a radionuclide having one spontaneous nuclear transition per second;

candela (cd) is the luminous intensity, in the perpendicular direction, of a surface of 1/600 000 square metre of black body at the temperature of freezing platinum under a pressure of 101 325 newtons per square metre;

celsius temperature (tºc) is equal to the difference tºc =T - To between two thermodynamic temperatures T and To where To equals 273.15 kelvin;

coulomb (C) is the quantity of electricity transported in 1 second by a current of 1 ampere;

degree celsius (ºC) is the special name for the unit kelvin for use in stating values of Celsius temperature;

farad (F) is the capacitance of a capacitor between the plates of which there appears a difference of potential of 1 volt when it is charged by a quantity of electricity equal to 1 coulomb;

foot (ft) is the length equal to 0.3048 metres exactly;

gray (Gy) is the energy imparted by ionising radiation to a mass of matter corresponding to 1 Joule per kilogram;

henry (H) is the Inductance of a closed circuit in which an electromotive force of 1 volt is produced when the electric current in the circuit varies uniformly at a rate of 1 ampere per second;

hertz (Hz) is the frequency of a periodic phenomenon of which the period is 1 second;

joule (J) is the work done when the point of application of a force of 1 newton is displaced a distance of 1 metre in the direction of the force;

kelvin (K) is the unit of thermodynamic temperature which is the fraction 1/273.16 of the thermodynamic temperature of the triple point of water;

kilogram (kg) is the unit of mass equal to the mass of the international prototype of the kilogram;

knot (kt) is the speed equal to 1 nautical mile per hour;

litre (L) is a unit of volume restricted to the measurement of liquids and gases which is equal to 1 cubic decimeter;

lumen (lm) is the luminous flux emitted in a solid angle of 1 steradian by a point source having a uniform intensity of 1 candela;

lux (lx) is the illuminance produced by a luminous flux of 1 lumen uniformly distributed over a surface of 1 square metre;

metre (m) is the distance travelled by light in a vacuum during 1/299792458 of a second;

mole (mol) is the amount of substance of a system which contains as many elementary entitles as there are atoms in 0.012 kilogram of carbon-12;

Note.-When the mole is used, the elementary entities must be specified and may be atoms, molecules, ions, electrons, other particles or specified groups of such particles.

nautical mile (NM) is the length equal to 1 852 metres exactly;

newton (N) is the force which when applied to a body having a mass of 1 kilogram gives it an acceleration of 1 metre per second squared;

ohm (Ω) is the electric resistance between two points of a conductor when a constant difference of potential of 1 volt, applied between these two points, produces In this conductor a current of 1 ampere, this conductor not being the source of any electromotive force;

pascal (Pa) is the pressure or stress of 1 newton per square metre;

radian (rad) is the plane angle between two radii of a circle which cut off on the circumference an arc equal In length to the radius;

second (s) is the duration of 9 192 631 770 periods of the radiation corresponding to the transition between the two hyperfine levels of the ground state of the caesium-133 atom;

siemens (S) is the electric conductance of a conductor in which a current of 1 ampere is produced by an electric potential difference of 1 volt;

sievert (Sv) is the unit of radiation dose equivalent corresponding to 1 joule per kilogram;

steradian (sr) is the solid angle which, having its vertex in the centre of a sphere, cuts off an area of the surface of the sphere equal to that of a square with sides of length equal to the radius of the sphere;

tesla (T) is the magnetic flux density given by a magnetic flux of 1 weber per square metre;

tonne (t) is the mass equal to 1 000 kilograms;

volt (V) is the unit of electric potential difference and electromotive force which is the difference of electric potential between two points of a conductor carrying a constant current of 1 ampere, when the power dissipated between these points is equal to 1 watt;

watt (W) is the power which gives rise to the production of energy at the rate of 1 Joule per second; and

weber (Wb) the magnetic flux which, linking a circuit of one turn produces in it an electromotive force of 1 volt as it is reduced to zero at a uniform rate in 1 second.

2 Temporal reference system

Universal Coordinated Time (UTC) is used by air navigation services and in documents published by the aeronautical information service. Reporting of time is expressed to the nearest minute, e.g. 12: 40: 35 is reported as 1241. Local time is UTC + 2 Hours.
The Gregorian calendar shall be used as the temporal reference system for air navigation.

3 Geodetic reference datum

3.1 Name/designation of datum.
The geographical coordinates indicating Latitude and Longitude are expressed in terms of the World Geodetic System of 1984 (WGS-84) geodetic reference datum.

3.2 Area of application.
The area of application for the published geographical coordinates coincides with the area of responsibility of the Aeronautical Information Service, i.e. the entire territory of the RSA as well as the airspace over the high seas encompassed by the Johannesburg Oceanic FIR in accordance with the regional air navigation agreement.

3.3 Use of an asterisk to identify published geographical coordinates.
The application of WGS-84 will be achieved either by surveyor mathematical conversion of coordinates. Where the information has been transformed mathematically into WGS-84 coordinates or where the accuracy of original field work does not meet the ICAO Standards and Recommended Practices they are published accompanied by an asterix (*) indicating that the information is of low integrity.

3.4 In addition to elevation referenced to the MSL (geoid), for the specific surveyed ground positions, geoid undulation (referenced to the WGS-84 ellipsoid) for those positions specified in ICAO Doc 10066 Appendix 2 shall also be published.

4 Aircraft nationality and registration marks

The nationality marks for aircraft registered in the Republic of South Africa are the letters ZS, ZT and ZU. The nationality marks are followed by a hyphen and a registration mark consisting of 3 letters, e.g. ZS-ABC, ZT-ABC, ZU-ABC.

5 Public holidays for the year 2026.

Date	Day	Name
01 January	Thursday	New Year's Day
21 March	Saturday	Human Rights Day
03 April	Friday	Good Friday
06 April	Monday	Family Day
27 April	Monday	Freedom Day
01 May	Friday	Workers Day
16 June	Tuesday	Youth Day
09 August	Sunday	National Women's Day
10 August	Monday	Public Holiday
24 September	Thursday	Heritage Day
16 December	Wednesday	Day of Reconciliation
25 December	Friday	Christmas Day
26 December	Saturday	Day of Goodwill

GEN 2.2 Abbreviations used in AIS publications

ICAO abbreviations shall be used in the aeronautical information services whenever they are appropriate and their use will facilitate distribution of aeronautical data and aeronautical information.

~	*Differences from ICAO Abbreviations (Doc 8400)*
†	*When radiotelephony is used, the abbreviations and terms are transmitted as spoken words.*
‡	*When radiotelephony is used, the abbreviations and terms are transmitted using the individual letters in non-phonetic form.*
*	*Signal is also available for use in communicating with stations of the maritime mobile service.*
#	*Signal for use in the teletypewriter service only.*

A

A~	Abbreviated VASI
A	Amber
AAA	*(or AAB, AAC...etc.. in sequence) Amended meteorological message (message type designator)*
A/A	Air-to-air
AAD	Assigned altitude deviation
AAIM	Aircraft autonomous integrity monitoring
AAL	Above aerodrome level
AAR	Air to air refuelling
ABI	Advanced boundary information
ABM	Abeam
ABN	Aerodrome beacon
ABT	About
ABV	Above
AC	Altocumulus
ACARS†	*(to be pronounced "AY-CARS")* Aircraft communication addressing and reporting system
ACAS†	Airborne collision avoidance system
ACC‡	Area control centre *or* area control
ACCID	Notification of an aircraft accident
ACFT	Aircraft
ACK	Acknowledge
ACL	Altimeter check location
ACN	Aircraft classification number
ACP	Acceptance *(message type designator)*
ACPT	Accept or accepted
ACSA~	Airports Company South Africa
ACT	Active *or* activated *or* activity
AD	Aerodrome
ADA	Advisory area
ADC	Aerodrome chart
ADDN	Addition *or* additional
ADF‡	Automatic direction-finding equipment
ADIZ†	(*to be pronounced "AY-DIZ")* Air defence identification zone
ADJ	Adjacent
ADO	Aerodrome office *(specify service)*
ADR	Advisory route
ADS*	The address *(when this abbreviation is used to request a repetition, the question mark (IMI) precedes the abbreviation, e.g. IMI ADS (to be used in AFS as a procedure signal)*

ADS-B‡	Automatic dependent surveillance - broadcast
ADS-C‡	Automatic dependent surveillance - contract
ADSU	Automatic dependent surveillance unit
ADVS	Advisory service
ADZ	Advise
AES	Aircraft earth station
AFIL	Flight plan filed in the air
AFIS	Aerodrome flight information service
AFM	Yes *or* affirm *or* affirmative *or* that is correct
AFS	Aeronautical fixed service
AFT ...	After...*(time or place)*
AFTN‡	Aeronautical fixed telecommunication network
A/G	Air-to-ground
AGA	Aerodrome, air routes and ground aids
AGL	Above ground level
AGN	Again
AIC	Aeronautical information circular
AIDC	Air traffic services interfacility data communications
AIM	Aeronautical information management
AIP	Aeronautical Information publication
AIP SUP	AIP supplement
AIRAC	Aeronautical information regulation and control
AIREP†	Air-report
AIRMET†	Information concerning en-route weather phenomena which may affect the safety of low level aircraft operations
AIS	Aeronautical information services
ALA	Alighting area
ALERFA†	Alert phase
ALR	Alerting *(message type designator)*
ALRS	Alerting service
ALS	Approach lighting system
ALSF-1~	Approach light systems with sequenced flashing lights in CAT 1 Configuration.
ALSF-2~	Approach light system with red barrettes and sequenced flashing lights.
ALT	Altitude
ALTN	Alternate *or* alternating (*light alternates in colour)*
ALTN	Alternate *(aerodrome)*
Am~	Amber
AMA	Area minimum altitude
AMATIS~	AMHS Agent Terminal Interface System
AMD	Amend *or* amended *(used to indicate amended meteorological message; message type designator)*
AMDT	Amendment *(AIP Amendment)*
AMHS~	Aeronautical Message Handling System
AMS	Aeronautical mobile service
AMSL	Above mean sea level
AMSS	Aerodrome mobile satellite service
ANAIS~	Aeronautical Automated Information System
ANC	Aeronautical chart - 1:500 000 *(followed by name/title)*
ANCS...	Aeronautical navigation chart - small scale *(followed by name/ title and scale)*

ANS	Answer
AOC...	Aerodrome obstacle chart *(followed by type and name/title)*
AO	Aircraft operator
AP	Airport
APAPI†	*(to be pronounced "AY-PAPI")* Abbreviated precision approach path indicator
APCH	Approach
APDC...	Aircraft parking/docking chart *(followed by name/title)*
APN	Apron
APP	Approach control office *or* approach control *or* approach control service
APR	April
APRX	Approximate *or* approximately
APSG	After passing
APU	Auxiliary power unit
APV	Approach procedure with vertical guidance
ARC	Area chart
ARNG	Arrange
ARO	Air traffic services reporting office
ARP	Aerodrome reference point
ARP	Air-report *(message type designator)*
ARQ	Automatic error correction
ARR	Arrival *(message type designator)*
ARR	Arrive *or* arrival
ARS	Special air-report *(message type designator*)
ARST	Arresting *(specify (part of) aircraft arresting equipment)*
AS	Altostratus
ASAP	As soon as possible
ASC	Ascent to *or* ascending to
ASDA	Accelerate-stop distance available
ASE	Altimetry system error
ASHTAM	Special series of NOTAM notifying, by means of a specific format, change in activity of a volcano, a volcanic eruption and/ or volcanic ash cloud that is of significance to aircraft operations
ASPH	Asphalt
AT...	At *(followed by time at which weather change is forecast to occur)*
ATA‡	Actual time of arrival
ATC‡	Air traffic control *(in general)*
ATCSMAC...	Air traffic control surveillance minimum altitude chart *(followed by name/title)*.
ATD‡	Actual time of departure
ATFM	Air traffic flow management
ATIS†	Automatic terminal Information service
ATM	Air traffic management
ATN	Aeronautical telecommunication network
ATP...	At… *(time or place)*
ATS	Air traffic services
ATSU~	Air Traffic Service Unit
ATTN	Attention
AT-VASIS†	*(to be pronounced "AY-TEE-VASIS")* Abbreviated T visual approach slope indicator system
ATZ	Aerodrome traffic zone
AUG	August
AUTH	Authorized *or* authorization
AUTO	Automatic
AUW	All up weight
AUX	Auxiliary

AVBL	Available *or* availability
AVG	Average
AVGAS†	Aviation gasoline
AWOS	Automated Weather Observing System
AWTA	Advise at what time able
AWY	Airway
AZM	Azimuth
B	
(B)~	Bi-directional
B~	Bar
B	Blue
BA	Braking action
BARO-VNAV†	*(to be pronounced "BAA-RO - VEE-NAV")* Barometric vertical navigation
BASE†	Cloud base
BCFG	Fog patches
BCN	Beacon *(Aeronautical ground light)*
BCST	Broadcast
BDRY	Boundary
BECMG	Becoming
BFR	Before
BKN	Broken
BL...	Blowing *(followed by DU-dust, SA=sand or SN=snow)*
BLDG	Building
BLO	Below clouds
BLW	Below...
BOMB	Bombing
BR	Mist
BRF	Short *(used to indicate the type of approach desired, or required)*
BRG	Bearing
BRKG	Braking
BS	Commercial broadcasting station
BTL	Between layers
BTN	Between
BUFR	Binary universal form for the representation of meteorological data
C	
...C	Centre *(preceded by runway designation number to identify a parallel runway)*
C	Degrees Celsius *(Centigrade)*
CA	Course to an altitude
CAA	Civil Aviation Authority *or* Civil Aviation Administration
CALVERT~	Configuration and -2 indicating Cat 2 configuration. Barrettes inner 1000 ft *(305 m)*.
CAMU~	Central Airspace Management Unit
CAT	Category
CAT	Clear air turbulence
CAVOK†	*(to be pronounced "KAV-OH-KAY")* Visibility, cloud and present weather better than prescribed values or conditions
CB~	Automatic dependent surveillance - broadcast *(details)* ads-b
CB‡	*(to be pronounced "CEE BEE")* Cumulonimbus
CBP~	Cloud Break Procedure
CC~	Automatic dependent surveillance - contract *(details)* ads-c
CC	Cirrocumulus
CCA	*(or CCB, CCC...etc. in sequence)* Corrected meteorological message *(message type designator)*
CCO	Continuous climb operations

CCT~	Circuit
CD	Candela
CD~	Coded
CD~	Controller-pilot data link communications *(details)* cpdlc
CD5B~	Coded approach light system with 5 bars suffix -1 for CAT ILS 1.
CDN	Co-ordination *(message type designator)*
CDO	Continuous descent operations
CDR	Conditional route
CF	Change frequency to...
CF	Course to a fix
CFM*	Confirm *or* I confirm *(to be used in AFS as a procedure signal)*
CGL	Circling guidance light(s)
CH	Channel
CH#	This is a channel-continuity-check of transmission to permit comparison of your record of channel-sequence numbers of messages received on the channel *(to be used in AFS as per procedure signal)*
CHEM	Chemical
CHF~	Aerodrome Authority
CHG	Modification *(message type designator)*
CI	Cirrus
CIDIN†	Common ICAO data interchange network
CIV	Civil
CK	Check
CL	Centre Line
CL30M~	Centreline. The figures indicate the spacing between lights when known.
CL4B~	Centreline with 4 bars *(single row not coded)* Prefixed by "B" indicates bar centreline.
CLA	Clear type of ice formation
CLBR	Calibration
CLCD~	Coded centreline. White, alternative white and red, red.
CLD	Cloud
CLD~	Configuration deviation list
CLG	Calling
CLIMB-OUT	Climb-out area
CLR	Clear(s) *or* cleared to... *or* clearance
CLRD	Runway (s) cleared *(used in METAR/SPECI)*
CLSD	Close *or* closed *or* closing
CM	Centimeter
CMB	Climb to *or* climbing to
CMPL	Completion *or* completed *or* complete
CNL	Cancel *or* cancelled
CNL	Flight plan cancellation *(message type designator)*
CNS	Communication, navigation and surveillance
COM	Communications
CONC	Concrete
COND	Condition
CONS	Continuous
CONST	Construction *or* constructed
CONT	Continue(s) *or* continued
COOR	Co-ordinate *or* coordination
COORD	Coordinates
COP	Change over point

COR	Correct *or* correction *or* corrected *(used to indicate corrected meteorological message; message type designator)*
COT	At the coast
COV	Cover *or* covered *or* covering
CPDLC‡	Controller-pilot data link communications
CPL	Current flight plan *(message type designator)*
CRC	Cyclic redundancy check
CRM	Collision risk mode!
CRP	Compulsory reporting point
CRZ	Cruise
CS	Call Sign
CS	Cirrostratus
CTA	Control area
CTAM	Climb to and maintain
CTC	Contact
CTL	Control
CTN	Caution
CTR	Control zone
CU	Cumulus
CUF	Cumuliform
CUST	Customs
CVR	Cockpit voice recorder
CW	Continuous wave
CWY	Clearway

D

... D~	DME Distance
D	Downward *(tendency In RVR during previous 10 minutes)*
D...	Danger area *(followed by Identification) (see FAD)~*
DA	Decision attitude
D-ATIS†	*(to be pronounced "DEE-ATIS")* Data link automatic terminal information service
DA/H~	Decision altitude/height
DAME~	Designated aviation medical examiner
DCD	Double channel duplex
DCKG	Docking
DCP	Datum crossing point
DCPC	Direct controller-pilot communications
DCS	Double channel simplex
DCT	Direct *(in relation to flight plan clearances and type of approach)*
DE*	From *(used to precede the call sign of the calling station) (to be used in AFS as a procedure signal)*
DEC	December
DEC~	From *(used to precede the call sign of the calling station) (to be used in AFS as a procedure signal)*
DEG	Degrees
DEP	Depart *or* departure
DEP	Departure *(message type designator)*
DEPO	Deposition
DER	Departure end of the runway
DES	Descend to *or* descending to
DEST	Destination
DETRESFA†	Distress phase
DEV	Deviation *or* deviating
DF	Direction finding
DFDR	Digital flight data recorder
DFTI	Distances from touchdown indicator

DH	Decision height
DIA~	Diameter
DIF	Diffuse
DIST	Distance
DIV	Divert *or* diverting
DLA	Delay *or* delayed
DLA	Delay *(message type designator)*
DLIC	Data link initiation capability
DLY	Daily
DME‡	Distance measuring equipment
DNG	Danger or dangerous
DOF	Date of flight
DOD~	Department of Defence
DOM	Domestic
DOT~	Department of Transport
DP	Dew point temperature
DPT	Depth
DR	Dead reckoning
DR ...	Low drifting *(followed by DU=dust, SA-sand or SN=snow)*
DRG	During
DS	Duststorm
DSB	Double sideband
DTAM	Descend to and maintain
DTG	Date-time group
DTHR	Displaced runway threshold
DTRT	Deteriorate *or* deteriorating
DTW	Dual tandem wheels
DU	Dust
DUC	Dense upper cloud
DUPE#	This is a duplicate message *(to be used in AFS as a procedure signal)*
DUR	Duration
D-VOLMET	Data link VOLMET
DVOR	Doppler VOR
DW	Dual wheels
DZ	Drizzle

E

E	East *or* eastern longitude
EAT	Expected approach time
EB	Eastbound
EDA	Elevation differential area
EDTO	Extended diversion time operations
EEE#	Error *(to be used in AFS as a procedure signal)*
EET	Estimated elapsed time
EFC	Expect further clearance
EFIS†	*(to be pronounced "EE-FIS")* Electronic flight instrument system
eFPL	Filed flight plan exchanged via flight and flow - information for a collaborative environment (FF-ICE) services
EGNOS†	*(to be pronounced "EGG-NOS")* European geostationary overlay service
EHF	Extremely high frequency [30000 to 300000 MHz]
EL/REIL~	Runway end lights/Runway end identifier lights.
ELBA†	Emergency location beacon - aircraft
ELEV	Elevation
ELR	Extra long range
ELT	Emergency locator transmitter
EM	Emission
EMBD	Embedded in a layer *(to Indicate cumulonimbus embedded in layers of other clouds)*
EMERG	Emergency

END	Stop-end *(related to RVR)*
ENE	East-north-east
ENG	Engine
ENR	En route
ENRC...	Enroute chart *(followed by name/ title)*
EOBT	Estimated off-block time
EQN	Equatorial latitudes northern hemisphere
EQPT	Equipment
EQS	Equatorial latitudes southern hemisphere
EROPS~	Extended range operations
ESE	East-south-east
EST	Estimate *or* estimated *or* estimation *(message type designator)*
ETA*‡	Estimated time of arrival *or* estimating arrival
ETD‡	Estimated time of departure *or* estimating departure
ETO	Estimated time over significant point
ETOPS~	Extended range operations with twin-engine aircraft
EUR RODEX	European regional OPMET data exchange
EV	Every
EVS	Enhanced vision system
EXC	Except
EXER	Exercises *or* exercising *or* to exercise
EXP	Expert *or* expected *or* expecting
EXTD	Extend *or* extending *or* Extended
F	
F	Fixed
F~	Sequenced flashing lights
FA	Course from a fix to an altitude
FAC	Facilities
FAD~	Danger Area *(South Africa)*
FAF	Final approach fix
FAL	Facilitation of international air transport
FAP	Final approach point
FAP~	Prohibited area *(South Africa)*
FAR~	Restricted area *(South Africa)*
FAS	Final approach segment
FATO	Final approach and take-off area
FAX	Facsimile transmission
FBL	Light *(used to indicate the Intensity of weather phenomena, Interference or static reports, e.g. FBL RA = light rain)*
FC	Funnel cloud *(tornado or water spout)*
FCST	Forecast
FCT	Friction coefficient
FDPS	Flight data processing system
FEB	February
FEW	Few
FG	Fog
FIC	Fight Information centre
FIR‡	Flight Information region
FIS	Flight Information service
FISA	Automated flight information service
FL	Flight level
FLD	Field
FLG	Flashing
FLO~	Floodlights
FLR	Flares
FLT	Flight
FLTCK	Flight check

FLUC	Fluctuating or fluctuation *or* fluctuated
FLW	Follow(s) *or* following
FLY	Fly *or* flying
FM	Course from a fix to manual termination *(used in navigation database coding)*
FM	From
FM...	From *(followed by time weather change is forecast to begin)*
FMC	Flight management computer
FMS‡	Flight management system
FMU	Flow management unit
FNA	Final approach
FPAP	Flight path alignment point
FPL	Filed flight plan exchanged via aeronautical fixed service (AFS)
FPM	Feet per minute
FPR	Flight plan route
FPU~	Filed flight plan *(message type designator)*
FR	Fuel remaining
FREQ	Frequency
FRI	Friday
FRNG	Firing
FRONT†	Front *(relating to weather)*
FROST†	Frost *(used In aerodrome warnings)*
FRQ	Frequent
FS~	French standard *(Angle of approach)*
FSL	Full stop landing
FSS	Flight service station
FST	First
FT	Feet *(dimensional unit)*
FTA~	Flight training area
FTE	Flight technical error
FTP	Fictitious threshold point
FTT	Flight technical tolerance
FU	Smoke
FZ	Freezing
FZDZ	Freezing drizzle
FZFG	Freezing fog
FZRA	Freezing rain

G

G	Green
G...	Variations from the mean wind speed (gusts) *(followed by figures in METAR/SPECI and TAF)*
GA	Go ahead, resume sending *(to be used in AFS as a procedure signal)*
GA	General aviation
G/A	Ground-to-air
G/A/G	Ground-to-air and air-to-ground
GAGAN†	GPS and geostationary earth orbit augmented navigation
GAIN	Airspeed or headwind gain
GAMET	Area forecast for low-level flights
GARP	GBAS azimuth reference point
GBAS†	*(to be pronounced "GEE-BAS")* Ground-based augmentation system
GCA‡	Ground controlled approach system *or* ground controlled approach
GEN	General
GEO	Geographic *or* true
GES	Ground earth station
GLD	Glider
GLONASS†	*(to be pronounced “GLO-NAS”)* Global orbiting navigation satellite system

GLS‡	GBAS landing system
GMC...	Ground movement chart *(followed by name /title)*
GND	Ground
GNDCK	Ground check
GNSS‡	Global navigation satellite system
GOV	Government
GP	Glide path
GPA	Global path angle
GPIP	Glide path intercept point
GPS‡	Global positioning system
GPU	Ground power unit
GPWS‡	Ground proximity warning system
GR~	Earth *(runway)*
GR	Hail
GRAS†	*(to be pronounced "GRASS")* Ground-based regional augmentation system
GRASS	Grass landing area
GRAV~	Gravel *(Runway)*
GRIB	Processed meteorological data in the form of grid point values expressed in binary form *(meteorological code)*
GRVL	Gravel
GS~	Grass (Runway)
GS	Ground speed
GS	Small hail and/or snow pellets
GUND	Geoid undulation
g/m^3~	Grams per cubic meter

H

H~	High intensity
H	High pressure area *or* the centre of high pressure
H...	Significant wave height *(followed by figures in METAR/SPECI)*
H24	Continuous day and night service
HA	Holding/racetrack to an altitude
HAPI	Helicopter approach path indicator
HBN	Hazard beacon
HDF	High frequency direction-finding station
HDG	Heading
HEL	Helicopter
HF‡	High frequency [3 000 to 30 000 kHz]
HF	Holding/racetrack to a fix
HGT	Height *or* height above
HJ	Sunrise to sunset
HLDG	Holding
HLS	Helicopter landing site
HM	Holding/racetrack to a manual termination
HN	Sunset to sunrise
HNH	High latitudes northern hemisphere
HO	Service available to meet operational requirements
HOD~	Hours of duty
HOL	Holiday
HOSP	Hospital aircraft
HPA	Hectopascal
HLP	Heliport
HR	Hours
HS	Service available during hours of scheduled operations
HSH	High latitudes southern hemisphere
HST~	High speed turn-off lights
HUD	Head-up display
HUM	Humanitarian

HURCN	Hurricane
HVDF	High and very high frequency direction finding stations *(at the same location)*
HVY	Heavy
HVY	Heavy *(used to indicate the intensity of weather phenomena, e.g. HVY RA = heavy rain)*
HX	No specific working hours
HYR	Higher
HZ	Haze
HZ	Hertz *(cycle per second)*

I

IAC...	Instrument approach chart *(followed by name/title)*
IAF	Initial approach fix
IAL~	Instrument approach and landing chart
IALS~	Intermediate approach lighting system
IAO	In and out of clouds
IAP	instrument approach procedure
IAR	Intersection of air routes
IAS	Indicated air speed
IBN	Identification beacon
ICAO	International Civil Aviation Organization
ICE	Icing
ID	Identifier *or* Identify
IDENT†	Identification
IF	Intermediate approach fix
IFF	Identification friend/foe
IFR‡	Instrument flight rules
IGA	International general aviation
ILS‡	Instrument landing system
IM	Inner marker
IMC‡	Instrument meteorological conditions
IMG	Immigration
IMI*	Interrogation sign (question mark) *(to be used in AFS as a procedure signal)*
IMPR	Improve *or* improving
IMT	Immediate *or* immediately
INA	Initial approach
INBD	Inbound
INC	In cloud
INCORP	Incorporated
INCERFA†	Uncertainty phase
INFO†	Information
INOP	Inoperative
INP	If not possible
INPR	In progress
INS	Inertial navigation system
INSTL	Install *or* installed *or* installation
INSTR	Instrument
INT	Intersection
INTL	International
INTRG	Interrogator
INTRP	Interrupt *or* interruption *or* Interrupted
INTSF	Intensify *or* intensifying
INTST	Intensity
IR	Ice on runway
IRS	Inertial reference system
ISA	International standard atmosphere
ISB	Independent sideband
ISOL	Isolated

J

JAN	January
JTST	Jet stream
JUL	July
JUN	June
K	
KG	Kilograms
KHZ	Kilohertz
KIAS	Knots indicated airspeed
KM	Kilometres
KMH	Kilometres per hour
KPA	Kilopascal
KT	Knots
KW	Kilowatts
kg/cm2~	Kilograms per square centimetre
L	
...L	Left *(preceded by runway designation number to identify a parallel runway)*
L	Locator *(see LM, LO)*
L	Low intensity
L	Low pressure area *or* the centre of low pressure
L	Litre
LAM	Logical acknowledgement *(message type designator)*
LAN	Inland
LASS~	Lowveld Military Airspace Sector
LAT	Latitude
LB~	3 Bar VASI (Long bodied)
LCA	Local *or* locally *or* location *or* located
LCN~	Load classification number
LDA	Landing distance available
LDAH	Landing distance available, helicopter
LDG	Landing
LDI	Landing direction Indicator
LDIN~	Sequenced flashing lead in lights
LEN	Length
LF	Low frequency [30 to 300 kHz]
LGT	Light *or* lighting
LGTD	Lighted
LIH	Light intensity high
LIL	Light Intensity low
LIM	Light intensity medium
LINE	Line *(used in SIGMET)*
LM	Locator middle
LMT	Local mean time
LNAV†	*(to be pronounced "EL-NAV")* Lateral navigation
LNG	long *(used to indicate the type of approach desired or required)*
LO	Locator, outer
LOC	Localizer
LONG	Longitude
LORAN†	LORAN *(long range air navigation system)*
LOSS	Airspeed or headwind loss
LPV	Localizer performance with vertical guidance
LR	The last message received by me was... *(to be used in AFS as a procedure signal)*
LRG	Long range
LS	The last message sent by me was.... or Last message was... *(to be used in AFS as a procedure signal)*
LTA	Lower control area
LTD	Limited
LTP	Landing threshold point

LV	Light and variable *(relating to wind)*
LVE	Leave *or* leaving
LVL	Level
LVP	Low visibility procedures
LYR	Layer *or* layered
M	
M~	Medium intensity
...M	Metres *(preceded by figures)*
M...	Mach number *(followed by figures)*
M...	Minimum value of runway visual range *(followed by figures In METAR/SPECI)*
MAA	Maximum authorized altitude
MAG	Magnetic
MAHF	Missed approach holding fix
MAINT	Maintenance
MALS~	Medium intensity approach system. May be installed with sequenced flashing lights (MALSF) or runway alignment indicator lights (MALSR).
MAP	Aeronautical maps and charts
MAPT	Missed approach point
MAR	At sea
MAR	March
MATF	Missed approach turning fix
MATZ	Military aerodrome traffic zone
MAX	Maximum
MAY	May
MBST	Microburst
MCA	Minimum crossing altitude
MCM	Maximum certified mass
MCTR	Military control zone
MCW	Modulated continuous wave
MDA	Minimum descent altitude
MDA/H~	Minimum descent altitude/height
MDF	Medium frequency direction-finding station
MDH	Minimum descent height
MEA	Minimum en-route altitude
MEDEVAC	Medical evacuation flight
MEHT	Minimum eye height over threshold *(for visual approach slope indicator system)*
MEL~	Minimum equipment list
MET†	Meteorological *or* meteorology
METAR†	Aerodrome routine meteorological report *(in meteorological code)*
MET REPORT	Local routine meteorological report *(in abbreviated plain language)*
MF	Medium frequency [300 kHz to 3000 kHz]
MHA	Minimum holding altitude
MHDF	Medium and high frequency direction-finding stations *(at the same location)*
MHVDF	Medium, high and very high frequency direction-finding station *(at the same location)*
MHZ	Megahertz
MID	Mid-point *(related to RVR)*
MIFG	Shallow fog
MIL	Military
MIN*	Minutes
MIS	Missing... *(transmission identification) (to be used in AFS as a procedure signal)*
MKR	Marker radio beacon
MLS‡	Microwave landing system
MM	Middle marker

MNH	Middle latitudes northern hemisphere
MNM	Minimum
MNPS	Minimum navigation performance specifications
MNT	Monitor *or* monitoring *or* monitored
MNTN	Maintain
MOA	Military operating area
MOC	Minimum obstacle clearance *(required)*
MOCA	Minimum obstacle clearance altitude
MOD	Moderate *(used to indicate the intensity of weather phenomena, interference or static reports e.g, MODRA - moderate rain)*
MON	Above-mountains
MON	Monday
MOPS†	Minimum operational performance standards
MOV	Move *or* moving *or* movement
MPS	Meters per second
MRA	Minimum reception altitude.
MRG	Medium range
MRP	ATS/MET reporting point
MS	Minus
MSA	Minimum sector altitude
MSAS†	*(to be pronounced "EM-SAS")* Multifunctional transport satellite (MTSAT) satellite-based augmentation system
MSAW	Minimum safe altitude warning
MSG	Message
MSH	Middle latitudes southern hemisphere
MSL	Mean sea level
MSR#	Message... *(transmission identification)* has been misrouted *(to be used in AFS as a procedure signal)*
MSSR	Monopulse secondary surveillance radar
MT	Mountain
MTOM	Maximum take-off mass
MTU	Metric units
MTW	Mountain waves
MUNICIP~	Municipality, Town Council, etc.
MVDF	Medium and very high frequency direction-finding station *(at the same location)*
MWO	Meteorological watch office
MX	Mixed type of ice formation *(white and clear)*

N

N	No distinct tendency *(in RVR during previous 10 minutes)*
N	North *or* northern latitude
NA~	Not authorized
NADP	Noise abatement departure procedure
NASC†	National AIS system centre
NAT	North Atlantic
NAV	Navigation
NAVAID	Navigation aid
NB	North bound
NBFR	Not before
NC	No change
NCD	No cloud detected *(used in automated METAR/SPECI)*
NDB‡	Non-directional Radio Beacon
NDV	No directional variations available *(used in automated METAR/ SPECI)*

NE	North-east
NEB	North-eastbound
NEG	No *or* negative *or* permission not granted *or* that is not correct
NGT	Night
NIL*†	None *or* I have nothing to send to you
NM	Nautical miles
NML	Normal
NN	No name, unnamed
NNE	North north-east
NNW	North north-west
NO	No (negative) *(to be used in AFS as a procedure signal)*
NOF	International NOTAM office
NONSTD	Non-standard
NOSIG†	No significant change *(used in trend-type landing forecasts)*
NOTAM†	A notice distributed by means of telecommunication containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations
NOTAMC	Cancelling NOTAM
NOTAMN	New NOTAM
NOTAMR	Replacing NOTAM
NOV	November
NOZ‡	Normal operating zone
NPA	Non precision approach
NR	Number
NRH	No reply heard
NS	Nimbostratus
NSC	Nil significant cloud
NSE	Navigation system error
NSW	Nil significant weather
NTL	National
NTZ‡	No transgression zone
NW	North-west
NWB	North-westbound
NXT	Next

O

(O)~	Omni-directional
O~	Oil
OAC	Oceanic area control centre
OAS	Obstacle assessment surface
OBS	Observe *or* observed *or* observation
OBSC	Obscure *or* obscured *or* obscuring
OBST	Obstacle
OCA	Obstacle clearance altitude
OCA	Oceanic control area
OCC	Occulting *(light)*
OCH	Obstacle clearance height
OCNL	Occasional *or* occasionally
OCS	Obstacle clearance surface
OCT	October
ODALS~	Omni-directional sequenced flashing lead in lights.
OFZ	Obstacle free zone
OGN	Originate (to be used in AFS as a procedure signal)
OHD	Overhead
OIS	Obstacle identification surface
OK*	We agree *or* it is correct (to be used in AFS as a procedure signal)
OLDI†	On-line data Interchange
OM	Out marker

OPA	Opaque, white type of ice formation
OPC	Control indicated is operational control
OPMET†	Operational meteorological *(information)*
OPN	Open *or* opening *or* opened
OPR	Operator *or* operate *or* operative *or* operating *or* operational
OPS†	Operations
O/R	On request
ORD	Order
OSV	Ocean station vessel
OTH~	Other
OTP	On top
OTS	Organized track system
OUBD	Out-bound
OVC	Overcast
P	
P...	Maximum value of wind speed or runway visual range *(followed by METAR/SPECI and TAF)*
P...	Prohibited area *(followed by identification)*
P~	Precision approach path indicator
PA	Precision approach
PALS	Precision approach lighting system *(specify category)*
PANS	Procedures for air navigation services
PAPI†	Precision approach path indicator
PAR‡	Precision approach radar
PARL	Parallel
PATC...	Precision approach terrain chart *(followed by name/title)*
PAX	Passenger(s)
PB~	Private Bag
PBC	Performance-based communication
PBE~	Portable breathing equipment
PBN	Performance-based navigation
PBS	Performance-based surveillance
PC~	Contingency procedures
PCD	Proceed *or* proceeding
PCL	Pilot-controlled lighting
PCN	Pavement classification number
PCR	Pavement classification rating
PCT	Per cent
PDC‡	Pre-departure clearance
PDG	Procedure design gradient
PER	Performance
PERM	Permanent
PF~	Paraffin Flares
PFP	Preliminary flight plan
PIB	Pre-flight Information bulletin
PJE	Parachute jumping exercise
PL	Ice pellets
PLA	Practice low approach
PLVL	Present level
PN	Prior notice required
PNR	Point of no return
PO	Dust devils/sand whirl (dust devil)
POB	Persons on board
POSS	Possible
PPI	Plan position Indicator
PPR	Prior permission required
PPSN	Present position
PRFG	Aerodrome partially covered by fog
PRI	Primary
PRIV~	Aerodrome licensed in Private category

PRKG	Parking
PROB†	Probability
PROC	Procedure
PROP	Propeller
PROV	Provisional
PRP	Point-in-space reference, point
PS	Plus
PSG	Passing
PSI~	Pounds per square inch
PSN	Position
PSP	Pierced steel plank
PSR‡	Primary surveillance radar
PSYS	Pressure system(s)
PTN	Procedure turn
PTS	Polar track structure
PUB~	Aerodrome licensed in the public category
PWR	Power

Q

QDL~	Do you intend to ask me for a series of bearings? or I intend to ask you for a series of bearings *(to be used in radiotelephony as a Q code)*
QDM‡	Magnetic heading *(zero wind)*
QDR	Magnetic, bearing
QFE‡	Atmospheric pressure at aerodrome elevation *(or at runway threshold)*
QFU	Magnetic orientation of runway
QGE	What is my distance to your station? *or* Your distance to my station is *(distance figures and units) (to be used in radiotelephony as a Q code)*
QJH	Shall I run my test tape/a test sentence? *or* Run your test tape/ a test sentence *(to be used in AFS as a Q code)*
QNE~	Indicated height on landing, with altimeter sub-scale set lo 1013,2 hectopascals
QNH‡	Altimeter sub-scale setting to obtain elevation when on the ground
QSP	Will you relay to... free of charge? *or* I will relay to... free of charge (*to be used in AFS as a Q code)*
QTA	Shall I cancel telegram number...? or Cancel telegram number (to be used in AFS as a Q code)
QTE	True bearing
QTF	Will you give me the position of my station according to the bearings taken by the D/F stations which you control? *or* The position of your station according to the bearings taken by the D/F stations that I control was...latitude...longitude (*or* other indication of position), class...at...hours *(to be used in radiotelegraphy as Q Code)*
QUAD	Quadrant
QUJ	Will you indicate the TRUE track to reach you? or The TRUE track to reach me is...degrees at... hours *(to be used in radiotelephony as a Q code)*

R

(R)~	VOR Radial
... R	Right *(preceded by runway designation number to identify a parallel runway)*
R	Rate of turn
R	Red

R...	Restricted area *(followed by identification)*
R ...	Runway *(followed by figures in METAR/SPECI)*
R*	Received *(acknowledgement of receipt) (to be used in AFS as a procedure signal)*
R...	Radial from VOR *(followed by three figures)*
R/T~	Radio Telephony
RA	Rain
RA	Resolution advisory
RAC	Rules of the air and air traffic services
RAFC~	Regional area forecast centre
RAG	Ragged
RAG	Runway arresting gear
RAI	Runway alignment Indicator
RAIL~	Runway alignment indicator lights *(always installed with other lighting systems.)*
RAIM†	Receiver autonomous integrity monitoring
RASC†	Regional AIS system centre
RASS	Remote altimeter setting source
RB	Rescue Boat
RCA	Reach cruising altitude
RCC	Rescue Co-ordination centre
RCF	Radiocommunication failure *(message type designator)*
RCH	Reach *or* reaching
RCL	Runway centre line
RCLL	Runway centre line light(s)
RCLR	Recleared
RCP‡	Required communication performance
RDOACT	Radioactive
Rd~	Red
RDH	Reference datum height
RDH~	Reference datum height (for ILS)
RDL	Radial
RDO	Radio
RE...	Recent *(used to qualify weather phenomena e.g. RERA - recent rain)*
REC	Receive *or* receiver
REDL	Runway edge light(s)
REF	Reference to... *or* refer to...
REG	Registration
REIL~	Runway end lights/Runway end identifier lights.
RENL	Runway end light(s)
REP	Report *or* reporting *or* reporting point
REQ	Request *or* requested
RERTE	Re-route
RESA	Runway end safety area
RF	Constant radius arc to a fix
RFFS	Rescue and fire services
RG	Range *(lights)*
RHC	Right-hand circuit
RIF	Reclearance in flight
RIME†	Rime *(used in aerodrome warnings)*
RL	Report leaving
RL~	Runway edge lights
RLA	Relay to
RLCE	Request level change en-route
RLLS	Runway lead-in lighting system
RLNA	Requested level not available
RMK	Remark
RNAV†	*(to be pronounced "AR-NAV")* Area navigation

RNG	Radio range
RNP‡	Required navigation performance
ROBEX†	Regional OPMET bulletin exchange *(scheme)*
ROC	Rate of climb
ROD	Rate of descent
ROLL~	Runway centre line light(s)
RON	Receiving only
RPDS	Reference path data selector
RPI‡	Radar position indicator
RPL	Repetitive flight plan
RPLC	Replace *or* replaced
RPS	Radar position symbol
RPT*	Repeat *or* I repeat *(to be used in AFS as a procedure signal)*
RQ*	Request *(to be used in AFS as a procedure signal)*
RQ~	Indication of a request *(to be used in AFS as a procedure signal)*
RQMNTS	Requirements
RQP	Request flight plan *(message type designator)*
RQS	Request supplementary flight plan *(message type designator)*
RR	Report reaching
RRA	*(or RRB, RRC...etc in sequence)* Delayed meteorological message *(message type designator)*
RSA~	Republic of South Africa
RSC	Rescue sub-centre
RSCD	Runway surface condition
RSP‡	Required surveillance performance
RSP	Responder beacon
RSR	En-route surveillance radar
RSS	Root sum square
RTD	Delayed *(used to indicate delayed meteorological message; message type designator)*
RTE	Route
RTF	Radiotelephone
RTG	Radiotelegraph
RTHL	Runway threshold light(s)
RTN	Return *or* returned *or* returning
RTODAH	Rejected take-off distance available, helicopter
RTS	Return to service
RTT	Radio teletypewriter
RTZL	Runway touchdown zone light(s)
RUT	Standard regional route transmitting frequencies
RV	Rescue vessel
RVA	Radar vectoring area
RVR‡	Runway visual range
RVSM‡	Reduced vertical separation minimum (300 m (1000 ft) between FL 290 and FL 410
RWY	Runway
S	
S	South *or* southern latitude
S...	State of the sea *(followed by figures in METAR/SPECI)*
S~	Standard VASI
S~	Strobes
S1~	Hangarage
S2~	Hangarage and minor aircraft repairs
S3~	Hangarage, minor aircraft repairs and minor engine repairs
S4~	Hangarage, major aircraft repairs and minor engine repairs
S5~	Hangarage, major aircraft repairs and engine repairs

SA	Sand
SACAA~	South African Civil Aviation Authority
SA-CARS~	South African Civil Aviation Regulations
SALS~	Short approach light system. May be installed with sequenced flashing lights (SALSF) or runway alignment indicator lights (SALSR)
SALS	Simple approach lighting system
SAN	Sanitary
SAND~	Sandy soil
SANDF~	South African National Defence Force
SAPS~	South African Police Service
SAR	Search and rescue
SARPS	Standards and Recommended Practices [ICAO]
SAT	Saturday
SATCOM†	Satellite communication *(used only when referring generally to both voice and data satellite communication or only data satellite communication)*
SATVOICE †	Satellite voice communication
SB	Southbound
SBAS†	*(to be pronounced "ESS-BAS")* Satellite-based augmentation system
SC	Stratocumulus
SCT	Scattered
Sd~	Sodium
SD	Standard deviation
SDBY	Stand by
SDF	Step down fix
SE	South-east
SEA	Sea *(used in connection with sea surface temperature and state of the sea)*
SEB	South-Eastbound
SEC	Seconds
SECN	Section
SECT	Sector
SELCAL†	Selective calling system
SEP	September
SER	Service *or* servicing *or* served
SEV	Severe *(used e.g. to qualify icing and turbulence reports)*
SFC	Surface
SG	Snow grains
SGL	Signal
SH …	Shower *(followed by RA = rain, SN = snow, PL = ice pellets, GR = hail, GS = small hail and/or snow pellets or combinations thereof, e.g. SHRASN = showers of rain and snow)*
SHF	Super high frequency [3 000 to 30 000 MHz]
SI	International system of units
SID†	Standard instrument departure
SIF	Selective identification feature
SIG	Significant
SIGMET†	information concerning en-route weather and other phenomena in the atmosphere that may affect the safety of aircraft operations
SIMUL	Simultaneous *or* simultaneously
SITA~	Societe international de Telecommunication Aeronautique *(a private satellite communication system)*
SIWL	Single isolated wheel load
SKED	Schedule or scheduled
SLP	Speed limiting point

SLW	Slow
SMC	Surface movement control
SMR	Surface movement radar
SN	Snow
SNOCLO	Aerodrome closed due to snow *(used in the METAR/SPECI)*
SNOWTAM †	A special series NOTAM notifying the presence or removal of hazardous conditions due to snow, ice, slush or standing water associated with snow, slush and ice on the movement area, by means of a specific format
SOC	Start of climb
SPECI†	Aerodrome special meteorological report (in meteorological code)
SPECIAL†	Local special meteorological report *(in abbreviated plain language)*
SPI	Special position indicator
SPL	Supplementary flight plan *(message type designator)*
SPOC	SAR point of contact
SPOT†	Spot wind
SQ	Squall
SQL	Squall line
SR	Sunrise
SRA	Surveillance radar approach
SRE	Surveillance radar element of precision approach radar system
SRG	Short range
SRR	Search and rescue region
SRY	Secondary
SS	Sandstorm
SS	Sunset
SSALS~	Simplified short approach light system. May be installed with sequenced flashing lights (SSALS) or runway alignment indicator lights (SSALR)
SSB	Single sideband
SSE	South-south-east
SSR‡	Secondary surveillance radar
SST	Supersonic transport
SSW	South-south-west
ST	Stratus
STA	Straight-in approach
STAR†	Standard instrument arrival route
STD	Standard
STF	Stratiform
STN	Station
STNR	Stationary
STOL	Short take-off and landing
STS	Status
STWL	Stopway light(s)
SUBJ	Subject to
SUN	Sunday
SUP	Supplement *(AIP Supplement)*
SUPPS	Regional supplementary procedures
SVC	Service *(message type only)*
SVCBL	Serviceable
SW	South-west
SWB	South-westbound
SWX	Space weather
SWXC	Space weather centre
SWY	Stopway
T	
T~	"T" Type
T	Temperature

...T	True *(preceded by a bearing to indicate reference to True North)*
TA	Traffic advisory
TA	Transition altitude
TAA	Terminal arrival altitude
TACAN†	UHF tactical air navigation aid
TAF†	Aerodrome forecast *(in meteorological code)*
TA/H	Turn at an altitude/height
TAIL†	Tail, wind
TAR	Terminal area surveillance radar
TAS	True airspeed
TAX	Taxiing *or* taxi
TC	Tropical cyclone
TCAC	Tropical cyclone advisory centre
TCAS RA†	*(to be pronounced "TEE-CAS-AR-AY")* Traffic alert and collision avoidance system resolution advisory
TCH	Threshold crossing height
TCU	Towering cumulus
TDO	Tornado
TDZ	Touchdown zone
TECR	Technical reason
TEL	Telephone
TEMPO†	Temporary *or* temporarily
TF	Track to fix
TF~	Turbine Fuel
TFC	Traffic
TGL	Touch-and-go landing
TGS	Taxiing guidance system
THR	Threshold
THRU	Through
THU	Thursday
TIBA†	Traffic information broadcast by aircraft
TIL†	Until
TIP	Until past...*(place)*
TKOF	Take-off
TL...	Till *(followed by time by which weather change is forecast to end)*
TLOF	Touchdown and lift-off area
TMA‡	Terminal control area
TMM~	Transmissometer
TN...	Minimum temperature *(followed by figures in TAF)*
TNA	Turn altitude
TNH	Turn height
TO...	To...*(place)*
TOC	Top of climb
TODA	Take-off distance available
TODAH	Take-off distance available, helicopter
TOP†	Cloud top
TORA	Take-off run available
TOX	Toxic
TP	Turning point
TPI~	Traffic Pattern Indicator
TR	Track
TRA	Temporary reserved airspace
TRANS	Transmits *or* transmitter
TREND†	Trend forecast
TRL	Transition level
TRG	Training
TROP	Tropopause
TS	Thunderstorm *(in aerodrome reports and forecasts, TS used alone means thunder heard but no precipitation at the aerodrome)*

TS...	Thunderstorm *(followed by RA = rain, SN = snow, PL = ice pellets, GR = hail, GS = small hair and/or snow pellets or combinations thereof e.g. TSRASN = thunderstorm with rain and snow)*
TSO*	Technical Standard Order
TSUNAMI†	Tsunami *(used in aerodrome warnings)*
TT	Teletypewriter
TUE	Tuesday
TURB	Turbulence
T-VASIS†	*(to be pronounced "TEE-VASIS")* T visual approach slope indicator systems
TVOR	Terminal VOR
TWR	Aerodrome control tower *or* Aerodrome control
TWY	Taxiway
TX	Maximum temperature *(followed by figures in TAF)*
TXL	Taxilane
TXT*	Text *(when the abbreviation is used to request a repetition, the question mark (IMI) precedes the abbreviation, e.g. IMI TXT) (to be used in AFS as a procedure signal)*
TYP	Type of aircraft
TYPH	Typhoon
U	
(u)~	Uni-directional
U	Upward *(tendency in RVR during previous 10 minutes)*
UA	Unmanned aircraft
UAB	Until advised by...
UAC	Upper area control centre
UAR	Upper air route
UAS	Unmanned aircraft system
UDF	Ultra high frequency direction-finding station
UFN	Until further notice
UHDT	Unable higher due traffic
UHF‡	Ultra high frequency [300 to 3000 MHz]
UIC	Upper information centre
UIR‡	Upper flight Information region
ULM	Ultra light motorized aircraft
ULR	Ultra long range
UNA	Unable
UNAP	Unable to approve
UNL	Unlimited
UNREL	Unreliable
UP	Unidentified precipitation *(used in automated METAR/SPECI)*
U/S	Unserviceable
UTA	Upper control area
UTC‡	Coordinated Universal Time
V	
V~	High intensity
V	Variations from the mean wind direction *(preceded and followed by figures in METAR/SPECI, e.g. 350V070)*
VA	Heading to an altitude
VA	Volcanic ash
VAAC	Volcanic ash advisory centre
VAC	Visual approach chart *(followed by name/title)*
VAL	In valleys
VAN	Runway control van
VAR	Magnetic variation
VAR	Visual-aural radio range

VASIS	Visual approach slope indicator system
VC...	Vicinity of the Aerodrome *(followed by FG = fog, FC = funnel cloud, SH = shower, PO = dust/sand whirls, BLDU = blowing dust, BLSA = blowing sand, BLSN = blowing snow, DS = duststorm, SS = sandstorm, TS = thunderstorm or VA = volcanic ash, e.g. VCFG = vicinity fog)*
VCCS~	Voice Control Communication System
VCY	Vicinity
VDF	Very high frequency direction-finding station
VER	Vertical
VFR‡	Visual flight rules
VHF‡	Very high frequency (30 to 300 MHz)
VI	Heading to an intercept
VIP‡	Very important person
VIS	Visibility
VLF	Very low frequency [3 to 30 kHz]
VLR	Very long range
VM	Heading to a manual termination
VMC‡	Visual meteorological conditions
VNAV†	*(to be pronounced "VEE-NAV")* Vertical navigation
VOL	Volume (followed by I, II...)
VOLMET†	Meteorological information for aircraft in flight
VOR‡	VHF omnidirectional radio range
VORTAC†	VOR and TACAN combination
VOT	VOR airborne equipment test facility
VPA	Vertical path angle
VPT	Visual manoeuvre with prescribed track
VRB	Variable
VSA	By visual reference to the ground
VSP	Vertical speed
VTF	Vector to final
VTOL	Vertical take-off and landing
VV...	Vertical visibility *(followed by figures in METAR/SPECI and TAF)*

W

W	West *or* western longitude
W	White
W...	Sea-surface temperature *(followed by figures in METAR/SPECI)*
W~	Watt
WAAS†	Wide area augmentation system
WAC	World Aeronautical Chart-ICAO 1:1 000 000 *(followed by name/title)*
WAFC	World area forecast centre
WB	Westbound
WB~	Wing bar *(lights always green unless specified)*
WBAR	Wing bar lights
WDI	Wind direction indicator
WDSPR	Widespread
WED	Wednesday
WEF	With effect from *or* effective from
WGS-84	World Geodetic System - 1984
WH~	Blasting
WI	Within
WID	Width *or* wide
WIE	With immediate effect *or* effective immediately
WILCO†	Will comply
WIND	Wind

WIP	Work in progress
WKN	Weaken *or* weakening
WNW	West-north-west
WO	Without
WPT	Way-point
WRNG	Warning
WS	Wind shear
WSPD	Wind speed
WSW	West-south-west
WT	Weight
WTSPT	Waterspout
WWW	Worldwide web
WX	Weather
WXR	Weather radar
X	
X	Cross
XBAR	Crossbar *(of approach lighting system)*
XNG	Crossing
XS	Atmospherics
Y	
Y	Yellow
YCZ	Yellow caution zone *(runway lighting)*
YES*	Yes (affirmative) *(to be used in AFS as a procedure signal)*
YR	Your
Z	
Z	Coordinated Universal Time *(in meteorological messages)*

LIST OF DEFINITIONS/GLOSSARY OF TERMS

Calendar:	Discrete temporal reference system that provides the basis for defining temporal position to a resolution of one day (ISO 19108).
Geoid:	The equipotential surface in the gravity field of the Earth which coincides with the undisturbed mean sea level (MSL) extended continuously through the continents.
Geoid undulation:	The distance of the geoid above (positive) or below (negative) the mathematical reference ellipsoid.
Gregorian calendar:	Calendar in general use; first introduced in 1582 to define a year that more closely approximates the tropical year than the Julian calendar (ISO 19108).
Aeronautical Information Product	Aeronautical data and aeronautical information provided either as digital data sets or as a standardized presentation in paper or electronic media. Aeronautical information products include: AIP, including amendments and supplements; AIC; aeronautical charts; NOTAM and digital data sets.
Logon address:	A specified code used for data link logon to an ATS unit.
Portrayal:	Presentation of information to humans (ISO 19117).
Precision:	The smallest difference that can be reliably distinguished by a measurement process.
Route stage:	A route or portion of a route flown without an intermediate landing.
Station declination	An alignment variation between the zero degree radial of a VOR and true north, determined at the time the VOR station is calibrated.

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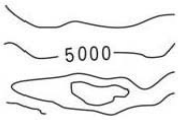
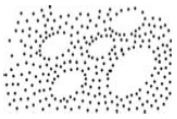
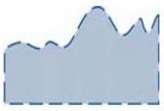
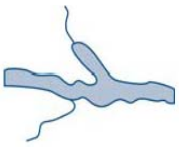
GEN 2.3 CHARTS SYMBOLS

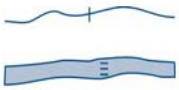
1. Topography	
Contours	
Approximate contours	
Relief shown by hachures	
Mountain pass	
Spot elevation	.6397 .8975
Spot elevation (of doubtful accuracy)	.6370+-

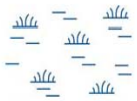
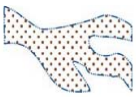
Highest elevation on chart	
Highest elevation on chart (Alternative)	
Bluff, cliff or escarpment	
Sand dunes	
Sand area	
Gravel	
Levee or esker	

Levee or esker (Alternative)	
Coniferous trees	
Other trees	
Palms	
Areas not surveyed for contour information or relief data incomplete	

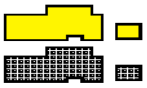
2. Hydrography	
Shore line (reliable)	
Shore line (unreliable)	

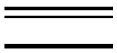
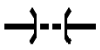
Tidal flats	
Coral reefs and ledges	
Large river (perennial)	
Small river (perennial)	
Rivers and streams (non-perennial)	
Rivers and streams (non~perennial) (Alternative)	
Rivers and streams (unsurveyed)	

Rapids	
Falls	
Canal	
Abandoned canal Note:- Dry canal having landmark value	
Lakes (perennial)	
Lakes (non-perennial)	
Lakes (non-perennial) (Alternative)	
Salt lake	
Salt pans (evaporator)	

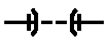
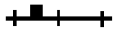
Swamp	
Spring, well or water hole (perennial)	
Spring, wen or water hole (intermittent)	
Reservoir	
Dry lake bed	
Dry lake bed (Alternative)	
Wash	
Wash (Alternative)	
Shoals	

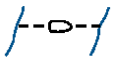
Danger line (2 M or one fathom line)	
Charted isolated rock	
Rock awash	
Unusual water features appropriately labelled	

3. Built-up areas	
City or large town	
Town	
Village	
Buildings	

4. Highways and Roads	
Dual highway	
Primary road	
Secondary road	
Trial	
Road bridge	
Road tunnel	

5. Railroads	
Railroad (single track)	
Railroad bridge	
Railroad (two or more tracks)	

Railroad (under construction)	
Railroad tunnel	
Railroad station	

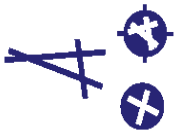
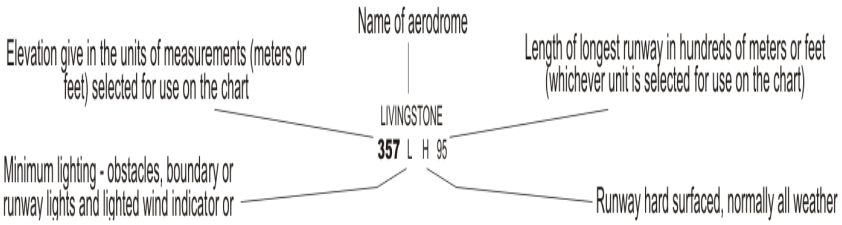
6 Miscellaneous	
Boundaries (international)	
Outer boundaries	
Fence	
Telegraph or telephone line (when a landmark)	
Dam	
Ferry	

Pipeline	
Oil or gas field	
Tank farms	
Nuclear power station	
Coast guard station	
Look out tower	
Mine	
Forest ranger station	
Race track or stadium	
Ruins	

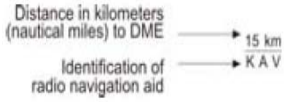
Fort	
Church	
Mosque	
Pagoda	
Temple	
Prominent transmission line	
Isogonic line or isogonal	
Ocean station vessel (normal position)	

7. Aerodromes	
Civil Land	

Civil Water	
Military Land	
Military Water	
Joint civil and military Land	
Joint civil and military Water	
Emergency aerodrome or aerodrome with no facilities	
Abandoned or closed aerodrome	
Sheltered anchorage	
Aerodrome for use on charts on which aerodrome classification is not required e.g. Enroute Charts	

Heliport (Note: Aerodrome for the exclusive use of helicopters)	
Note:- Where required by the function of the chart, the runway pattern of the aerodrome may he shown in lieu of the aerodrome symbols, for example	
Aerodrome data in abbreviated form which may he in association with aerodrome symbols.  	
Aerodromes affecting the traffic pattern on the aerodrome on which the procedure is based	
The aerodrome on which the procedure is based	

8. Radio Navigation Aids	
Basic radio navigation aid symbol (Note:-This symbol may be used with or without a box to enclose the data)	

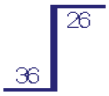
Non-directional radio beacon NDB	
VHF omnidirectional radio range VOR	
Distance measuring equipment DME	
Co-located VOR and DME radio navigation	
DME distance	
VOR radial	
UHF tactical air navigation aid (TACAN)	

Collocated VOR and TACAN radio navigation aids (VORTAC)	
Instrument landing system (ILS) Plan View	
Instrument landing system (ILS) Profile	
Radio marker beacon (Elliptical) Note:- Marker beacon may be shown by outline, or stipple, or both	
Compass rose To be orientated on the chart in accordance with the alignment of the station (normally Magnetic North) Note: Additional points of compass may be added as required	
Compass rose to be used as appropriate in combination with the following symbols:	
VOR	

VOR/DME	
TACAN	
VORTAC	

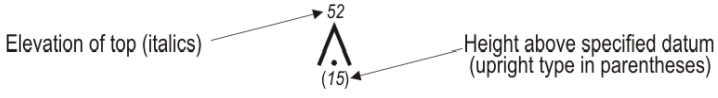
9. Air Traffic Services	
Flight information region (FIR)	
Aerodrome traffic zone (ATZ)	
ATC service boundary	
Control area (CTA) Airway (AWY) Controlled route	

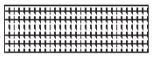
Uncontrolled route	
Advisory airspace (ADA)	
Control Zone (CTR)	
Air defence identification zone (ADIZ)	
Advisory route (ADR)	
Visual flight path compulsory, with radio communication requirement	
Visual flight path compulsory, without radio communication requirement	
Visual flight path recommended	
Scale-break (on ATS route)	

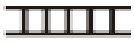
Scale-break (on ATS route) Alternative	
Reporting point Compulsory	
Reporting point On request	
Change-over point (COP) To be superimposed on the appropriate route symbol at right angles to the route	
Final Approach Fix (FAF)	
Altitudes/flight levels	
Altitude/flight level "window"	
“At or above” altitude/flight level	
"At or below" altitude/flight level"	
"Mandatory" altitude/flight level	
" Recommended ' procedure altitude/ flight level	

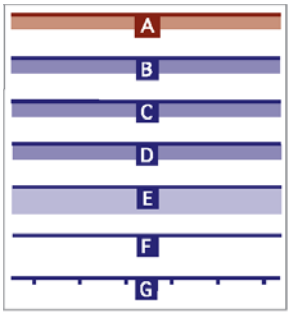
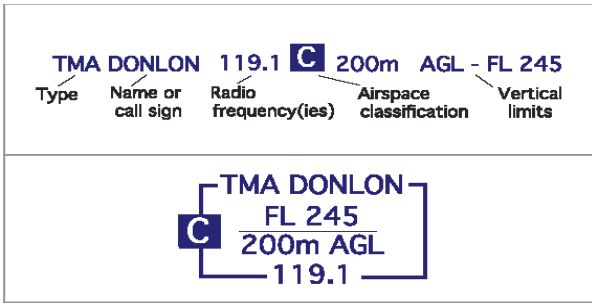
"Expected" altitude	Expect 5000 Expect FL 50
Note:For use only on SID and STAR charts. Not intended for depiction of minimum obstacle clearance altitude	

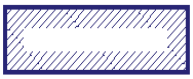
10. Obstacles	
Obstacle	
Group obstacle	
Lighted obstacle	
Lighted group obstacle	
Exceptionally high obstacle lighted (above 100m GND)	
Exceptionally high obstacle - lighted (optional symbol) Note: For obstacle having a height of the order of 300 m (1 000 ft) above terrain	

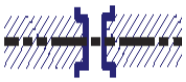


11. Aerodrome/Heliport Charts	
Hard surface runway	
Unpaved runway	
Stopway (SWY)	
Taxiways and parking areas	
Helicopter alight area on an aerodrome	
Aerodrome reference point (ARP)	
VOR check-point	
Runway visual (RVR) observation site	
Pierced steel plank or steel mesh runway	

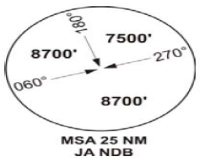
Point light	
Point light	
Obstacle light	
Landing direction indicator (lighted)	
Landing direction indicator (unlighted)	
Stop bar	
Runway-holding position Pattern A *Note: For application, see Annex 14, Volume I, paragraph 5.2.10*	
Runway-holding position Pattern B *Note: For application, see Annex 14, Volume I, paragraph 5.2.10*	

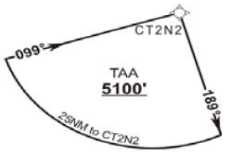
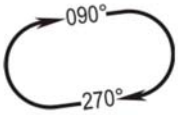
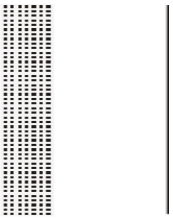
12. Airspace Classifications	
Airspace classifications	
Aeronautical data in abbreviated form to be used in association with airspace classification symbols	

13. Airspace Restrictions	
Restricted airspace (prohibited, restricted or danger area) Common boundary of two areas Note: - The angle and density of rulings may be varied according to scale and the size, shape and orientation of the area.	

International boundary closed to passage of aircraft except through air corridor	

14. Visual AIDS	
Marine light Note 2:- Characteristics are to be indicated as follows: *Note.- Marine alternating lights are red and white unless otherwise indicated. Marine lights are white unless colours are stated.* Alt Alternating B Blue F Fixed Fl Flashing G Green Gp Group Occ Occulting R Red SEC Sector sec Second (U) Unwatched W White	
Aeronautical ground light	
Lightship	

15. Additional Symbols for use on Paper and Electronic Charts	
PLAN VIEW	
Minimum sector altitude (MSA) Note:- This symbol may be modified to reflect particular sector shapes.	

Terminal arrival altitude (TAA) Note:- This symbol may be modified to reflect particular TAA shapes	
Holding pattern	
Missed approach track	
PROFILE	
Runway	
Radio navigation aid (type of aid and its use in the procedure to be annotated on top of the symbol)	
Radio Marker beacon (type of beacon to be annotated on top of the symbol)	

Collocated radio navigation aid and marker beacon (type of aid to be annotated on top of the symbol)	
DME fix (distance from DME and the fix use in the procedure to be annotated on top of the symbol)	
Collocated DME fix and marker beacon (distance from DME and the type of beacon to be annotated on top of the symbol).	

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GEN 2.4 LOCATION INDICATORS

The location indicators marked with an asterisk (*) cannot be used in the address component of AFS messages.

1. ENCODE	
LOCATION	**INDICATOR**
AGGENEYS	FAAG*
ALEXANDER BAY	FAAB*
ALIWAL NORTH	FAAN*
ALKANTPAN	FACO*
BEAUFORT WEST TOWN (MET)	FABY*
BETHLEHEM	FABM*
BHISHO	FABE
BIG WATER	FAGA*
BLACK ROCK	FABP*
BOSCHKOP (KITTY HAWK AERO ESTATE)	FAKT*
BRAM FISCHER INTL	FABL
BRAKPAN	FABB*
BRITS	FABS*
CALVINIA (MET)	FACV*
CAPE TOWN FIR	FACA
CAPE TOWN INTERNATIONAL	FACT
CAPE WINELANDS	FAWN*
CARNARVON	FACN*
CIVIL AVIATION AUTHORITY	FAHQ
DE AAR	FADA*
DE AAR (MET)	FADY*
DELAREYVILLE	FADL*
DWAALBOOM	FADB*
KING PHALO	FAEL
ERMELO	FAEO*
FICKSBURG	FAFB*
FREEWAY	FAFW*
GARDEN ROUTE AERO	FAPG*
GEORGE	FAGG
GEORGE DICK MONTSHIOA	FAMM

1. ENCODE	
LOCATION	**INDICATOR**
GRAAFF-REINET	FAGR*
GRAND CENTRAL	FAGC
GREYTOWN	FAGY*
GROBLERSDAL	FAGL*
HALFWEG	FAHI*
HEIDELBERG	FAHG*
HLUHLUWE	FAHL*
HOWICK	FAHC*
INTERNATIONAL NOTAM OFFICE	FAJN
IRENE (MET UPPER AIR/RESEARCH CENTRE)	FAIR*
JOHANNESBURG FIR	FAJA
JOHANNESBURG (CITY)	FAJB*
JOHANNESBURG OCEANIC	FAJO
KAROO GATEWAY	FABW*
KIMBERLEY	FAKM
KING SHAKA INTERNATIONAL	FALE
KLERKSDORP	FAKD*
KROONSTAD	FAKS*
KRUGERSDORP	FAKR*
KRUGER MPUMALANGA INTERNATIONAL	FAKN
KWANDWE	FAKG*
LADYSMITH	FALY*
LANSERIA INTERNATIONAL	FALA
LICHTENBURG	FALI*
LOUIS TRICHARDT (CIVIL)	FALO*
MAJUBA POWER STATION	FAMJ*
MALAMALA	FAMD*
MALELANE	FAMN*
MARGATE	FAMG*
MICROLAND FLIGHT PARK	FABA*
MTHATHA	FAUT

1. ENCODE	
LOCATION	**INDICATOR**
MIDDELBURG (EASTERN CAPE)	FAMC*
MIDDELBURG (MPUMALANGA)	FAMB*
MKUZE	FAMU*
MILLVALE	FAMS*
MOSSELBAY	FAMO*
NELSPRUIT	FANS*
NEWCASTLE	FANC*
NEW TEMPE	FATP*
ORIENT	FAOI*
O R TAMBO INTERNATIONAL	FAOR
OUDTSHOORN	FAOH*
PARADISE BEACH	FAPX*
PHALABORWA	FAPH*
PIET RETIEF	FAPF*
PIETERMARITZBURG	FAPM
PIETERSBURG (CIVIL)	FAPI*
PILANESBERG INTERNATIONAL	FAPN
POLOKWANE INTERNATIONAL	FAPP
PORT ALFRED	FAPA*
CHIEF DAWID STUURMAN INTERNATIONAL	FAPE
POTCHEFSTROOM	FAPS*
PRETORIA (MET)	FAPR
PRIESKA	FAPK*
PROGRESS	FAPZ*
QUEENSTOWN	FAQT*
RAND	FAGM
REIVILO	FARI*
RICHARDS BAY	FARB
ROBERTSON	FARS*
RUSTENBURG	FARG*
SABI SABI	FASE*
SALDANHA-VREDENBURG	FASD*
SECUNDA	FASC*

1. ENCODE	
LOCATION	**INDICATOR**
SISHEN	FASS*
SKUKUZA	FASZ*
SPRINGBOK	FASB*
SPRINGS	FASI*
STELLENBOSCH	FASH*
ST FRANCIS FIELD	FACF*
SWELLENDAM	FASX*
TEDDERFIELD AIR PARK	FATA*
THABA THOLO	FATG*
TOMMY'S FIELD	FATF*
TSWALU GAME RESERVE	FATW*
TUTUKA	FATT*
TZANEEN	FATZ*
UITENHAGE	FAUH*
ULUNDI	FAUL*
ULUSABA	FAUS*
UPINGTON INTERNATIONAL	FAUP
VENETIA MINE	FAVM*
VIRGINIA/DURBAN	FAVG
VREDENDAL	FAVR*
WARMBATHS	FAWA*
WELKOM	FAWM*
WILLISTON	FAWL*
WITBANK	FAWI*
WONDERBOOM	FAWB
WORCESTER	FAWC*

2. DECODE	
INDICATOR	**LOCATION**
FAAB*	ALEXANDER BAY
FAAG*	AGGENEYS
FAAN*	ALIWAL NORTH
FABA*	MICROLAND FLIGHT PARK
FABB*	BRAKPAN
FABE	BHISHO
FABL	BRAM FISCHER INTERNATIONAL
FABM*	BETHLEHEM
FABP*	BLACK ROCK
FABS*	BRITS
FABW*	KAROO GATEWAY
FABY*	BEAUFORT WEST TOWN (MET)
FACA	CAPE TOWN FIR
FACF*	ST FRANCIS FIELD
FACN*	CARNARVON
FACO*	ALKANTPAN
FACT	CAPE TOWN INTERNATIONAL
FACV*	CALVINIA (MET)
FADA*	DE AAR
FADB*	DWAALBOOM
FADL*	DELAREYVILLE
FADY*	DE AAR (MET)
FAEL	KING PHALO
FAEO*	ERMELO
FAFB*	FICKSBURG
FAFW*	FREEWAY
FAGA*	BIG WATER
FAGC	GRAND CENTRAL
FAGG	GEORGE
FAGL*	GROBLERSDAL
FAGM*	RAND
FAGR*	GRAAFF-REINET
FAGY*	GREYTOWN

2. DECODE	
INDICATOR	**LOCATION**
FAHC*	HOWICK
FAHG*	HEIDELBERG
FAHI*	HALFWEG
FAHL*	HLUHLUWE
FAHQ	CIVIL AVIATION AUTHORITY
FAIR*	IRENE (MET UPPER AIR/RESEARCH CENTRE)
FAJA	JOHANNESBURG FIR
FAJB*	JOHANNESBURG (CITY)
FAJN	INTERNATIONAL NOTAM OFFICE
FAJO	JOHANNESBURG OCEANIC
FAKD*	KLERKSDORP
FAKG*	KWANDWE
FAKM	KIMBERLEY
FAKN	KRUGER MPUMALANGA INTERNATIONAL
FAKR*	KRUGERSDORP
FAKS*	KROONSTAD
FAKT*	BOSCHKOP (KITTY HAWK AERO ESTATE)
FALA	LANSERIA INTERNATIONAL
FALE	KING SHAKA INTERNATIONAL
FALI*	LICHTENBURG
FALO*	LOUIS TRICHARDT (CIVIL)
FALY*	LADYSMITH
FAMB*	MIDDELBURG (MPUMALANGA)
FAMC*	MIDDELBURG (EASTERN CAPE)
FAMD*	MALAMALA
FAMG*	MARGATE
FAMJ*	MAJUBA POWER STATION
FAMM	GEORGE DICK MONTSHIOA
FAMN*	MALELANE
FAMO*	MOSSELBAY
FAMS*	MILLVALE
FAMU*	MKUZE

2. DECODE	
INDICATOR	**LOCATION**
FANC*	NEWCASTLE
FANS*	NELSPRUIT
FAOH*	OUDTSHOORN
FAOI*	ORIENT
FAOR	O R TAMBO INTERNATIONAL
FAPA*	PORT ALFRED
FAPE	CHIEF DAWID STUURMAN INTERNATIONAL
FAPF*	PIET RETIEF
FAPG*	GARDEN ROUTE AERO
FAPH*	PHALABORWA
FAPI*	PIETERSBURG (CIVIL)
FAPK*	PRIESKA
FAPM	PIETERMARITZBURG
FAPN	PILANESBERG INTERNATIONAL
FAPP	POLOKWANE INTERNATIONAL
FAPR	PRETORIA (MET)
FAPS*	POTCHEFSTROOM
FAPX*	PARADISE BEACH
FAPZ*	PROGRESS
FAQT*	QUEENSTOWN
FARB	RICHARDS BAY
FARG*	RUSTENBURG
FARI*	REIVILO
FARS*	ROBERTSON
FASB*	SPRINGBOK
FASC*	SECUNDA
FASD*	SALDANHA-VREDENBURG
FASE*	SABI SABI
FASH*	STELLENBOSCH
FASI*	SPRINGS
FASS*	SISHEN
FASX*	SWELLENDAM
FASZ*	SKUKUZA

2. DECODE	
INDICATOR	**LOCATION**
FATA*	TEDDERFIELD AIR PARK
FATF*	TOMMY'S FIELD
FATG*	THABA THOLO
FATP*	NEW TEMPE
FATT*	TUTUKA
FATW*	TSWALU GAME RESERVE
FATZ*	TZANEEN
FAUH*	UITENHAGE
FAUL*	ULUNDI
FAUP	UPINGTON INTERNATIONAL
FAUS*	ULUSABA
FAUT	MTHATHA
FAVG	VIRGINIA/DURBAN
FAVM*	VENETIA MINE
FAVR*	VREDENDAL
FAWA*	WARMBATHS
FAWB	WONDERBOOM
FAWC*	WORCESTER
FAWI*	WITBANK
FAWL*	WILLISTON
FAWM*	WELKOM
FAWN*	CAPE WINELANDS

The location indicators listed below are unlicensed, and operators are to use them at their own discretion

1. ENCODE	
LOCATION	**INDICATOR**
AIR CONTROL COMMAND (SAAF)	FAAC*
ABERDEEN	FAAE*
AIR FORCE HQ	FAAH
ALLDAYS	FAAL*
AMSTERDAM	FAAM*
ANDREWS FIELD	FAAF*
ARATHUSA SAFARI LODGE	FAAR*
ASKHAM	FAAK*
BARBERTON	FABR*
BARKLEY EAST	FABF*
BELFAST	FABH*
BOTHAVILLE	FABO*
BUFFELSHOEK	FABG*
BULTFONTEIN	FABU*
BURGERSDORP	FABD*
BUSHMANSKLOOF	FABK*
BUSHVELD AIRSPACE CONTROL SECTOR (SAAF)	FABC*
BUTTERWORTH	FABV*
CALEDON	FACG*
CARLETONVILLE	FACR*
CATHCART	FACX*
CEDARVILLE	FACZ*
CERES	FACE*
CHITWA CHITWA	FACC*
CLANWILLIAM	FACW*
CRADOCK	FACD*
DARLINGTON DAM	FADP*
DE DOORNS	FADS*
DELTA 200	FADX*

1. ENCODE	
LOCATION	**INDICATOR**
DENDRON	FADO*
DOCKS WATERFRONT	FADW*
DOUGLAS CAPE	FADC*
DRAKENBERG GARDENS	FADZ*
DRIEFONTEIN/FOCHVILLE	FADF*
DUKUDUKU	FADK*
DULLSTROOM	FADU*
ELLISRAS CONTROL REPORTING POINT (SAAF)	FAEA*
EKLAND RANCH	FAER*
ELGIN	FAEG*
ELLIOT	FAET*
EL MIRRADOR	FALQ*
EMPANGENI	FAEM*
ENTABENI	FAEN*
ESHOWE	FAES*
GOUGH ISLAND	FAGE*
GRAHAMSTOWN	FAGT*
GRAVELOTTE	FAGV*
GROOTFONTEIN	FAGF*
GROOTVLEI	FAGI*
HARDING	FAHJ*
HAZYVIEW (MET)	FAHW*
HEILBRON	FAHO*
HENNEMAN/HENNENMAN	FAHN*
HENRY'S FLATS	FAHF*
HIPPO POOLS	FAHD*
HOEDSPRUIT (SAAF)	FAHS
HOEDSPRUIT (CIVIL)	FAHT*
HOOPSTAD	FAHP*
H.M.S BASTARD	FAHU*
IDUTYWA	FAID*
INGWAVUMA	FAIV*
INGWELALA	FAIW*

1. ENCODE	
LOCATION	**INDICATOR**
ISITHEBE	FAIS*
ITALA	FAIA*
JACKALBERRY	FAJC*
JAN KEMP DORP	FAJK*
JANSENVILLE	FAJV*
JOUBERTINA	FAJP*
KAGGA KAMMA	FAKA*
KEI MOUTH	FAKE*
KENTON ON SEA	FAKX*
KERSEFONTEIN	FAKF*
KLASERIE	FAKC*
KLEINSEE	FAKZ*
KOFFYFONTEIN	FAKV*
KOSI BAY	FAKB*
KOSTER	FAKO*
KRIEL	FAKL*
KURUMAN	FAKU*
LAMBERTS BAY	FALB*
LANGEBAANWEG (SAAF)	FALW
LIME ACRES	FALC*
LOERIESFONTEIN	FALF*
LOHATLA (ARMY)	FALH*
LONDOLOZI	FALD*
LYDENBURG	FALL*
MABALINGWE	FAMA*
MACLEAR	FAMF*
MADIKWE GAME RESERVE	FAMK*
MADIMBO	FAMP*
MAKHADO MILITARY AERODROME	FALM
MARBLE HALL	FAMI*
MARIEPSKOP (SAAF)	FAMR*
MARION ISLAND	FAME*
MAZZEPA BAY	FAMY*

1. ENCODE	
LOCATION	**INDICATOR**
MONTAGU	FAMQ*
MSAULI	FAMZ*
MUSSINA	FAMH*
NDUNO	FANO*
NGALA	FANG*
NGODWANA/SAPPI	FAND*
NONGOMA	FANA*
NTSIRI	FANI*
NYATHI	FANT*
NYLSTROOM	FANY*
OLIFANTSHOEK	FAOF*
OTHAWA	FAOL*
OVERBERG	FAOB
PAARL	FAPU*
PARYS	FAPY*
PAULPIETERSBURG MONDI	FAPC*
PETIT	FARA*
PETRUSVILLE	FAPV*
PHINDA	FADQ*
PIESANGHOEK	FAQB*
PIETERSRUS	FAPW*
PILGRIMS REST	FAPO*
POFADDER	FAPD*
POMFRET	FAQF*
PONGOLA	FAPL*
PORT ST JOHNS	FAPJ*
POSTMASBURG	FAPT*
POTGIETERSRUS	FAQR*
PUNDA MARIA	FAPQ*
REITZ	FARZ*
RICHMOND	FARM*
RIETFONTEIN	FARF*
ROCK FIG	FATD*
SANDHURST	FASA*

1. ENCODE	
LOCATION	**INDICATOR**
SCHWEIZER RENEKE	FASG*
SEAVIEW	FAEW*
SENEKAL	FASN*
SILVERMINE (SA NAVY)	FASV*
SINGITA SABI SAND	FASP*
SITEKA	FASM*
SOMERSET EAST	FAST*
SOMMERSVELD	FALS*
SOUTHERN AIR COMMAND (SAAF)	FASF*
STAR	FAZQ*
STEELPOORT	FASO*
STEYTLERVILLE	FALR*
STILBAAI	FACY*
STUTTERHEIM	FATM*
SUTHERLAND	FASL*
SYFERFONTEIN	FASY*
SWARTBERG	FAZG*
SWARTKOP (SAAF)	FASK*
TACTICAL SUPPORT COMMAND (SAAF)	FATS*
THABA N'CHU	FATN*
THABAZIMBI	FATI*
THOHOYANDOU	FATH*
THORNY BUSH GAME LODGE	FATB*
TRISTAN DE CUNHA	FATC*
TSITSIKAMA FLY-INN	FATK*
TWEE RIVIEREN	FATR*
ULCO	FAUC*
UGIE	FAUG*
UMTSHEZI MUNICIPALITY	FAEC*
UTRECHT	FAUR*
VAALPUTS	FAVA*
VANDERBIJLPARK	FAVP*
VASTRAP (MIL)	FAVS*

1. ENCODE	
LOCATION	**INDICATOR**
VERBORGENFONTEIN	FAVF*
VEREENIGING	FAVV*
VICTORIA WEST	FAVW*
VOLKSRUST	FAVU*
VREDENDAL	FAVR*
VRYBURG	FAVB*
VRYHEID	FAVY*
WATERKLOOF (SAAF)	FAWK
WATTS LANDING	FAWG*
WAVECREST	FAWR*
WELGEVONDEN	FAWE*
WESSELBRON	FAWS*
WHITE RIVER	FAWV*
WILLOWMORE	FAWO*
WINTERVELDT MINE	FAWT*
WOLMARANSTAD	FAWD*
YSTERPLAAT	FAYP
ZEERUST	FAZR*
ZULULAND ANTHRACITE COLLERY	FAZC*
ZUNEY	FAZU*

2. DECODE	
INDICATOR	**LOCATION**
FAAC*	AIR CONTROL COMMAND (SAAF)
FAAE*	ABERDEEN
FAAF*	ANDREWS FIELD
FAAH	AIR FORCE HQ
FAAK*	ASKHAM
FAAL*	ALLDAYS
FAAM*	AMSTERDAM
FAAR*	ARATHUSA SAFARI LODGE
FABC*	BUSHVELD AIRSPACE CONTROL SECTOR (SAAF)
FABD*	BURGERSDORP
FABF*	BARKLEY EAST
FABG*	BUFFELSHOEK
FABH*	BELFAST
FABK*	BUSHMANS KLOOF
FABO*	BOTHAVILLE
FABR*	BARBERTON
FABU*	BULTFONTEIN
FABV*	BUTTERWORTH
FACC*	CHITWA CHITWA
FACD*	CRADOCK
FACE*	CERES
FACG*	CALEDON
FACR*	CARLETONVILLE
FACW*	CLANWILLIAM
FACX*	CATHCART
FACY*	STILBAAI
FACZ*	CEDARVILLE
FADC*	DOUGLAS CAPE
FADF*	DRIEFONTEIN/FOCHVILLE
FADK*	DUKUDUKU
FADO*	DENDRON
FADP*	DARLINGTON DAM
FADQ*	PHINDA

2. DECODE	
INDICATOR	**LOCATION**
FADS*	DE DOORNS
FADU*	DULLSTROOM
FADW*	DOCKS WATERFRONT
FADX*	DELTA 200
FADZ*	DRAKENSBERG GARDENS
FAEA*	ELLISRAS CONTROL REPORTING POINT (SAAF)
FAEC*	UMTSHEZI MUNICIPALITY
FAEG*	ELGIN
FAEM*	EMPANGENI
FAEN*	ENTABENI
FAER*	EKLAND RANCH
FAES*	ESHOWE
FAET*	ELLIOT
FAEW*	SEAVIEW
FAGE*	GOUGH ISLAND
FAGF*	GROOTFONTEIN
FAGI*	GROOTVLEI
FAGT*	GRAHAMSTOWN
FAGV*	GRAVELOTTE
FAHD*	HIPPO POOLS
FAHF*	HENRY'S FLATS
FAHJ*	HARDING
FAHN*	HENNEMAN/HENNENMAN
FAHO*	HEILBRON
FAHP*	HOOPSTAD
FAHS	HOEDSPRUIT (SAAF)
FAHT*	HOEDSPRUIT (CIVIL)
FAHU*	H.M.S. BASTARD
FAHW*	HAZYVIEW (MET)
FAIA*	ITALA
FAID*	IDUTYWA
FAIS*	ISITHEBE
FAIV*	INGWAVUMA

2. DECODE	
INDICATOR	**LOCATION**
FAIW*	INGWELALA
FAJC*	JACKALBERRY
FAJK*	JAN KEMP DORP
FAJP*	JOUBERTINA
FAJV*	JANSENVILLE
FAKA*	KAGGA KAMMA
FAKB*	KOSI BAY
FAKC*	KLASERIE
FAKE*	KEI MOUTH
FAKF*	KERSEFONTEIN
FAKL*	KRIEL
FAKO*	KOSTER
FAKU*	KURUMAN
FAKV*	KOFFYFONTEIN
FAKX*	KENTON ON SEA
FAKZ*	KLEINSEE
FALB*	LAMBERTS BAY
FALC*	LIME ACRES
FALD*	LONDOLOZI
FALF*	LOERIESFONTEIN
FALH*	LOHATLA (ARMY)
FALL*	LYDENBURG
FALM	AFB MAKHADO MILITARY
FALQ*	EL MIRRADOR
FALR*	STEYTLERVILLE
FALS*	SOMMERVELD
FALW	LANGEBAANWEG (MIL - UNLICENSED)
FAMA*	MABALINGWE
FAME*	MARION ISLAND
FAMF*	MACLEAR
FAMH*	MUSSINA
FAMI*	MARBLE HALL
FAMK*	MADIKWE GAME RESERVE

2. DECODE	
INDICATOR	**LOCATION**
FAMP*	MADIMBO
FAMQ*	MONTAGU
FAMR	MARIEPSKOP (SAAF)
FAMY*	MAZZEPA BAY
FAMZ*	MSAULI
FANA*	NONGOMA
FAND*	NGODWANA/SAPPI
FANG*	NGALA
FANI*	NTSIRI
FANO*	NDUNO
FANT*	NYATHI
FANY*	NYLSTROOM
FAOB	OVERBERG
FAOF*	OLIFANTSHOEK
FAOL*	OTHAWA
FAPC*	PAULPIETERSBURG MONDI
FAPD*	POFADDER
FAPJ*	PORT ST JOHNS
FAPL*	PONGOLA
FAPO*	PILGRIMS REST
FAPQ*	PUNDU MARIA
FAPT*	POSTMASBURG
FAPU*	PAARL
FAPV*	PETRUSVILLE
FAPW*	PIETERSRUS
FAPY*	PARYS
FAQB*	PIESANGHOEK
FAQF*	POMFRET
FAQR*	POTGIETERSRUS
FARA*	PETIT
FARF*	RIETFONTEIN
FARM*	RICHMOND
FARZ*	REITZ
FASA*	SANDHURST

2. DECODE	
INDICATOR	**LOCATION**
FASF*	SOUTHERN AIR COMMAND (SAAF)
FASG*	SCHWEIZER RENEKE
FASK*	SWARTKOP
FASL*	SUTHERLAND
FASM*	SITEKA
FASN*	SENEKAL
FASO*	STEELPOORT
FASP*	SINGITA SABI SAND
FAST*	SOMERSET EAST
FASV*	SILVERMINE (SA NAVY)
FASY*	SYFERFONTEIN
FATB*	THORNY BUSH GAME LODGE
FATC*	TRISTAN DE CUNHA
FATD*	ROCK FIG
FATH*	THOHOYANDOU
FATI*	THABAZIMBI
FATK*	TSITSIKAMA FLY-INN
FATM*	STUTTERHEIM
FATN*	THABA N'CHU
FATR*	TWEE RIVIEREN
FATS*	TACTICAL SUPPORT COMMAND (SAAF)
FAUC*	ULCO
FAUG*	UGIE
FAUR*	UTRECHT
FAVA*	VAALPUTS
FAVB*	VRYBURG
FAVF*	VERBORGENFONTEIN
FAVP*	VANDERBIJLPARK
FAVR*	VREDENDAL
FAVS*	VASTRAP (MIL)
FAVU*	VOLKSRUST
FAVV*	VEREENIGING
FAVW*	VICTORIA WEST

2. DECODE	
INDICATOR	**LOCATION**
FAVY*	VRYHEID
FAWD*	WOLMARANSTAD
FAWE*	WELGEVONDEN
FAWG*	WATTS LANDING
FAWK	WATERKLOOF (SAAF)
FAWO*	WILLOWMORE
FAWR*	WAVECREST
FAWS*	WESSELBRON
FAWT*	WINTERVELDT MINE
FAWV*	WHITE RIVER
FAYP	YSTERPLAAT (SAAF)
FAZC*	ZULULAND ANTHRACITE COLLERY
FAZG*	SWARTBERG
FAZQ*	STAR
FAZR*	ZEERUST
FAZU*	ZUNEY

GEN 2.5 LIST OF RADIO NAVIGATION AIDS

ID	STATION NAME	FACILITY	PURPOSE (see Note)
ABV	ALEXANDER BAY	DME	AE
ABV	ALEXANDER BAY	VOR	AE
AGV	AGGENEYS	DME	E
AGV	AGGENEYS	VOR	E
BLV	BRAM FISCHER INTERNATIONAL	DME	A
BLV	BRAM FISCHER INTERNATIONAL	VOR	A
BSI	KING PHALO	ILS GP RWY 11	A
BSI	KING PHALO	ILS LOC RWY 11	A
BSI	KING PHALO	DME RWY 11	A
CDV	CALEDON	DME	E
CDV	CALEDON	DVOR	E
CSV	CERES	DME	E
CSV	CERES	DVOR	E
CTI	CAPE TOWN INTERNATIONAL	ILS GP RWY 01	A
CTI	CAPE TOWN INTERNATIONAL	ILS LOC RWY 01	A
CTI	CAPE TOWN INTERNATIONAL	DME	A
CTV	CAPE TOWN INTERNATIONAL	DME	A
CTV	CAPE TOWN INTERNATIONAL	VOR	A
CZV	ZONDERWATER	DME	E
CZV	ZONDERWATER	VOR	E
DPV	WONDERBOOM	DVOR	AE
DPV	WONDERBOOM	DME	AE
ELI	KING PHALO	ILS GP RWY 29	A
ELI	KING PHALO	ILS LOC RWY 29	A
ELI	KING PHALO	DME RWY 29	A
ELV	KING PHALO	DME	A
ELV	KING PHALO	VOR	A
ERV	ELLISRAS	DME	A
ERV	ELLISRAS	VOR	A
GAV	GRASMERE	VOR	E
GEI	GEORGE	ILS GP RWY 11	A
GEI	GEORGE	ILS LOC RWY 11	A

ID	STATION NAME	FACILITY	PURPOSE (see Note)
GEI	GEORGE	DME	A
GGI	GEORGE	ILS GP RWY 29	A
GGI	GEORGE	ILS LOC RWY 29	A
GGI	GEORGE	DME	A
GRV	GEORGE	DME	AE
GRV	GEORGE	DVOR	AE
GWV	GREEFSWALD	VOR	E
GYV	GREYTOWN	DME	A
GYV	GREYTOWN	VOR	A
HGV	HEIDELBERG	VOR	E
HMV	HOFMEYER	DVOR	E
HSI	HOEDSPRUIT	ILS GP RWY 18	A
HSI	HOEDSPRUIT	ILS LOC RWY 18	A
HSV	HOEDSPRUIT (MIL)	DME	A
HSV	HOEDSPRUIT (MIL)	VOR	A
JAI	O R TAMBO INTERNATIONAL	ILS GP RWY 21L	A
JAI	O R TAMBO INTERNATIONAL	ILS LOC RWY 21L	A
JBI	O R TAMBO INTERNATIONAL	ILS GP RWY 21R	A
JBI	O R TAMBO INTERNATIONAL	ILS LOC RWY 21R	A
JNI	O R TAMBO INTERNATIONAL	ILS GP RWY 03R	A
JNI	O R TAMBO INTERNATIONAL	ILS LOC RWY 03R	A
JSI	O R TAMBO INTERNATIONAL	ILS GP RWY 03L	A
JSI	O R TAMBO INTERNATIONAL	ILS LOC RWY 03L	A
JSV	O R TAMBO INTERNATIONAL	DME	A
JSV	O R TAMBO INTERNATIONAL	DVOR	A
KSI	CAPE TOWN INTERNATIONAL	ILS GP RWY 19	A
KSI	CAPE TOWN INTERNATIONAL	ILS LOC RWY 19	A
KSI	CAPE TOWN INTERNATIONAL	DME	A
KYV	KIMBERLEY	DME	AE
KYV	KIMBERLEY	VOR	AE
LAI	LANSERIA	ILS LOC RWY 07	A
LAI	LANSERIA	DME	A
LIV	LANSERIA	DME	AE

ID	STATION NAME	FACILITY	PURPOSE (see Note)
LIV	LANSERIA	DVOR	AE
LTV	MAKHADO (MIL)	DME	A
LTV	MAKHADO (MIL)	VOR	A
LWI	LANGEBAANWEG (MIL)	ILS GP RWY 20L	A
LWI	LANGEBAANWEG (MIL)	ILS LOC RWY 20L	A
LWV	LANGEBAANWEG (MIL)	DME	A
LWV	LANGEBAANWEG (MIL)	VOR	A
LYV	LADYSMITH	DME	AE
LYV	LADYSMITH	DVOR	AE
MMV	GEORGE DICK MONTSHIOA	DME	A
MMV	GEORGE DICK MONTSHIOA	VOR	A
NVV	NIEUWOUDTVILLE	DVOR	E
OBI	OVERBERG - TEST FLYING & DEVELOPING CENTRE MIL - LICENSED	ILS GP RWY 35	A
OBI	OVERBERG - TEST FLYING & DEVELOPING CENTRE MIL - UNLICENSED	ILS LOC RWY 35	A
OBV	OVERBERG (MIL)	DME	A
OBV	OVERBERG (MIL)	VOR	A
PDI	CHIEF DAWID STUURMAN INTERNATIONAL	ILS GP RWY 26	A
PDI	CHIEF DAWID STUURMAN INTERNATIONAL	ILS LOC RWY 26	A
PEI	CHIEF DAWID STUURMAN INTERNATIONAL	ILS GP RWY 08	A
PEI	CHIEF DAWID STUURMAN INTERNATIONAL	ILS LOC RWY 08	A
PEV	CHIEF DAWID STUURMAN INTERNATIONAL	DME	AE
PEV	CHIEF DAWID STUURMAN INTERNATIONAL	VOR	AE
PHV	PHALABORWA	VOR	AE
PJV	PORT ST JOHNS	DVOR	E
PKI	KRUGER MPUMALANGA INTERNATIONAL	DME RWY 05	A
PKI	KRUGER MPUMALANGA INTERNATIONAL	ILS GP RWY 05	A
PKI	KRUGER MPUMALANGA INTERNATIONAL	ILS LOC RWY 05	A
PKV	KRUGER MPUMALANGA INTERNATIONAL	DVOR	AE
PMV	PIETERMARITZBURG	DME	AE
PMV	PIETERMARITZBURG	VOR	AE
PNV	PILANESBERG	DME	A
PNV	PILANESBERG	DVOR	A
PPV	POLOKWANE INTERNATIONAL	DME	A

ID	STATION NAME	FACILITY	PURPOSE (see Note)
PPV	POLOKWANE INTERNATIONAL	VOR	A
PVV	PETRUSVILLE	VOR	E
RAV	RAND	DME	A
RAV	RAND	VOR	A
RBV	RICHARDS BAY	DME	AE
RBV	RICHARDS BAY	VOR	AE
SLV	SUTHERLAND	VOR	E
SSV	SISHEN	DME	E
SSV	SISHEN	VOR	E
STV	STANDERTON	VOR	E
SVV	SOMERSVELD	VOR	A
TGI	KING SHAKA INTERNATIONAL	DME RWY 24	A
TGI	KING SHAKA INTERNATIONAL	ILS GP RWY 24	A
TGI	KING SHAKA INTERNATIONAL	ILS LOC RWY 24	A
TGV	KING SHAKA INTERNATIONAL	DME	A
TGV	KING SHAKA INTERNATIONAL	DVOR	AE
TNI	KING SHAKA INTERNATIONAL	DME RWY 06	A
TNI	KING SHAKA INTERNATIONAL	ILS GP RWY 06	A
TNI	KING SHAKA INTERNATIONAL	ILS LOC RWY 06	A
UL	ULUNDI	DME	A
UPV	UPINGTON	DME	AE
UPV	UPINGTON	VOR	AE
VWV	VICTORIA WEST	VOR	E
WIV	WITBANK	VOR	AE
WKI	WATERKLOOF AFB (MIL - UNLICENSED)	ILS LOC RWY 01	A
WKV	WATERKLOOF (MIL)	DME	A
WKV	WATERKLOOF (MIL)	VOR	A
WMV	WELKOM	DME	AE
WMV	WELKOM	VOR	AE
WRV	WARDEN	VOR	E

STATION NAME	FACILITY	ID	PURPOSE (see Note)
ALEXANDER BAY	DME	ABV	AE
ALEXANDER BAY	VOR	ABV	AE
AGGENEYS	DME	AGV	E
AGGENEYS	VOR	AGV	E
BRAM FISCHER INTERNATIONAL	DME	BLV	A
BRAM FISCHER INTERNATIONAL	VOR	BLV	A
CALEDON	DME	CDV	E
CALEDON	DVOR	CDV	E
CAPE TOWN INTERNATIONAL	ILS GP RWY 01	CTI	A
CAPE TOWN INTERNATIONAL	ILS LOC RWY 01	CTI	A
CAPE TOWN INTERNATIONAL	DME	CTI	A
CAPE TOWN INTERNATIONAL	DME	CTV	A
CAPE TOWN INTERNATIONAL	VOR	CTV	A
CAPE TOWN INTERNATIONAL	ILS GP RWY 19	KSI	A
CAPE TOWN INTERNATIONAL	ILS LOC RWY 19	KSI	A
CAPE TOWN INTERNATIONAL	DME	KSI	A
CERES	DME	CSV	E
CERES	DVOR	CSV	E
KING PHALO	ILS GP RWY 11	BSI	A
KING PHALO	ILS LOC RWY 11	BSI	A
KING PHALO	DME RWY 11	BSI	A
KING PHALO	ILS GP RWY 29	ELI	A
KING PHALO	ILS LOC RWY 29	ELI	A
KING PHALO	DME RWY 29	ELI	A
KING PHALO	DME	ELV	A
KING PHALO	VOR	ELV	A
ELLISRAS	DME	ERV	A
ELLISRAS	VOR	ERV	A
GEORGE	ILS GP RWY 11	GEI	A
GEORGE	ILS LOC RWY 11	GEI	A
GEORGE	DME	GEI	A
GEORGE	ILS GP RWY 29	GGI	A
GEORGE	ILS LOC RWY 29	GGI	A
GEORGE	DME	GGI	A

STATION NAME	FACILITY	ID	PURPOSE (see Note)
GEORGE	DME	GRV	AE
GEORGE	DVOR	GRV	AE
GEORGE DICK MONTSHIOA	DME	MMV	A
GEORGE DICK MONTSHIOA	VOR	MMV	A
GRASMERE	VOR	GAV	E
GREEFSWALD	VOR	GWV	E
GREYTOWN	DME	GYV	A
GREYTOWN	VOR	GYV	A
HEIDELBERG	VOR	HGV	E
HOEDSPRUIT	ILS GP RWY 18	HSI	A
HOEDSPRUIT	ILS LOC RWY 18	HSI	A
HOEDSPRUIT (MIL)	DME	HSV	A
HOEDSPRUIT (MIL)	VOR	HSV	A
HOFMEYER	DVOR	HMV	E
KIMBERLEY	DME	KYV	AE
KIMBERLEY	VOR	KYV	AE
KING SHAKA INTERNATIONAL	DME RWY 24	TGI	A
KING SHAKA INTERNATIONAL	ILS GP RWY 24	TGI	A
KING SHAKA INTERNATIONAL	ILS LOC RWY 24	TGI	A
KING SHAKA INTERNATIONAL	DME	TGV	A
KING SHAKA INTERNATIONAL	DVOR	TGV	AE
KING SHAKA INTERNATIONAL	DME RWY 06	TNI	A
KING SHAKA INTERNATIONAL	ILS GP RWY 06	TNI	A
KING SHAKA INTERNATIONAL	ILS LOC RWY 06	TNI	A
KRUGER MPUMALANGA INTERNATIONAL	DME RWY 05	PKI	A
KRUGER MPUMALANGA INTERNATIONAL	ILS GP RWY 05	PKI	A
KRUGER MPUMALANGA INTERNATIONAL	ILS LOC RWY 05	PKI	A
KRUGER MPUMALANGA INTERNATIONAL	DVOR	PKV	AE
LADYSMITH	DME	LYV	AE
LADYSMITH	DVOR	LYV	AE
LANGEBAANWEG (MIL)	ILS GP RWY 20L	LWI	A
LANGEBAANWEG (MIL)	ILS LOC RWY 20L	LWI	A
LANGEBAANWEG (MIL)	DME	LWV	A
LANGEBAANWEG (MIL)	VOR	LWV	A

STATION NAME	FACILITY	ID	PURPOSE (see Note)
LANSERIA	DME	LIV	A
LANSERIA	DVOR	LIV	A
LANSERIA	DME	LAI	A
LANSERIA	ILS LOC RWY 07	LAI	A
MAKHADO (MIL)	DME	LTV	A
MAKHADO (MIL)	VOR	LTV	A
NIEUWOUDTVILLE	DVOR	NVV	E
O R TAMBO INTERNATIONAL	ILS GP RWY 21L	JAI	A
O R TAMBO INTERNATIONAL	ILS LOC RWY 21L	JAI	A
O R TAMBO INTERNATIONAL	ILS GP RWY 21R	JBI	A
O R TAMBO INTERNATIONAL	ILS LOC RWY 21R	JBI	A
O R TAMBO INTERNATIONAL	ILS GP RWY 03R	JNI	A
O R TAMBO INTERNATIONAL	ILS LOC RWY 03R	JNI	A
O R TAMBO INTERNATIONAL	ILS GP RWY 03L	JSI	A
O R TAMBO INTERNATIONAL	ILS LOC RWY 03L	JSI	A
O R TAMBO INTERNATIONAL	DME	JSV	A
O R TAMBO INTERNATIONAL	DVOR	JSV	A
OVERBERG (MIL)	DME	OBV	A
OVERBERG (MIL)	VOR	OBV	A
OVERBERG - TEST FLYING & DEVELOPING CENTRE MIL - UNLICENSED	ILS GP RWY 35	OBI	A
OVERBERG - TEST FLYING & DEVELOPING CENTRE MIL - UNLICENSED	ILS LOC RWY 35	OBI	A
PETRUSVILLE	VOR	PVV	E
PHALABORWA	VOR	PHV	AE
PIETERMARITZBURG	DME	PMV	AE
PIETERMARITZBURG	VOR	PMV	AE
PILANESBERG	DME	PNV	A
PILANESBERG	DVOR	PNV	A
CHIEF DAWID STUURMAN INTERNATIONAL	ILS GP RWY 26	PDI	A
CHIEF DAWID STUURMAN INTERNATIONAL	ILS LOC RWY 26	PDI	A
CHIEF DAWID STUURMAN INTERNATIONAL	ILS GP RWY 08	PEI	A
CHIEF DAWID STUURMAN INTERNATIONAL	ILS LOC RWY 08	PEI	A
CHIEF DAWID STUURMAN INTERNATIONAL	DME	PEV	AE
CHIEF DAWID STUURMAN INTERNATIONAL	VOR	PEV	AE

STATION NAME	FACILITY	ID	PURPOSE (see Note)
PORT ST JOHNS	DVOR	PJV	E
POLOKWANE INTERNATIONAL	DME	PPV	A
POLOKWANE INTERNATIONAL	VOR	PPV	A
RAND	DME	RAV	A
RAND	VOR	RAV	A
RICHARDS BAY	DME	RBV	AE
RICHARDS BAY	VOR	RBV	AE
SISHEN	DME	SSV	E
SISHEN	VOR	SSV	E
SOMERSVELD	VOR	SVV	A
STANDERTON	VOR	STV	E
SUTHERLAND	VOR	SLV	E
ULUNDI	DME	UL	A
UPINGTON	DME	UPV	AE
UPINGTON	VOR	UPV	AE
VICTORIA WEST	VOR	VWV	E
WARDEN	VOR	WRV	E
WATERKLOOF AFB (MIL - UNLICENSED)	ILS LOC RWY 01	WKI	A
WATERKLOOF (MIL)	DME	WKV	A
WATERKLOOF (MIL)	VOR	WKV	A
WELKOM	DME	WMV	AE
WELKOM	VOR	WMV	AE
WITBANK	VOR	WIV	AE
WONDERBOOM	DVOR	DPV	AE
WONDERBOOM	DME	DPV	AE
ZONDERWATER	DME	CZV	E
ZONDERWATER	VOR	CZV	E

A = Aerodrome

E = En-route

AE = Dual purpose

GEN 2.6 CONVERSIONS TABLES

CONVERSION OF UNITS OF MEASUREMENT

NM to KM 1NM = 1.852KM		KM to NM 1KM = 0.5399NM		FT to M 1FT = 0.3048M		M to FT 1M = 3.2808FT	
NM	**KM**	**KM**	**NM**	**FT**	**M**	**M**	**FT**
0.1	0.185	0.1	0.05	1	0.305	1	3.28
0.2	0.370	0.2	0.11	2	0.610	2	6.56
0.3	0.556	0.3	0.16	3	0.914	3	9.84
0.4	0.741	0.4	0.22	4	1.219	4	13.12
0.5	0.926	0.5	0.27	5	1.524	5	16.40
0.6	1.111	0.6	0.32	6	1.829	6	19.69
0.7	1.296	0.7	0.38	7	2.134	7	22.97
0.8	1.482	0.8	0.43	8	2.438	8	26.25
0.9	1.667	0.9	0.49	9	2.743	9	29.53
1	1.852	1	0.54	10	3.048	10	32.81
2	3.704	2	1.08	50	15.240	50	164.04
3	5.556	3	1.62	100	30.480	100	328.08
4	7.408	4	2.16	500	152.400	500	1640.42
5	9.260	5	2.70	1000	304.800	1000	3280.84
6	11.112	6	3.24	5000	1524.000	5000	16404.20
7	12.964	7	3.78	10000	3048.000		
8	14.816	8	4.32				
9	16.668	9	4.86				
10	18.520	10	5.40				
50	92.600	50	27.00				
100	185.200	100	54.00				
500	926.000	500	269.98				

Decimal Minutes to Seconds		Seconds to Decimal Minutes	
Decimal Minutes	**Seconds**	**Seconds**	**Decimal Minutes**
0.1	6	1	0.0167
0.2	12	5	0.0833
0.3	18	10	0.167
0.4	24	15	0.25
0.5	30	20	0.333
0.6	36	25	0.417
0.7	42	30	0.5
0.8	48	35	0.583

Decimal Minutes to Seconds		Seconds to Decimal Minutes	
Decimal Minutes	**Seconds**	**Seconds**	**Decimal Minutes**
0.9	54	40	0.666
1	60	45	0.75
		50	0.833
		55	0.916

GEN 2.7 SUNRISE/ SUNSET TABLES

All times indicated are UTC.

Bloemfontein							
Month	**Date**	**Sunrise**	**Sunset**	**Month**	**Date**	**Sunrise**	**Sunset**
JAN	01	0321	1717	JUL	02	0509	1529
	08	0325	1718		09	0508	1532
	15	0330	1718		16	0507	1535
	22	0336	1716		23	0504	1539
	29	0343	1714		30	0500	1543
FEB	05	0349	1710	AUG	06	0455	1546
	12	0354	1705		13	0449	1550
	19	0359	1658		20	0442	1554
	26	0405	1651		27	0436	1557
MAR	05	0409	1644	SEP	03	0428	1601
	12	0413	1637		10	0420	1605
	19	0417	1629		17	0411	1608
	26	0421	1619		24	0403	1612
APR	02	0426	1612	OCT	01	0356	1616
	09	0428	1605		08	0347	1619
	16	0433	1557		15	0339	1624
	23	0437	1549		22	0331	1628
	30	0441	1544		29	0326	1633
MAY	07	0445	1537	NOV	05	0320	1638
	14	0450	1532		12	0315	1644
	21	0454	1529		19	0311	1650
	28	0458	1526		26	0309	1655
JUN	04	0501	1524	DEC	03	0309	1700
	11	0504	1524		10	0310	1705
	18	0506	1525		17	0312	1710
	25	0508	1527		24	0315	1714
					31	0320	1716

Cape Town							
Month	**Date**	**Sunrise**	**Sunset**	**Month**	**Date**	**Sunrise**	**Sunset**
JAN	01	0339	1801	JUL	02	0552	1548
	08	0344	1801		09	0551	1551
	15	0350	1800		16	0549	1555
	22	0357	1757		23	0545	1600
	29	0404	1755		30	0540	1604
FEB	05	0311	1749	AUG	06	0535	1609
	12	0418	1742		13	0528	1615
	19	0425	1734		20	0520	1619
	26	0431	1727		27	0512	1624
MAR	05	0437	1718	SEP	03	0503	1629
	12	0442	1710		10	0453	1633
	19	0447	1701		17	0443	1638
	26	0452	1649		24	0434	1644
APR	02	0458	1640	OCT	01	0425	1648
	09	0503	1632		08	0416	1653
	16	0509	1623		15	0406	1659
	23	0514	1615		22	0357	1704
	30	0519	1608		29	0350	1710
MAY	07	0525	1600	NOV	05	0343	1717
	14	0530	1554		12	0337	1724
	21	0535	1550		19	0333	1731
	28	0539	1547		26	0330	1737
JUN	04	0543	1544	DEC	03	0328	1743
	11	0547	1544		10	0328	1749
	18	0550	1544		17	0330	1754
	25	0551	1545		24	0333	1758
					31	0338	1800

Durban							
Month	**Date**	**Sunrise**	**Sunset**	**Month**	**Date**	**Sunrise**	**Sunset**
JAN	01	0259	1701	JUL	02	0452	1507
	08	0303	1702		09	0452	1510
	15	0309	1701		16	0450	1514
	22	0315	1659		23	0447	1518
	29	0322	1657		30	0443	1522
FEB	05	0328	1652	AUG	06	0438	1526
	12	0333	1647		13	0432	1530
	19	0339	1640		20	0425	1534
	26	0345	1633		27	0418	1537
MAR	05	0349	1626	SEP	03	0410	1542
	12	0353	1618		10	0401	1545
	19	0358	1610		17	0352	1549
	26	0402	1600		24	0344	1553
APR	02	0407	1552	OCT	01	0336	1557
	09	0410	1545		08	0328	1601
	16	0415	1537		15	0319	1606
	23	0419	1529		22	0311	1610
	30	0424	1523		29	0305	1616
MAY	07	0428	1516	NOV	05	0249	1621
	14	0433	1511		12	0254	1627
	21	0437	1508		19	0250	1633
	28	0441	1505		26	0248	1638
JUN	04	0444	1503	DEC	03	0247	1644
	11	0448	1503		10	0248	1649
	18	0450	1503		17	0250	1654
	25	0451	1505		24	0253	1658
					31	0258	1700

Johannesburg							
Month	**Date**	**Sunrise**	**Sunset**	**Month**	**Date**	**Sunrise**	**Sunset**
JAN	01	0320	1704	JUL	02	0456	1528
	08	0324	1705		09	0455	1531
	15	0329	1705		16	0454	1534
	22	0335	1703		23	0451	1538
	29	0341	1701		30	0447	1541
FEB	05	0346	1658	AUG	06	0443	1544
	12	0351	1653		13	0438	1547
	19	0355	1648		20	0432	1551
	26	0400	1642		27	0426	1553
MAR	05	0403	1635	SEP	03	0419	1556
	12	0407	1628		10	0411	1559
	19	0411	1621		17	0404	1602
	26	0413	1613		24	0356	1605
APR	02	0417	1608	OCT	01	0349	1607
	09	0420	1559		08	0342	1611
	16	0424	1552		15	0335	1615
	23	0427	1545		22	0327	1618
	30	0430	1540		29	0322	1622
MAY	07	0434	1535	NOV	05	0317	1627
	14	0438	1530		12	0313	1632
	21	0442	1528		19	0310	1637
	28	0445	1525		26	0308	1642
JUN	04	0448	1523	DEC	03	0308	1647
	11	0451	1523		10	0309	1652
	18	0453	1524		17	0311	1657
	25	0455	1526		24	0314	1704
					31	0319	1703

Port Elizabeth							
Month	**Date**	**Sunrise**	**Sunset**	**Month**	**Date**	**Sunrise**	**Sunset**
JAN	01	0311	1733	JUL	02	0524	1520
	08	0316	1733		09	0523	1523
	15	0322	1732		16	0521	1527
	22	0329	1729		23	0517	1532
	29	0326	1727		30	0512	1536
FEB	05	0343	1721	AUG	06	0507	1541
	12	0350	1714		13	0500	1547
	19	0357	1706		20	0452	1551
	26	0403	1659		27	0444	1556
MAR	05	0409	1650	SEP	03	0435	1601
	12	0414	1642		10	0425	1605
	19	0419	1633		17	0415	1610
	26	0424	1621		24	0406	1616
APR	02	0430	1612	OCT	01	0357	1620
	09	0435	1604		08	0348	1625
	16	0441	1555		15	0338	1631
	23	0446	1547		22	0329	1636
	30	0451	1540		29	0322	1642
MAY	07	0457	1532	NOV	05	0315	1649
	14	0502	1526		12	0309	1656
	21	0507	1522		19	0305	1703
	28	0511	1519		26	0302	1709
JUN	04	0515	1516	DEC	03	0300	1715
	11	0519	1516		10	0300	1721
	18	0522	1516		17	0302	1726
	25	0523	1517		24	0305	1730
					31	0310	1732

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GEN 3 SERVICES
GEN 3.1 AERONAUTICAL INFORMATION SERVICES

1 Responsible service

1.1 The Aeronautical Information Service, which forms part of the Department Aviation Infrastructure of the South African Civil Aviation Authority, ensures the flow of information necessary for the safety, regularity and efficiency of international and national air navigation within the area of its responsibility as indicated under para 2 below.

1.2 AIS Headquarters:

South African Civil Aviation Authority Aeronautical Information Services
Private Bag x 73
Halfway House
1685
Republic of South Africa

TEL: +27 860 267 435
Website: www.caa.co.za

1.3 International NOTAM Office (NOF)

International NOTAM Office
A.T.N.S.
Private Bag X01
Bonaero Park
1622
Republic Of South Africa
Aeronautical Telegraphic Address: FAJNYNYX

Flight Plans
TEL: +2711 928 6518 (international calls)
0860 359 669 (national call share number)

NOTAM
TEL: +2711 928 6592
E-mail: jsnotam@atns.co.za
Website: atns.co.za

2 Area of responsibility

The Aeronautical Information Services (AIS) is responsible for the collection and dissemination of information for the entire area which coincides with the Cape Town, Johannesburg and Johannesburg Oceanic Flight Information Regions (FIRs). The area excludes Lesotho and Eswatini as these states publish their own AIP and NOTAM.

3 Aeronautical publications

3.1 Aeronautical information is published in the form of an Aeronautical Information Product, and consists of the following elements.

- Aeronautical Information Publication (AIP) including amendment service;
- Supplements to the AIP;
- Notice to airmen (NOTAM) and pre-flight information bulletins (PIB);
- Aeronautical Information Circular (AIC).
- Checklists and list of valid NOTAM

AIP, AIP Amendments and AIP supplements shall be made available by most expeditious means.

3.2 Aeronautical Information Publication (AIP)

The publication of an AIP is intended primarily to satisfy international requirements for the exchange of aeronautical information of a lasting character and is essential to Air Navigation.

The AIP constitutes the basic information source for permanent information and long duration temporary changes.
The South African AIP is published in three parts GEN, ENR and AD.

The AIP purchase price is R868-00 (excluding postage), which includes the amendment service for the current year.

Each AIP shall not duplicate information within itself or from other sources.

3.3 AIP Amendment service (AIP AMDT)

Permanent changes to the AIP shall be published as AIP Amendments.

Amendments to AIP shall be issued every 3 months at the following predetermined intervals:-

15 January, 15 April, 15 July, 15 October

When an AIP amendment will not be published at the established interval, a NIL notification shall be originated and distributed by means of the Summary of NOTAM in force (NIF).

Each AIP AMDT shall be allocated a serial number, which shall be consecutive and based on the calendar year. The year, indicated by two digits, is a part of the serial number of the amendment, e.g. AIP AMDT 1/96.

New or revised information contained in the AIP replacement pages will have an annotation (a thick vertical bar) next to the appropriate line. Should a page be reprinted because it was blank or backed a page containing changes, but does not carry any changes in respect to the previous edition, it shall not contain any highlighting symbols (vertical bar).

A checklist of AIP pages containing page number/chart title and the publication or effective date (day, month by name and year) of the information is reissued with each amendment and is an integral part of the AIP.

The AIP amendment service will cost R617-00 per year.

3.4 **AIP Supplement Service (AIP SUP)**

The purpose of the AIP SUP is to bring to the attention of the user any temporary changes of long duration (three months or longer) and/or information of operational significance containing extensive text or graphics, which affect one or more parts of the AIP.

Operationally significant changes shall be published under the AIRAC procedure (refer to paragraph 4).

AIP SUP shall be numbered consecutively based on a calendar year.

The period of validity will normally be given in the AIP SUP itself.

Whenever an AIP SUP is issued to replace a NOTAM, a reference to the serial number of the relevant NOTAM shall be included.

AIP SUP can be cancelled either by an AIP AMDT, AIP SUP or by NOTAM.

A checklist of valid AIP SUP shall be issued at intervals of not more than one month. Such information shall be issued through the monthly summary of NOTAM in force (NIF).

3.5 **AIRAC AIP Supplement (AIRAC AIP SUP)**

The purpose of an AIP SUP is to bring to the attention of the user any temporary changes of long duration (three months or longer) and/or information of operational significance containing extensive text or graphics, which affect one or more parts of the AIP. Operationally significant changes shall be published in accordance with AIRAC procedures and shall be clearly identified by the acronym - AIRAC.

The AIRAC AIP SUP shall be published at least 56 days in advance of the effective date with the objective of reaching recipients at least 28 days in advance of the effective date.

Effective dates will be published in accordance with the predetermined internationally agreed schedule of effective dates based on an interval of 28 days.

Information notified by means of the AIRAC procedure shall not be changed for at least 28 days after the indicated effective date, unless the circumstance notified is of a temporary nature and would not persist for the full period.

When information has not been submitted for publication at the AIRAC date a NIL notification shall be originated and distributed by the monthly printed Plain Language Summary of NIF

3.6 Notice to airmen (NOTAM)

A NOTAM shall be originated and issued concerning the following information:

A NOTAM is a notice distributed by means of the Aeronautical Fixed Service (AFS) containing information concerning the establishment, withdrawal and significant changes in operational capability of radio navigation and air-ground communication services, the timely knowledge of which is essential to personnel concerned with flight operations.

A NOTAM shall be originated and issued promptly whenever the information to be disseminated is of a temporary nature and of short duration or when operationally significant permanent changes, or temporary changes of long duration are made at short notice, except for extensive text or graphics.

NOTAM are originated and issued for South Africa for the entire area which coincides with the Cape Town, Johannesburg and Johannesburg Oceanic Flight Information Regions (FIRs). The area excludes, Lesotho and Swaziland as these States publish NOTAM.

NOTAM are distributed in six series identified by A, B, C, D, E and F:

Each international NOTAM office shall be connected, through the AFS, to the following points within the territory for which it provides service:

a) area control centres and flight information centres;

b) aerodromes/heliports at which an information service is established in accordance with Chapter 8.

Series A: NOTAM containing information of concern to long or medium-range flights, and given selected international distribution.

Series B: NOTAM containing full information on all aerodromes, facilities and procedures available for use in international civil aviation and given international distribution to adjacent States only.

Series C: NOTAM containing information of concern to aircraft other than those engaged in international civil aviation and given national distribution only.

Series D: NOTAM containing information of concern for military airports only and given selected international distribution.

Series E: NOTAM containing information of concern for heliports only and given international distribution to adjacent States only.

Series F: NOTAM containing information of an administrative nature (e.g: Hand amendments, Publications, Trigger NOTAM); and given selected international distribution.

When an AIP AMDT or an AIP SUP is published in accordance with AIRAC procedures, a TRIGGER NOTAM shall be originated giving a brief description of the contents, the effective date, and the reference number to the AIP AMDT or AIP SUP.

The basic purpose of a NOTAM is the dissemination of information in advance of the event to which it relates, except in the case of unserviceability which cannot be foreseen.

A NOTAM checklist shall be issued over the AFS, for each month on the first day of the following month, containing a numerical list of all NOTAM currently in force and referring to the latest AIP AMDT, AIP SUP and AIC issued.

Each NOTAM shall be transmitted as a single telecommunication message.

A NOTAM containing permanent or temporary information of long duration shall carry appropriate AIP or AIP Supplement references.

A monthly Checklist of Aeronautical Information includes a reference of the latest AIP AMDT, checklist of AIP SUP and AIC issued, shall be published on the Civil Aviation Authority website at www.caa.co.za

Pre-flight Information Bulletins (PIB), which contain recapitulation of current NOTAM and other information of urgent character for the operator/flight crews, are available from the Aeronautical Management Services Centre. The extent of the information contained in the PIB is indicated under paragraph 5 of this sub-section.

3.7 Aeronautical Information Circular (AIC)

An AIC is a notice containing information that does not qualify for the origination of a NOTAM or for inclusion into the AIP, but which relates to flight safety, air navigation, technical, administrative or legislative matters.

An AIC shall be issued whenever it is necessary to promulgate the following:

- A long-term forecast of any major change in legislation, regulations, procedures or facilities.
- Information of a purely explanatory or advisory nature liable to affect flight safety.
- Information or notification of an explanatory or advisory nature concerning technical, legislative or administrative matters.

AIC's are classified into the following subjects - General, Operation of Aircraft, Personnel Licensing, Air Navigation Services, Aerodromes and Airworthiness.

Serial numbers will be allocated which shall be consecutive and based on the calendar year. E.g. 001/2014, 002/2014 etc.

Series Subject
A - General
B - Operation of Aircraft
C - Personnel Licensing
D - Air Navigation Services
E - Aerodromes
F - Airworthiness

Further sub-divisions shall also be used e.g.

Series B - Operation of Aircraft	General
Series B - Operation of Aircraft	Safety
Series B - Operation of Aircraft	Regulation
Series B - Operation of Aircraft	Accidents and Incidents etc

The date of issue will appear on each AIC.

A check list of AIC (AIC 10.2) currently in force shall be available from the CAA website at www.caa.co.za under Aeronautical Information.

4 AIRAC System

4.1 In order to control and regulate the operationally significant changes requiring amendments to charts, route manuals e.t.c., such changes, whenever possible, will be issued on predetermined dates according to the AIRAC SYSTEM. This type of information will be published as an AIRAC AIP SUP.

4.2 The table below indicates AIRAC effective dates for the coming years. AIRAC information will be issued so that the information will be received by the user not later than 28 days, and for major changes not later than 56 days, before the effective date. At AIRAC effective date, a trigger NOTAM will be issued giving a brief description of the contents, effective date and reference number of the AIP AMDT or AIRAC AIP SUP that will become effective on that date. Trigger NOTAM will remain in force as a reminder in the PIB until the new checklist/summary is issued.

If no information was submitted for publication at the AIRAC date, a NIL notification will be issued by NOTAM not later than one AIRAC cycle before the AIRAC effective date concerned.

4.3 Schedule of AIRAC effective dates

2025	2026	2027	2028	2029	2030
23 January	22 January	21 January	20 January	18 January	17 January
20 February	19 February	18 February	17 February	15 February	14 February
20 March	19 March	18 March	16 March	15 March	14 March
17 April	16 April	15 April	13 April	12 April	11 April
15 May	14 May	13 May	11 May	10 May	09 May
12 June	11 June	10 June	08 June	07 June	06 June
10 July	09 July	08 July	06 July	05 July	04 July
07 August	06 August	05 August	03 August	02 August	01 August
04 September	03 September	02 September	31 August	30 August	29 August
02 October	01 October	30 September	28 September	27 September	26 September
30 October	29 October	28 October	26 October	25 October	24 October
27 November	26 November	25 November	23 November	22 November	21 November
25 December	24 December	23 December	21 December	20 December	19 December

5 Pre-Flight Information

For any aerodrome/heliport used for international air operations, aeronautical information relative to the route stages originating at the aerodrome/heliport shall be made available to flight operations personnel, including flight crews and services responsible for pre-flight information.

Additional current information relating to the aerodrome of departure shall be provided concerning the following:
Failure, irregular operation and changes in the operational status of radio navigation services, VHF aeromobile channels, RVR observing system and secondary power supply.

NOTAM are important because they communicate important flight and safety information to pilots and other personnel who may need them. Because they're delivered in a timely manner, it's important for pilots to be aware of the different NOTAM and to react to the notices immediately. Conducting effective briefings is an essential part of flight preparation. Without proper preparation, a crew will not have the necessary situational awareness to fly at maximum effectiveness and safety.

It is therefore the responsibility of the pilot/flight crews to obtain the latest NOTAM information and conduct a thorough briefing on the latest NOTAM prior to their flight thus ensuring that all crew members operating the aircraft and responsible for the safe conduct of a flight are aware of the most important parameters.

6 Pre-Flight Information Service at aerodromes/heliports.

Pre-flight information service is available through one of the following means:

The AIM Service Centre

Hours of service: MON-SUN 24HR

Contact details: +2711 928 6518 (international calls)
0860 359 669 (national call share number)

File2Fly Internet self-briefing service

Hours of Service: MON-SUN 24HR

Contact details: https://file2fly.atns.co.za

AIRPORT	COVERAGE
O R Tambo International Airport.	Republic of South Africa, Botswana, Lesotho, Swaziland, Mozambique, Mauritius, Zambia, Malawi, Namibia, Algeria, Ghana, Tunisia, Belgium, Germany, Finland, United Kingdom, Netherlands, Sweden, Congo, Madagascar, Cameroon, Gabon, Central African Republic, Equatorial Guinea, Angola, Seychelles, Zimbabwe, Democratic Republic of Congo, Morocco, Senegal, Burkina Faso, Cote D'ivoire, Niger, Mali, Guinea-Bissau, Mauritania, Cape Verde, Ethiopia, Burundi, Somalia, Egypt, Eritrea, Kenya, Libya, Sudan, United Republic of Tanzania, Uganda, United States, Spain, Canary Islands, Gibraltar, France, Greece, Italy, Albania, Israel, Malta, Austria, Switzerland, Republic of Moldova, Yugoslav Republic of Macedonia, Honduras, Gautemala, Nicaragua, Costa Rica, El Salvador, Afghanis tan, Bahrain, Saudi Arabia, Iran, Jordan, Kuwait, Lebanon, United Arab Emirates, Oman, Pakistan, Iraq, Syrian Arab Republic, China, Japan, Argentina, Brazil, Sri Lanka, India, Hong Kong, Maldives, Malaysia, Singapore, Australia, Macao, Vietnam, Portugal, Denmark, Nigeria, Poland, Russia.

Daily NOTAM Summaries and Pre-flight Information Bulletins (PIB) are available from the AIM Service Centre.

A pre-flight information bulletin and NOTAM Summaries can be distributed by e-mail, or AFTN.

Post Flight Information Form, see (AIC 004/2018), for post-flight annotation by flight crews of information concerning the state, operation and reliability of air navigation facilities, are available on the ATNS website, www.atns.co.za, under the Post Flight Report on the AIM sub-menu.

GEN 3.2 AERONAUTICAL CHARTS

1 Responsible service(s)

1.1 The Civil Aviation Authity of South Africa provides a wide range of aeronautical charts for use by all types of civil aviation. The Aeronautical Information Service produces the charts which are part of the AIP.

1.2 The World aeronautical Chart (WAC) series ICAO 1: 1000 000 and ICAO 1:500 000 are compiled by the Department: Rural development and Land Reform, Chief Directorate: Nationale Geo-spatial Information.

1.3 Charts, suitable for pre-flight planning and briefing. selected from those listed In the ICAO Aeronautical Chart Catalogue (DOC 7101). are available for reference at aerodrome AIS units. (Their addresses can be found under para. 3 below.) The charts are produced in accordance with the provisions contained in ICAO Annex 4 - Aeronautical Charts. Differences to these provisions are detailed in subsection GEN 1.7.

2 Maintenance of charts

2.1 The aeronautical charts included in the AIP are kept up to date by amendments to the AIP. Corrections to aeronautical charts not contained in the AIP are promulgated by AIP amendments and are listed under paragraph 7 of this subsection. Information concerning the planning for or issuance of new maps and charts is notified by Aeronautical Information Circular.

2.2 If incorrect information detected on published charts is of operational significance, it is corrected by NOTAM.

3 Purchase arrangements

3.1 The following SA 1:500 000 Topographical (Aeronautical Edition) and the 1: 1000 000 (ICAO) World Aeronautical Charts and Digital format charts are available from:

a) National Geo-spatial Information
Department of Agriculture, Land Reform and Rural Development
Private Bag x 10
Mowbray
7705

b) The Chief Director: National Geo-spatial Information
Department of Agriculture, Land Reform and Rural Development
600 Lilian Ngoyi Street
Block A
Pretoria
0001

3.2 The following series of aeronautical charts are produced

a) World Aeronautical Chart - ICAO 1:1 000 000 (Mandatory)
b) Aeronautical Chart - ICAO: 1:500 000 (Non-mandatory)
c) Aerodrome/Heliport Chart - ICAO (Mandatory)
d) Aerodrome Ground Movement Chart - ICAO (Non-mandatory)
e) Aircraft Parking/Docking Chart -ICAO (Non-mandatory)
f) Standard Departure Chart -Instrument (SID) - ICAO (Conditionally required)
g) Standard Arrival Chart - Instrument (STAR) -ICAO (Conditionally required)
h) Instrument Approach Chart -ICAO (for each runway and procedure type) (Mandatory)
i) Precision Approach Terrain Chart (PATC) – ICAO (Mandatory)
j) Aerodrome Obstacle Chart - ICAO – Type A (Operating Limitations) (Mandatory)
k) Radar Minimum Altitude Chart (ATC Surveillance Minimum Chart) - ICAO

3.3 General description

a) World Aeronautical Chart -ICAO 1:1 000 000. This series is constructed on Lambert conical orthomorphic projection. The aeronautical data shown have been kept to a minimum, consistent with the use of the chart for visual air navigation. It includes a selection of aerodromes, significant obstacles, elements of the ATS system, prohibited, restricted and danger areas, and radio navigation aids. The chart provides information to satisfy visual air navigation and is also used as a pre-flight planning chart.
b) Aeronautical chart - ICAO 1: 500 000: This series is constructed on Lambert conical orthomorphic projection and the aeronautical data consist of major international aerodromes, selected radio navigation aids, lattices of long-range electronic aids to navigation, FIR, CTA, CTR, reporting points, etc. The chart is designed to provide a means of maintaining a continuous flight record of the aircraft position.
c) Aerodrome/Heliport Chart - ICAO. This chart contains detailed aerodrome/heliport data to provide flight crews with information that will facilitate the ground movement of aircraft:
   - from the aircraft stand to the runway; and;
   - from the runway to the aircraft stand;
     and helicopter movement:
     from the helicopter stand to the touchdown and lift-off area and to the final approach and take-off area;
   - from the final approach and take-off area to the touchdown and lift-off area and to the helicopter stand;
   - along helicopter ground and air taxiways; and
   - along air transit routes.
     It also provides essential operational information at the aerodrome/heliport.

d) Aerodrome Ground Movement Chart - ICAO. This chart is produced for those aerodromes where, due to congestion of information, details necessary for the ground movement of aircraft along the taxiways to and from the aircraft stands and for the parking/docking of aircraft cannot be shown with sufficient clarity on the Aerodrome/ Heliport Chart - ICAO.

e) Aircraft Parking/Docking Chart - ICAO. This chart is produced for those aerodromes where, due to the complexity of the terminal facilities, the information to facilitate the ground movement of aircraft between the taxiways and the aircraft stands and the parking/docking of aircraft cannot be shown with sufficient clarity on the Aerodrome/ Heliport Chart - ICAO or on the Aerodrome Ground Movement Chart - ICAO.

f) Standard Departure Chart - Instrument (SID) - ICAO. This chart is produced whenever a standard departure route - instrument has been established and cannot be shown with sufficient clarity on the Area Chart - ICAO. The aeronautical data shown includes the aerodrome of departure, aerodrome(s) which affect the designated standard departure route - instrument, prohibited, restricted and danger areas and the air traffic services system. This chart provides the flight crew with information that will enable them to comply with the designated standard departure route - instrument from the take-off phase to the en-route phase.

g) Standard Arrival Chart - Instrument (STAR) - ICAO. This chart is produced whenever a standard arrival route - instrument has been established and cannot be shown with sufficient clarity on the Area Chart - ICAO.
The aeronautical data shown include the aerodrome of landing, aerodrome(s) which affect the designated standard arrival route - instrument, prohibited, restricted and danger areas and the air traffic services system. This chart provides the flight crew with information that will enable them to comply with the designated standard arrival route - instrument from the en-route phase to the approach phase.

h) Instrument Approach Chart - ICAO. This chart is produced for all aerodromes used by civil aviation where instrument approach procedures have been established. A separate Instrument Approach Chart - ICAO has been provided for each approach procedure.
The aeronautical data shown includes information on aerodromes, prohibited, restricted and danger areas, radio communication facilities and navigation aids, minimum sector altitude, procedure track portrayed in plan and profile view, aerodrome operating minima etc.
This chart provides the flight crew with information that will enable them to perform an approved instrument approach procedure to the runway of intended landing including the missed approach procedure and where applicable, associated holding patterns.

i) Precision Approach Terrain Chart – ICAO. This chart provides detailed terrain profile information within a defined portion of the final approach so as to enable the aircraft operating agencies to assess the effects of the terrain on decision height determination by use of radio altimeters.

j) Aerodrome Obstacle Chart – ICAO Type A (Operating Limitations). This chart is produced for all aerodromes used by civil aviation, and provides information on significant obstacles in the take-off flight path areas. It is shown in both plan and profile view. This obstacle information provides data necessary to enable the operator to comply with the operating limitations of Annex 6, Parts I and II, Chapter 5.

k) Radar Minimum Altitude Chart (ATC Surveillance Minimum Chart) - ICAO. This supplementary chart provides information which enables the flight crew to monitor and cross-check altitudes assigned by a controller using an ATS surveillance system.

3.4 The following series of charts are not published/produced: These charts are either not required, not implemented or are available from commercial suppliers.

a) Aeronautical Navigation Chart - ICAO Small Scale
b) Plotting Chart – ICAO
c) Aerodrome Obstacle Chart - ICAO Type B
d) Aerodrome Terrain and Obstacle Chart – ICAO Electronic
e) Area Chart – ICAO
f) Enroute Chart - ICAO
g) Visual Approach Chart - ICAO
h) Electronic Aeronautical Chart Display - ICAO Charts

4 List of aeronautical charts available

4.1 The aeronautical charts available are listed in the tables which follow at 5.

5 Index to the World Aeronautical Chart (WAC) - ICAO 1: 1000

Title of Series	Scale	Name and/or number			Date Y/M/D	Source Date
World Aeronautical Chart ICAO (WAC)	1:1 000 000	Bloemfontein	(3397)	8th Ed	JUL 23	2013
		Bulawayo	(3275)	4th Ed	NOV 22	2006
		Calvinia	(3396)	7th Ed	JAN 23	2015
		Cape Town	(3422)	6th Ed	JUL 23	2014
		Durban	(3398)	9th Ed	JAN 23	2015
		Inhambane	(3276)	4th Ed	NOV 22	2000
		Johannesburg	(3300)	8th Ed	APR 24	2015
		Kalahari	(3274)	3rd Ed	NOV 16	1998
		Keetmanshoop	(3302)	4th Ed	MAY 14	2002
		Livingstone	(3177)	5th Ed	MAY 14	2009
		Maputo	(3299)	6th Ed	NOV 22	2010
		Ondangwa	(3179)	3rd Ed	MAY 14	2009
		Gqeberha	(3421)	5th Ed	JUL 23	2015
		Tsumeb	(3178)	4th Ed	MAY 14	2009
		Vryburg	(3301)	6th Ed	APR 24	2006
		Windhoek	(3273)	4th Ed	MAY 14	2009
SA Topographi-cal Aeronautical Edition	1:500 000	Alexander Bay	(2714)	5th Ed	APR 20	2009
		Alldays	(2126)	4th Ed	OCT 22	2014
		Beaufort West	(3122)	4th Ed	APR 21	2005
		Bloemfontein	(2924)	3rd Ed	APR 20	2004
		Calvinia	(3117)	3rd Ed	JAN 23	2015
		Cape Town	(3317)	4th Ed	JUL 23	2014
		Durban	(2928)	4th Ed	APR 20	2015
		Gobabis	(2118)	1st Ed	Namib FEB 00	1985
		Grootfontein	(1918)	1st Ed	Namib May 96	1985
		Johannesburg	(2526)	4th Ed	APR 24	2015
		Katima Mulilo	(1722)	1st Ed	RSA OCT 95	1982
		Keetmanshoop	(2518)	3rd Ed	APR 21	2009
		Kimberley	(2722)	3rd Ed	APR 20	2013
		Kroonstad	(2726)	4th Ed	APR 21	2017
		Leonardville	(2318)	1st Ed	Namib FEB 00	1983
		Luderitz	(2514)	1st Ed	Namib OCT 95	1978
		Mbombela	(2530)	4th Ed	APR 24	2010
		Ondangwa	(1714)	1st Ed	JUN 96	1981
		Opuwo	(1711)	1st Ed	FEB 00	1985
		Otjiwarongo	(1914)	2nd Ed	FEB 00	1986
		Oudtshoorn	(3320)	4th Ed	APR 21	2007
		Musina	(2130)	4th Ed	OCT 22	2014
		Phalaborwa	(2330)	4th Ed	OCT 22	2008
		Polokwane	(2326)	4rd Ed	APR 24	2018
		Gqeberha	(3324)	3rd Ed	JUL 23	2014
		Prieska	(2920)	4th Ed	APR 21	2005
		Queenstown	(3126)	3rd Ed	APR 20	2015
		Rehoboth	(2314)	1st Ed	OCT 98	1977
		Rundu	(1718)	1st Ed	OCT 96	1981
		Springbok	(2916)	6th Ed	APR 21	2015
		Ulundi	(2730)	4th Ed	JAN 23	2015
		Upington	(2718)	4th Ed	APR 20	2009
		Mahikeng	(2522)	3rd Ed	APR 24	2007
		Windhoek	(2113)	1st Ed	MAY 08	1984

Title of Series	Scale				Date Y/M/D	Source Date
Instrument Approach and landing Chart		**Alexander Bay** Aerodrome Chart	 -AD-01		 07/03/15	
		Bethlehem Aerodrome Chart	 -AD-01		 07/06/07	
		Bloemfontein (Bram Fischer INTL) Aerodrome Chart Aircraft parking/Docking chart Hot Spot VOR RWY 02 VOR RWY 20 Radar Terrain Clearance Chart UTONU 1A STAR 02 Data tabulation OKTIG 1B SID 02 Data tabulation RNAV (GNSS) RWY 02 Data tabulation RNAV (GNSS) RWY 20 Data tabulation	 -AD-01 -AD-02 -AD-03 -VOR-01 -VOR-02 -RAD-01 -ARR-01 -ARR-01A -DEP-01 -DEP-01A -RNAV-01 -RNAV-01A -RNAV-02 -RNAV-02A		 18/11/08 14/11/13 17/01/05 14/12/11 14/12/11 23/05/18 17/03/30 17/03/30 17/03/30 17/03/30 17/03/30 17/03/30 17/03/30 17/03/30	
		Bhisho Aerodrome Chart	 -AD-01		 18/12/06	
		Cape Town INTL Aerodrome Chart Ground Movement Chart Aircraft Parking/Docking Chart Aircraft Parking/Docking Chart Restricted Visibility Chart Hot Spot Helicopters ARR/DEP Zone Chart KODES 1A SID 01 IMSOM 1A SID 01 TETAN 1A SID 19 TETAN 1B SID 19 IMSOM 1B SID 19 OKTED 1B SID 19 OKTED 1C SID 19 ERDAS 1A STAR 01 GETEN 1A STAR 01 ASPIK 1A STAR 01 ERDAS 1B STAR 19 GETEN 1B STAR 19 ASPIK 1B STAR 19 ERDAS 1C STAR 01 Data tabulation ASPIK 1C STAR 01 Data tabulation GETEN 1C STAR 01 Data tabulation ILS RWY 01 Data tabulation	 -AD-01 -AD-02 -AD-03 -AD-04 -AD-05 -AD-06 -AD-07 -DEP-02 -DEP-03 -DEP-05 -DEP-06 -DEP-08 -DEP-09 -DEP-10 -ARR-01 -ARR-02 -ARR-04 -ARR-06 -ARR-07 -ARR-08 -ARR-10 -ARR-10A -ARR-11 -ARR-11A -ARR-12 -ARR-12A -ILS-01 -ILS-01A		 25/08/07 23/06/15 23/06/15 23/06/15 23/07/13 23/07/13 12/03/08 19/01/03 07/05/10 19/01/03 19/01/03 19/01/03 07/05/10 19/01/03 19/01/03 19/01/03 19/01/03 07/05/10 19/01/03 19/01/03 07/05/10 25/08/07 25/08/07 25/08/07 25/08/07 25/08/07 25/08/07 23/06/15 23/06/15	

Title of Series	Scale				Date Y/M/D	Source Date
Instrument Approach and landing Chart		ILS Z RWY 19	-ILS-02		23/06/15	
		Data tabulation	-ILS-02A		23/06/15	
		VOR Z RWY 01	-VOR-01		19/01/03	
		Radar Terrain Clearance Chart	-RAD-01		25/10/30	
		Precision APCH Terrain Chart RWY 01	-PATC-01		24/07/11	
		Precision APCH Terrain Chart RWY 19	-PATC-02		24/07/11	
		AD OBST Type A	-OBST Type A-01		13/10/17	
		AD OBST Type A	-OBST Type A-02		13/10/17	
		RNAV (RNP) Z RWY 01	-RNAV-01		19/05/23	
		Data tabulation	-RNAV-01A		17/10/12	
		RNAV (RNP) Y RWY 01	-RNAV-02		19/05/23	
		Data tabulation	-RNAV-02A		17/10/12	
		RNAV (RNP) Z RWY 19	-RNAV-03		19/01/03	
		Data tabulation	-RNAV-03A		17/10/12	
		RNAV (RNP) Z RWY 34	-RNAV-04		19/05/23	
		Data tabulation	-RNAV-04A		17/11/09	
		RNAV (GNSS) RWY 01	-RNAV-05		19/05/23	
		Data tabulation	-RNAV-05A		20/03/26	
		RNAV (GNSS) RWY 19	-RNAV-06		18/05/24	
		Data tabulation	-RNAV-06A		18/02/01	
		King Phalo				
		Aerodrome Chart	-AD-01		24/04/18	
		Restricted Visibility Chart	-AD-02		16/12/08	
		ILS Z RWY 11	-ILS-01		25/02/20	
		Data tabulation	-ILS-01A		25/02/20	
		ILS RWY 29	-ILS-03		25/07/10	
		Data tabulation	-ILS-03A		25/07/10	
		VOR RWY 11	-VOR-01		08/07/03	
		VOR Z RWY 29	-VOR-02		08/07/03	
		VOR Y RWY 29	-VOR-03		08/07/03	
		Radar Terrain Clearance Chart	-RAD-01		22/09/08	
		RNAV (GNSS) RWY 11	-RNAV-01		18/10/11	
		Data tabulation	-RNAV-01A		17/07/20	
		RNAV (GNSS) RWY 29	-RNAV-02		17/07/20	
		Data tabulation	-RNAV-02A		17/07/20	
		Graaff-Reinet				
		Aerodrome Chart	-AD-01		21/08/12	
		RNAV (GNSS) RWY 04	-RNAV-01		21/02/25	
		Data tabulation	-RNAV-01A		21/02/25	
		George				
		Aerodrome Chart	-AD-01		18/10/11	
		Restricted visibility chart	-AD-02		18/05/24	
		Hot Spot	-AD-03		18/05/24	
		XALIN 1B RNAV (GNSS) RWY 11 STAR	-ARR-02		18/05/24	
		Data tabulation	-ARR-02A		18/05/24	
		AXEMU 1A RNAV (GNSS) RWY 11 STAR	-ARR-03		18/05/24	
		Data tabulation	-ARR-03A		18/05/24	
		GABGO 1A RNAV (GNSS) RWY 11 STAR	-ARR-04		18/05/24	
		Data tabulation	-ARR-04A		18/05/24	
		GABGO 1B RNAV (GNSS) RWY 11 STAR	-ARR-05		18/05/24	
		Data tabulation	-ARR-05A		18/05/24	

Title of Series	Scale				Date Y/M/D	Source Date
Instrument Approach and landing Chart		ILS RWY 11 Data tabulation ILS Z RWY 29 Data tabulation VOR RWY 11 VOR RWY 29 Radar Minimum Altitude Chart RNAV (GNSS) RWY 11 Data tabulation RNAV (GNSS) RWY 29 Data tabulation Precision APCH Terrain Chart RWY 06 Precision APCH Terrain Chart RWY 24 AD OBST Type A	-ILS-01 -ILS-01A -ILS-02 -ILS-02A -VOR-01 -VOR-02 -RAD-01 -RNAV-01 -RNAV-01A -RNAV-02 -RNAV-02A -PATC-01 -PATC-02 -OBST Type A-01		25/08/07 25/05/15 24/10/03 24/10/03 14/05/01 14/05/01 25/06/12 18/02/01 18/03/29 18/03/29 18/03/29 16/11/10 16/11/10 16/11/10	
		George Dick Montshioa Aerodrome Chart VOR A RWY 04	 -AD-01 -VOR-01		 19/07/18 19/06/20	
		Grand Central Aerodrome Chart Restricted visibility Chart	 -AD-01 -AD-02		 24/11/28 10/04/08	
		Greytown Aerodrome Chart VOR RWY 24 RNAV (GNSS) RWY 24 Data tabulation	 -AD-01 -VOR-01 -RNAV-01 -RNAV-01A		 21/08/12 19/03/28 19/05/23 19/05/23	
		Hluhluwe Aerodrome Chart	 -AD-01		 04/07/08	
		Hoedspruit Aerodrome Chart	 -AD-01		 04/07/08	
		Johannesburg (O R Tambo INTL) Aerodrome Chart Ground movement Aircraft Parking/Docking Chart Aerodrome Parking and Docking Chart Aircraft Parking/Docking Chart Aircraft Parking/Docking Chart Ground Movement Chart - A380 Hot spot chart EGMEN 2A SID 03L APDAK 3A RWY 03L SID VASUR 3A SID 03L/R RAGUL 3A RWY 03L/R SID NESAN 1A SID 03L/R GRASMERE 5B RWY 03L/R SID EXOBI IA SID 03L/R EGMEN 1C SID 03L	 -AD-01 -AD-02 -AD-03 -AD-04 -AD-05 -AD-06 -AD-07 -AD-08 -DEP-01 -DEP-02 -DEP-03 -DEP-04 -DEP-06 -DEP-07 -DEP-08 -DEP-10		 24/10/03 23/06/15 23/06/15 23/07/13 23/06/15 23/06/15 23/06/15 23/07/13 13/01/10 16/08/18 16/03/31 16/08/18 13/01/10 14/08/21 13/01/10 13/01/10	

Title of Series	Scale				Date Y/M/D	Source Date
Instrument Approach and landing Chart		Data tabulation	-DEP-10A		13/01/10	
		APDAK 1 B RNAV 03L SID	-DEP-11		14/08/21	
		Data tabulation	-DEP-11A		13/01/10	
		EGMEN 2B SID 21R	-DEP-12		13/01/10	
		APDAK 2B RWY 21R SID	-DEP-13		14/08/21	
		VASUR 3B SID 21L/R	-DEP-14		16/03/31	
		OVALA 1B RWY 21L/R SID	-DEP-16		14/08/21	
		GRASMERE 6C RWY 21R SID	-DEP-17		14/08/21	
		EXOSI 3B SID 21L/R	-DEP-18		13/01/10	
		HEIDELBERG 5D RWY 21L/R SID	-DEP-19		14/08/21	
		LANSERIA 1C SID 21R	-DEP-20		16/03/31	
		EGMEN 1D SID 21R	-DEP-21		13/01/10	
		Data tabulation	-DEP-21A		13/01/10	
		APDAK 1 D RNAV RWY 21R SID	-DEP-22		14/08/21	
		Data tabulation	-DEP-22A		13/01/10	
		GEROX 1C RNAV RWY 21R SID	-DEP-23		14/08/21	
		Data tabulation	-DEP-23A		13/01/10	
		RAGUL 1D RWY 21R	-DEP-24		25/06/12	
		Data tabulation	-DEP-24A		25/06/12	
		AVILO 1A 03R STAR	-ARR-07		20/12/31	
		AVAGO 1C 03R STAR	-ARR-08		20/12/31	
		Data tabulation	-ARR-08A		13/01/10	
		NIBEX 1B RNAV RWY 03R STAR	-ARR-09		20/12/31	
		Data tabulation	-ARR-09A		13/01/10	
		AVILO 1B RNAV RWY 03R STAR	-ARR-12		20/12/31	
		Data tabulation	-ARR-12A		13/01/10	
		AVAGO 1D STAR 21L	-ARR-18		25/04/17	
		Data tabulation	-ARR-18A		25/04/17	
		NIBEX 1D STAR 21L	-ARR-19		20/12/31	
		Data tabulation	-ARR-19A		13/01/10	
		ILS Z RWY 03L	-ILS-01		13/01/10	
		ILS Y RWY 03L	-ILS-02		16/08/18	
		ILS Z RWY 03R	-ILS-03		25/10/02	
		Data tabulation	-ILS-03A		25/10/02	
		ILS X RWY 03R	-ILS-05		14/08/21	
		ILS W RWY 03R	-ILS-06		14/08/21	
		ILS RWY 21L	-ILS-07		25/10/02	
		Data tabulation	-ILS-07A		25/10/02	
		ILS RWY 21R	-ILS-10		25/08/07	
		Data tabulation	-ILS-10A		25/08/07	
		VOR Z RWY 21R	-VOR-01		13/04/04	
		VOR Y RWY 21R	-VOR-02		13/01/10	
		Radar Minimum Altitude Chart	-RAD-01		25/02/20	
		RNAV RWY 03R	-RNAV-01		20/12/31	
		Data tabulation	-RNAV-01A		14/01/09	
		RNAV RWY 21L	-RNAV-02		20/12/31	
		Data tabulation	-RNAV-02A		14/05/01	
		AD OBST Type A RWY 03L 21R	-OBST Type A-01		20/10/08	
		AD OBST Type A RWY 03R 21L	-OBST Type A-02		17/04/27	
		Precision APCH Terrain Chart RWY 03L	-PATC-01		25/02/20	
		Precision APCH Terrain Chart RWY 21R	-PATC-02		25/02/20	
		Precision APCH Terrain Chart RWY 03R	-PATC-03		25/02/20	
		Precision APCH Terrain Chart RWY 21L	-PATC-04		25/02/20	

Title of Series	Scale				Date Y/M/D	Source Date
Instrument Approach and landing Chart		**Kimberly**				
		Aerodrome Chart	-AD-01		25/04/17	
		Restricted Visibility Chart	-AD-02		25/04/17	
		Aircraft Parking/Docking Chart	-AD-03		25/04/17	
		VOR RWY 02	-VOR-01		13/12/12	
		VOR RWY 20	-VOR-02		13/12/12	
		EVESI 1A STAR 02	-ARR-01		17/05/25	
		Data tabulation	-ARR-01A		17/05/25	
		IBKEL 1A STAR 02	-ARR-02		20/08/13	
		Data tabulation	-ARR-02A		20/08/13	
		IBKEL 1B STAR 20	-ARR-03		20/08/13	
		Data tabulation	-ARR-03A		20/08/13	
		UNRAG 1A SID 02	-DEP-01		17/05/25	
		Data tabulation	-DEP-01A		17/05/25	
		OKPAG 1A SID 02	-DEP-02		20/08/13	
		Data tabulation	-DEP-02A		20/08/13	
		OKPAG 1B SID 20	-DEP-03		20/08/13	
		Data tabulation	-DEP-03A		20/08/13	
		RNAV (GNSS) RWY 02	-RNAV-01		17/06/22	
		Data tabulation	-RNAV-01A		17/06/22	
		RNAV (GNSS) RWY 20	-RNAV-02		17/06/22	
		Data tabulation	-RNAV-02A		17/06/22	
		King Shaka INTL				
		Aerodrome Chart	-AD-01		18/10/11	
		Aircraft Parking/Docking Chart	-AD-02		23/06/15	
		AD OBST TYPE A	-OBST Type A-01		14/11/13	
		ILS Z RWY 06	-ILS-01		16/12/08	
		ILS Y RWY 06	-ILS-02		25/10/02	
		Data tabulation	-ILS-02A		25/10/02	
		LS Z RWY 24	-ILS-03		16/12/08	
		ILS Y RWY 24	-ILS-04		16/12/08	
		VOR Z RWY 06	-VOR-01		17/01/05	
		VOR Z RWY 24	-VOR-02		17/01/05	
		Radar Minimum Altitude Chart	-RAD-01		13/07/25	
		RWY 06 APMAT 1A	-ARR-01		14/12/11	
		Data tabulation	-ARR-01A		10/05/06	
		RWY 06 DUNSA 1A	-ARR-02		14/12/11	
		Data tabulation	-ARR-02A		13/05/02	
		RWY 06 GETOK 1C	-ARR-03		15/04/30	
		Data tabulation	-ARR-03A		17/08/17	
		RWY 06 ITMIL 1A	-ARR-04		15/08/20	
		Data tabulation	-ARR-04A		10/05/06	
		RWY 24 APMAT 1B	-ARR-05		15/08/20	
		Data tabulation	-ARR-05A		11/04/07	
		RWY 24 DUNSA 1B	-ARR-06		14/12/11	
		Data tabulation	-ARR-06A		13/03/07	
		RWY GETOK 1D	-ARR-07		15/08/20	
		Data tabulation	-ARR-07A		11/04/07	
		RWY24 ITMIL 1B	-ARR-08		17/03/30	
		Data tabulation	-ARR-08A		11/04/07	
		RWY 06 ITMIL 1C	-DEP-01		14/12/11	
		Data tabulation	-DEP-01A		10/05/06	
		RWY 24 OKTAN 1A	-DEP-02		14/12/11	
		Data tabulation	-DEP-02A		11/04/07	

Title of Series	Scale				Date Y/M/D	Source Date
Instrument Approach and Landing Chart		RWY 06 TUBIN 1A	-DEP-03		14/12/11	
		Data tabulation	-DEP-03A		11/04/07	
		RWY 24 TUBIN 1B	-DEP-04		14/12/11	
		Data tabulation	-DEP-04A		11/04/07	
		Greytown 1A	-DEP-05		14/12/11	
		Data tabulation	-DEP-05A		11/04/07	
		Greytown 2B	-DEP-06		14/12/11	
		Data tabulation	-DEP-06A		11/04/07	
		RNAV RWY 06	-RNAV-01		17/08/17	
		Data tabulation	-RNAV-01A		10/11/18	
		RNAV RWY 24	-RNAV-02		17/08/17	
		Data tabulation	-RNAV-02A		10/11/18	
		Precision APCH Terrain Chart RWY 06	-PATC-01		24/07/11	
		Precision APCH Terrain Chart RWY 24	-PATC-02		24/07/11	
		Kleinsee				
		Aerodrome Chart	-AD-01		04/07/08	
		Kruger Mpumalanga INTL				
		Aerodrome Chart	-AD-01		20/12/31	
		RAMP chart	-AD-02		04/07/08	
		ILS Z RWY 05	-ILS-01		20/04/23	
		ILS Y RWY 05	-ILS-02		20/04/23	
		VOR/DME RWY 05	-VOR-01		18/07/19	
		VOR/DME RWY 23	-VOR-02		18/07/19	
		RNAV (GNSS) RWY 05	-RNAV-01		20/10/08	
		Data tabulation	-RNAV-01A		20/10/08	
		TILIR 1A RWY 05	-ARR-01		21/05/20	
		Data tabulation	-ARR-01A		21/05/20	
		Ladysmith				
		Aerodrome Chart	-AD-01		04/07/08	
		Langebaan CFS				
		Aerodrome Chart	-AD-01		04/07/08	
		Lanseria INTL				
		Aerodrome chart	-AD-01		19/06/20	
		Aicraft parking/Docking Chart	-AD-02		24/10/03	
		Restricted Visibility Chart	-AD-03		19/01/03	
		RNAV (GNSS) RWY 07	-RNAV-01		16/08/18	
		Data tabulation	-RNAV-01A		21/07/15	
		RNAV (RNP) RWY 25	-RNAV-02		18/05/24	
		Data tabulation	-RNAV-02A		18/05/24	
		VOR Z RWY 07	-VOR-01		16/05/26	
		VOR Y RWY 07	-VOR-02		16/05/26	
		ILS Z RWY 07	-ILS-01		20/04/23	
		Data tabulation	-ILS-01A		20/04/23	

Title of Series	Scale				Date Y/M/D	Source Date
Instrument Approach and Landing Chart		**Makhado AFB** Aerodrome Chart	-AD-01		04/07/08	
		Margate Aerodrome Chart RNAV (GNSS) RWY 05 Data tabulation RNAV (GNSS) RWY 23 Data tabulation	-AD-01 -RNAV-01 -RNAV-01A -RNAV-02 -RNAV-02A		18/10/11 16/12/08 16/12/08 16/12/08 16/12/08	
		Malelane Aerodrome Chart RNAV (GNSS) RWY 09 Data tabulation RNAV (GNSS) RWY 27 Data tabulation	-AD-01 -RNAV-01 -RNAV-01A -RNAV-02 -RNAV-02A		18/10/11 17/04/27 15/10/15 17/04/27 15/10/15	
		Mthatha Aerodrome Chart RNP RWY 14 Data tabulation RNAV (GNSS) RWY 32 Data tabulation	-AD-01 -RNP-01 -RNP-01A -RNAV-02 -RNAV-02A		18/11/08 25/06/12 25/06/12 18/11/08 19/01/03	
		Nelspruit Aerodrome Chart RAMP	-AD-01 -AD-02		04/07/08 04/07/08	
		Newcastle Aerodrome Chart RNP RWY 11 Data tabulation	-AD-01 RNP-01 RNP-01A		08/12/18 23/10/05 23/06/15	
		Overberg Aerodrome Chart	-AD-01		04/07/08	

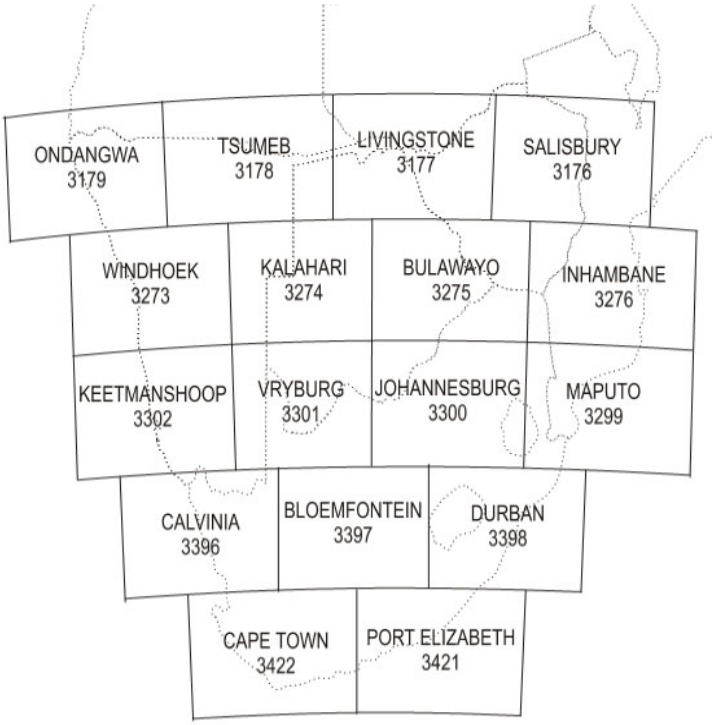
Title of Series	Scale				Date Y/M/D	Source Date
Instrument Approach and Landing Chart		**Phalaborwa**				
		Aerodrome Chart	-AD-01		04/07/08	
		Pietermaritzburg				
		Aerodrome Chart	-AD-01		18/11/08	
		RNAV (GNSS) RWY 16	-RNAV-01		19/06/20	
		Data tabulation	-RNAV-01A		10/07/29	
		RNAV (GNSS) RWY 34	-RNAV-02		19/07/18	
		Data tabulation	-RNAV-02A		10/09/23	
		Piet Retief				
		Aerodrome Chart	-AD-01		04/07/08	
		Pilanesberg				
		Aerodrome Chart	-AD-01		04/07/08	
		Breakcloud VOR/DME 05	-VOR-01		04/07/08	
		Garden Route Aero				
		Aerodrome Chart	-AD-01		18/11/08	
		RNAV (GNSS) RWY 12	-RNAV-01		21/11/04	
		Data tabulation	-RNAV-01A		21/11/04	
		RNAV (GNSS) RWY 30	-RNAV-02		21/11/04	
		Data tabulation	-RNAV-02A		21/11/04	
		Polokwane INTL				
		Aerodrome Chart	-AD-01		18/11/08	
		Restricted Visibility Chart	-AD-02		13/03/07	
		VOR RWY 05	-VOR-01		16/09/15	
		RNAV (GNSS) RWY 05	-RNAV-01		19/07/18	
		Data tabulation	-RNAV-01A		19/07/18	
		Pongola				
		Aerodrome Chart	-AD-01		04/07/08	
		Chief Dawid Stuurman INTL				
		Aerodrome Chart	-AD-01		18/11/08	
		Aircraft parking/Docking Chart	-AD-02		15/09/17	
		ILS RWY 08	-ILS-01		25/10/02	
		Data tabulation	-ILS-01A		25/10/02	
		ILS Z RWY 26	-ILS-02		17/09/14	
		VOR Z RWY 08	-VOR-01		18/12/06	
		VOR Z RWY 26	-VOR-02		16/01/07	
		Radar Terrain Clearance Chart	-RAD-01		25/10/02	
		RNAV (GNSS) RWY 08	-RNAV-01		15/09/17	
		Data tabulation	-RNAV-01A		15/09/17	
		RNAV (GNSS) RWY 26	-RNAV-02		15/09/17	
		Data tabulation	-RNAV-02A		15/09/17	
		AD OBST Type A-01 RWY 08/26	-OBST Type A-01		18/06/21	
		Precision APCH Terrain Chart RWY 08	-PATC-01		18/06/21	
		Precision APCH Terrain Chart RWY 26	-PATC-02		18/06/21	
		Rand				
		Aerodrome Chart	-AD-01		18/10/11	
		Restricted Visibility Chart	-AD-02		10/01/14	

Title of Series	Scale				Date Y/M/D	Source Date
Instrument Approach and Landing Chart		**Richards Bay** Aerodrome Chart Parking Breakcloud VOR/DME 05 Breakcloud VOR/DME 23	 -AD-01 -AD-02 -VOR-01 -VOR-03		 04/07/08 04/07/08 04/07/08 04/07/08	
		Secunda Aerodrome Chart	 -AD-01		 18/11/08	
		Sishen Aerodrome Chart Aircraft parking/Docking chart XASMI/XATKU VISUAL DEP XATKU/XASMI VISUAL ARR RNAV (GNSS) RWY 17 Data tabulation	 -AD-01 -AD-02 -VFR DEP-01 -VFR ARR-01 -RNAV-01 -RNAV-01A		 21/08/12 14/05/01 19/07/18 19/07/18 17/09/14 17/09/14	
		Skukuza Aerodrome Chart RNAV (GNSS) RWY 17 Data tabulation RNAV (GNSS) RWY 35 Data tabulation	 -AD-01 -RNAV-01 -RNAV-01A -RNAV-02 -RNAV-02A		 18/12/06 18/12/06 18/12/06 18/12/06 18/12/06	
		St Francis field Aerodrome Chart RNAV (GNSS) RWY 10 Data tabulation RNAV (GNSS) RWY 28 Data tabulation	 -AD-01 -RNAV-01 -RNAV-01A -RNAV-02 -RNAV-02A		 18/12/06 18/09/13 18/09/13 18/09/13 18/09/13	
		Swartkop MIL Aerodrome Chart	 -AD-01		 07/03/15	
		Tutuka Aerodrome Chart	 -AD-01		 04/07/08	
		Tswalu Aerodrome Chart	 -AD-01		 19/01/03	
		Tzaneen Aerodrome Chart	 -AD-01		 04/07/08	
		Ulundi Aerodrome Chart	 -AD-01		 04/07/08	

Title of Series	Scale				Date Y/M/D	Source Date
Instrument Approach and Landing Chart		**Upington** Aerodrome Chart Restricted Visibility Chart Hot spot chart VOR RWY 35 RNAV (GNSS) RWY 35 Data tabulation	 -AD-01 -AD-02 -AD-03 -VOR-01 -RNAV-01 -RNAV-01A		 21/08/12 14/05/01 16/01/07 14/03/06 16/12/08 16/12/08	
		Venetia Mine Aerodrome Chart	 -AD-01		 04/07/08	
		Waterkloof AFB Aerodrome Chart	 -AD-01		 05/01/20	
		Wonderboom Aerodrome Chart RNAV (GNSS) RWY 29 Data tabulation VOR RWY 29	 -AD-01 -RNAV-01 -RNAV-01A -VOR-01		 18/11/08 18/09/13 18/09/13 16/07/21	
		Witbank Aerodrome Chart Breakcloud VOR	 -AD-01 -VOR-01		 04/07/08 04/07/08	
		Ysterplaat MIL Aerodrome Chart	 -AD-01		 07/03/15	

World Aeronautical Charts

WORLD AERONAUTICAL
CHART INDEX
SOUTHERN AFRICA



6 Topographical charts

To supplement Aeronautical charts, a wide range of topographical charts is available from:

a) The Government Printer
Publications Section
Private Bag X85
Pretoria
0001

b) Department: Rural development and Land Reform
Chief Directorate: Nationale Geo-spatial Information
Private Bag x10
Mowbray
7705

c) The Surveyor-General
Private Bag X20634
Bloemfontein
9300

d) The Surveyor-General
P.O. Box 396
Pietermaritzburg
3200

7 Corrections to charts not contained in the AIP

Charts	Location	Corrections

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GEN 3.3 AIR TRAFFIC SERVICES

1 Responsible service

Air Traffic Control in South Africa is regulated by the Civil Aviation Authority.

The majority of Air Traffic Control Services are provided by the Air Traffic and Navigational Services Company Ltd under authority of the Minister of Transport.

Regulating Authority:

Postal address:
Director of Civil Aviation Civil Aviation Authority
Private Bag X 73
HALFWAY HOUSE
1685
Republic of South Africa

Telephone: (011) 545 1000
Telefax: (011) 545 1465

AFS Address: FAHQYAYX

Air Traffic Service Provider:

Postal Address:
Chief Executive Officer Air Traffic and Navigational Services Company Ltd
Private Bag x 15
Kempton Park
1620

Telephone: (011) 607 1383/1382
Telefax: (011) 607 1577
Telex:
AFS Address: FAATYNYX

2 Area of responsibility

Air traffic services as indicated in the following paragraphs are provided for the entire area which coincides with the Cape Town, Johannesburg and Johannesburg Oceanic Flight Information Regions.

3 Types of services

With the exception of military aerodromes and a limited number of small aerodromes, Air Traffic Services in the Republic of South Africa are provided by the Air Traffic and Navigational Services Company Ltd.

The airspace of the Republic of South Africa, including adjacent international waters, is comprised of Cape Town, Johannesburg and Johannesburg Oceanic Flight Information Regions.

Air Traffic Service is exercised:

a) on airways on the main ATS route

b) in terminal control areas, control areas and in control zones at controlled aerodromes equipped with approach and landing aids.

c) in aerodrome traffic zones at other aerodromes with control towers.

Flight Information Service (which includes Advisory Service) and Alerting Service within the FIRs is provided by the various Flight Information Centres.

Aerodrome Flight Information Service is provided at some of the smaller aerodromes.

Air Traffic Control, Flight Information and Alerting Service is provided by:

a) the three ACCs, Johannesburg, Cape Town and Johannesburg Oceanic along the airways including those parts of the airways traversing terminal control areas within their respective FIRs;

b) the relevant aerodrome control tower in co-ordination with the respective APP as necessary, for arriving and departing aircraft;

c) other ATSUs in the different FIRs.

The description of the airspaces designated for air traffic services purposes is found in the tables forming part of ENR 2.

The air traffic rules and procedures in force in the organization of air traffic services are in conformity with ICAO Standards, Recommended Practices and Procedures. Differences between the national and international rules and procedures are given in the Regional Supplementary Procedures and Altimeter Setting Procedures being reproduced in full with differences indicated.

4 Co-ordination between the operator and ATS

Co-ordination between operators and the air traffic services is effected in accordance with paragraph 2.15 of ICAO Annex 11 and paragraphs 2.1.1.4 and 2.1.1.5 of part VIII of the PANS-ATM, (Doc 4444 - PANS-ATM)

4.1 Letters of Agreement and Operations Letters

1) In accordance with ICAO it is accepted practice that the term Letter of Agreement is used to cover agreements between two or more adjacent ATSUs or between ATS Authorities of different States dealing with the manner in which air traffic services are to be provided by the parties concerned.

The term Operations Letter is used to cover agreements between one or more ATSUs on the one hand and other authorities, agencies or bodies (military, other operators, aerodrome operators etc.) on the other hand specifying the conditions. means and procedures employed to regulate their co-operation or the conduct of specific operations affecting Air Traffic Services.

2) In order to comply with the afore-mentioned, the following procedure shall be followed for the processing of Letters of Agreement and Operations Letters to ensure that:

a) Any action required by Letters of Agreement is co-ordinated with ATSUs concerned.

b) Any necessary co-ordination with other parties concerned with an Operational Letter is affected. This also means where ATS providers in South Africa require to undertake operational agreements with foreign ATS providers, co-ordination with the South African CAA through the Director of Civil Aviation shall be undertaken.

c) The effective date of an agreement allows for at least 30 days for familiarisation after distribution to all concerned.

d) The Agreement is signed by the Unit Chief Controller / ATS Manager and responsible personnel of the other Agencies / Operators involved.

e) A copy of the Agreement is to be provided to:

i) The Civil Aviation Authorities (CAAs) of the States involved.

ii) The units / agencies / operators involved

5 Minimum flight altitude

a) En-route safe altitude. An altitude which will ensure a separation height of at least 1500 FT above the highest obstacle within five (5) NM of the aircraft in flight.

b) Minimum off route altitude (MORA)

6 Minimum flight altitude formula

An operator must use the following method to calculate minimum flight altitude:

MORA is a minimum flight altitude computed from current ONC or WAC charts.

1) Two types of MORAs are charted which are:

a) Route MORAs e.g. 9800a: and

b) Grid MORAs e.g. 98.

2) Route MORA values are computed on the basis of an area extending 10 NM to either side of route centreline and including a 10 NM radius beyond the radio fix/ reporting point or mileage break defining the route segment.

3) MORA values clear all terrain and man-made obstacles by 1 000 feet in areas where the highest terrain elevation or obstacles are up to 5 000 feet. A clearance of 2 000 feet is provided above all terrain or obstacle which are 5 001 feet and above.

4) A grid MORA is an altitude computed by the formula and the values are shown within each grid formed by charted lines of altitude and longitude. Figures are shown in thousands and hundreds of feet (omitting the last two digits so as to avoid chart congestion). Values followed by plus/minus are believed not to exceed the altitudes shown. The same clearance criteria as explained in subparagraph (3) above apply.

7 ATS units address list

Bram Fischer International Postal Address: P/Bag X20559, Bloemfontein 9300 Telephone: +27 51 503 7201 Telefax:+27 51 503 7214 AFS Address: FABLZTZX	Cape Town International Postal Address: P/Bag X 17, Cape Town Intl Airport, 7525 Telephone: +27 21 937 1116/7 Telefax: +27 21 934 0964 AFS Address: FACTZTZZ
Central Airspace Management Unit (CAMU) Postal Address: Private Bag x 1, Bonaero Park, 1622 Telephone: +27 11 928 6433 Telefax: +27 11 928 6420 E-mail: camu@atns.co.za	Chief Dawid Stuurman Postal Address: P.O.Box 5360,Walmer, 6065 Telephone: +27 41 501 5900 Telefax: +27 41 501 5957 (administration, office hours) Telefax: +27 41 501 5959 (ATS briefing). AFS Address: FAPEZTZX
George Postal Address: PO Box 10005, George 6530 Telephone: +27 44 801 8809 Telefax: +27 44 801 8810 AFS Address: FAGGZTZX	George Dick Montshioa Postal Address: P. O. Box 183, Mafikeng 2745 Telephone: +27 18 385 1131 Telefax:+27 18 385 1131 AFS Address: FAMMZTZX
Grand Central Postal Address: P.O. Box 36, Halfway House, 1685 Telephone: +27 11 315 3534 Telefax: +27 11 805 6089 AFS Address: FAGCZTZX	Kimberley Postal Address: P/Bag X5052, Kimberley, 8300 Telephone: +27 53 851 1012 Telefax: +27 53 851 1555 AFS Address: FAKMZTZZ
King Phalo Postal Address: P O Box 5035, Greenfields, 5208 Telephone: +27 43 736 6161 / 706 0259 Telefax: +27 43 736 6014 AFS Address: FAELZTZX	King Shaka International Postal Address: P.O. Box 2620, Country Club 4301 Telephone: +27 32 436 5002 Telefax: +27 32 436 3811 AFS Address: FALEZTZX
Kruger Mpumalanga International Postal Address: P O Box 20015, West Acres, 1200 Telephone: +27 13 753 7520 / 751 2917 Telefax: +27 13 751 2910 AFS Address: FAKNZTZZ	Lanseria Postal Address: P O Box 165,Lanseria 1748 Telephone: +27 11 701 3262 / 701 3278 Telefax: +27 11 701 3505 AFS Address: FALAZTZX

Mthatha Postal Address: P/Bag X5036, Mthatha Telephone: +27 47 536 0029 Telefax:+27 47 536 0040 AFS Address: FAUTZTZX	O R Tambo International Postal Address: P/Bag X1, Bonaero Park, 1622 Telephone: +27 11 928 6454/5 Telefax: +27 11 395 1045 AFS Address: FAORZTZZ
Pietermaritzburg Postal Address: P.O. Box 212005, Oribi 3205 Telephone: +27 33 392 3110 Telefax: +27 33 386 9618 AFS address: FAPMZTZX	Pilanesberg Postal Address: P.O. Box 2931, Mogwase, 0314 Telephone: +27 14 552 2154 or +27 14 552 1261 EXT 217 Telefax: +27 14 552 2154 AFS address: FAPNZTZX
Polokwane International Airport Postal Address: Postnet Suite 18, P/Bag X598, Polokwane North 0750 Telephone: +27 15 288 0343 Telefax: +27 15 288 0344 AFS address: FAPPZTZZ	Rand Postal Address: P.O.Box 18133,Rand Airport 1419 Telephone: +27 11 827 4517 Telefax: +27 11 827 4239 AFS Address: FAGMZTZX
Richards Bay Postal Address: Postnet Suite 75, P/Bag X1040, Richards Bay 3900 Telephone: +27 35 907 5354 AFS address: FARBZTZX	Upington Postal Address: P.O. Box 1810, Upington 8800 Telephone: +27 66 512 2688 Telefax: +27 54 331 1606 AFS Address: FAUPZTZX
Virginia (Durban) Postal Address: ATNS Virginia Tower, Postnet Suite 10, P/Bag X70 Durban North 4016 Telephone: +27 31 563 4213 Telefax:+27 31 563 4213 AFS Address: FAVGZTZZ	Wonderboom Postal Address: P O Box 81986, Doornpoort, 0017 Telephone: +27 12 543 1402 Telefax:+27 12 543 0038 AFS Address: FAWBZTZX

7.1 Hours of operations of an Air Traffic Service Unit

Pilots must take note that although the hours of operations of an Air Traffic Service Unit associated with a specific aerodrome Is published in the Republic of South Africa AIP, the service could be extended outside the published hours of operation in emergencies or at the request of the aerodrome operator. Such extensions will be advertised by NOTAM. In the interest of flight safety pilots are reminded to ensure that they familiarise themselves with the latest NOTAM in this regard.

8 USER PROCEDURE RELATING TO THE FLEXIBLE USE OF AIRSPACE WITHIN THE SOUTH AFRICAN AREA OF RESPONSIBILITY.

8.1 History:

The concept of managing the flow of air traffic within the South African area of responsibility is not new, as the Implementation of the flow control office within the OR Tambo ATC Centre will reflect. The basic concept of managing the flow of traffic, by means of Slot times has been expanded to incorporate the total management of air traffic by the planned progressive implementation of flexible use of airspace (FUA) which will allow the use of all available airspace over South Africa, by all potential users of such airspace. This concept is reflected by the terms of access and equity as entrenched in the National Airspace Master Plan and which state:

Access

The ATM system should provide an operating environment that:

a) ensures that all airspace users have the right of access to ATM resources needed to meet their specific operational requirements; and

b) ensures that the shared use of the airspace for different airspace users can be achieved safely.

Equity

The ATM System should ensure equity for all airspace users that have access to a given airspace or service. Thus, excluding emergency situations, which will always enjoy the highest priority, the first aircraft ready to use the ATM resources will generally receive priority, except where significant overall safety or system operational efficiency would accrue by providing priority on a different basis.

8.2 Concept:

The responsibility for the management of traffic flows within South African airspace will reside with the Central Airspace Management Unit (CAMU) which is established at the O R Tambo ATC Centre. The units responsibility will include, apart from managing the functions of the slot allocation program, the management of the use of airspace as per user requirements, catering for military exercises, special and unusual events and any other activity which might require the use of airspace for a particular time period. This unit will also be responsible for the re-routing of traffic, affected by adverse weather and temporary restricted or special use of airspace in consultation with operators and users in a collaborative decision making (CDM) process, as well as reducing delays caused by whatever reason at destination airports in co-operation with the relevant ATSU.

8.3 Application

In order to allow air traffic management to operate efficiently, all applications for use of airspace, will be required to be routed via the CAMU for processing and dissemination of Information to all affected stakeholders.

The policies and procedures associated with service are subject to strategic consideration by NASCOM periodically.

The FUA application process requires applicants to comply with the specific FUA application procedure and time scale in order to allow the safe and effective use of airspace required, without straining the efficient and orderly flow of other air traffic. The procedure consists of three components:

8.3.1 Strategic component:

This encompasses the long term planning of aircraft operators, such as schedule planning, large scale military exercises and special events, as well as slot reservations. In the event of significant changes to airspace or route structure being required to accommodate a specific use of airspace, for which AIP supplements need to be published, a lead-time of 70 days is required. Slot reservations still need to comply with the requirements as detailed in the AIP ENR 1.9.

Should the planned event be conducted within a portion of existing managed airspace, without requiring significant change to route structures, 30 days prior notification is required in order to ensure the circulation of NOTAM and other relevant information.

8.3.2 Pre-tactical component:

This encompasses airspace users engaged in normal operations, such as aerial surveys, will be accommodated in this phase of planning. Applicants are required to confirm such strategic services requests at least 48 hours prior commencement of such operations.

8.3.3 Tactical component:

Ad hoc special requests for airspace usage on a short-term basis will be dealt with, within the tactical environment, but will require 7 hours prior application. Users making use of this option must note that although the request for airspace may be approved, the allocation of such airspace may not meet their specified location or time requirements for the operation.

8.3.4 The application process is as follows:

An application for Flexible Use of Airspace needs to be applied for through the online application form which is available on the ATNS website (www.atns.co.za). under the Flexible Use of Airspace tab. The automated tracking number provided is an acknowledgment that your submission was received by the CAMU FUA processing office. It Is a temporary number for tracking purposes only. It is NOT to be taken as a response or clearance to operate.

CENTRAL AIRSPACE MANAGEMENT UNIT; FUA - USERS APPLICATION	
ITEM	**LEAD TIME**
Submit request to CAMU containing the following information: 1. The requesting authority 2. Contact number 3. Type of operation 4. Number of balloons or sky-lanterns, where applicable 5. Dates of the requirement 6. The duration of the operation 7.The starting time of the operation 8. The lateral limits of the proposed area of operation either with coordinates or geographically defined. 9. Vertical limits of the proposed area of operation 10. Any special or unique communication or operational management issues. 11. Transponder codes 12. Any emergency procedures in place by applicant	As required by either the Strategic Pre - tactical or tactical requirement as reflected in GEN 3.3 para 8.3.
1. Supply details on separate page if necessary 2. NB! In the event of cancellation of intended operation the CAMU be informed. 3. Users are required to submit applications for special airspace allocation to the CAMU using the online application form available on WWW.ATNS.CO.ZA 4. For operations such as aerial photography and surveys an aeronautical map with the area of operations clearly depicted on it will be required to be attached to the application.	

9 AUTOMATIC DEPENDENT SURVEILLANCE (ADS)/CONTROLLER PILOT DATA LINK COMMUNICATION/CONTROL (CPDLC) ATS

In September 1999 ATNS successfully concluded the ADS/CPDLC trials under the project ADSAT. ADS/CPDLC as an ATM tool was accepted as operational prior 2001 and is currently being utilised for daily operations

Operators are encouraged to exploit the full benefits of the new technology, which enhances safety and efficiency due to reduced workloads, increased situational awareness and optimum routings and preferred level approvals. Those operators who are already equipped should ensure that the correct procedures detailed in the Indian Ocean Operations Manual (IOOM) are followed during operations. The participation of operators is particularly encouraged in the Indian Ocean Random Routing Area. Electronic copies of the IOOM are obtainable from the Manager Standard Assurance - ATNS or from the editor of the IOOM as reflected below:

The Editor
IOOM Melbourne Centre
P.O. Box 1093
TULLAMARINE VICTORIA 3043
AUSTRALIA
E-mail: kathryn.cornelius@airservices.gov.au
Fax: +64 9 275 3106

The service provided from Johannesburg is an ADS and CPDLC service with the additional benefits of vertical random routing and flex tracking operations in the IORRA.

The operations will be based on CPDLC as defined within the RTCA, D0219 and D0212 as implemented within the FANS-1/A avionics package.

Logon for FANS/1 equipped aircraft will be initiated with the address FAJO and for FANS/A equipped aircraft by JNBCAYA.

Operators requiring any additional information should contact the ATNS Senior Manager Operations (North) at 27-11-607 1323 or the Manager Air Traffic Services at Johannesburg 27-11-928 6526.

The IOOM is managed on behalf of the IOOM members by Air Services Australia. Any persons, organisations or agencies wishing to be part of the paper copy distribution list, should apply to the editor of the IOOM.

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GEN 3.4 COMMUNICATION SERVICES

1 Responsible service

Telecommunication and Navigation Services are regulated by the South African Civil Aviation Authority, established by section 2 of the South African Civil Aviation Authority Act 1998 (Act number 40 of 1998).

Telecommunication and Navigation Services are provided by the Air Traffic and Navigation Services Company Ltd (ATNS) under authority of the Minister of Transport.

Regulating Authority:

Postal Address:

South African Civil Aviation Authority
Air Navigation Services Department: Communications, Navigation and Surveillance
Private Bag X 73,
Halfway House
1685

Telephone: +27 11 545 1000
Telefax: +27 11 545 1465
AFS Address: FAHQYAYX
Website: www.caa.co.za

Service Provider: ATNS

Postal Address:

Chief Executive Officer
Air Traffic and Navigation Services Company Ltd
Private Bag x 15
Kempton Park
1620

Telephone: +27 11 607 1383/1382
Telefax: +27 11 607 1577
AFS Address: FAATYFYX
Website: www.atns.co.za

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

Annex 10 - Vol I & II - Aeronautical Telecommunication

Doc 8400 - Procedures for Air Navigation Services ICAO Abbreviations and Codes

Doc 8585 - Designations for Aircraft Operating Agencies, Authorities and Services

Doc 7030 - Regional Supplementary Procedures (COM Procedures for AFI)

Doc 7910 - Location Indicators

1.1 Satellite communication (SATCOM)

The following telephone numbers are to be utilised for satellite communication (SATCOM) purposes:

1) Primary number:
Johannesburg Oceanic: +27 11 928 6456

2) Secondary numbers:
Johannesburg Filter: +27 11 928 6454
Cape Town Filter: + 27 21 937 1116
King Shaka Tower: +27 32 436 5002
Bloemfontein Tower: +27 51 503 7201/6
Port Elizabeth: +27 41 51 35851

It must be emphasized that these numbers are for emergency only, when all other airborne means of communication with the appropriate ATS unit have failed.

2 Area of responsibility

Enquiries, suggestions or complaints regarding any telecommunications service within the boundaries of the Republic of South Africa should be referred to the relevant Station Telecommunication Officer or to the Director of Civil Aviation

Facilities listed in the Republics FIRs but which fall within the boundaries of Lesotho and Swaziland are provided and administered by the following respective authorities:

a) Lesotho
Department of Civil Aviation
P.O. Box 629 Maseru 100
AFS Address: FXMMYAYX
Commercial Telegraphic Address: Civilair Maseru

b) Swaziland
Civil Aviation Branch,
Ministry of Works and Communications,
P.O. Box 58,
Mbabane.
AFS Address: FDMBYAYX
Commercial Telegraphic Address:, MINWORKS MBABANE

3 Types of service

3.1 Radio Navigation Services.

The following types of radio aids to navigation are available:

DME - Distance Measuring Equipment.
ILS - Instrument Landing System.
NDB - LF/MF Non-directional Beacon
RSR - Route Surveillance Radar.
SSR - Secondary Surveillance Radar

TAR - Terminal Area Surveillance Radar.
VDF - VHF Direction-finding Station.
VOR - VHF Omni-directional Radio Range.

Radio broadcasting stations are not listed as it is considered inadvisable to use them for navigational purposes.

According to the judgement of the direction finding station, bearings are classified as follows:

Class A: Accurate to within +/-2 degrees.
Class B: Accurate to within +/-5 degrees.
Class C: Accurate to within +/-10 degrees.

Direction-finding stations have authority to refuse to give bearings or headings to steer when conditions are unsatisfactory or when bearings do not fall within the calibration limits of the station, stating the reason at the time of refusal

The use of GPS as a navigational aid has limited approval by the Civil Aviation Authority.

3.2 Mobile/fixed service

3.2.1 Mobile 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 which exercises control in the area in which the aircraft is flying. Aircraft should maintain 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.

Clearance delivery service.

At JOHANNESBURG/O R Tambo International Airport a clearance delivery service is provided. This service provides:-

a) ATC clearance
b) Runway in use;
c) ATIS information;
d) Transponder code; and
e) other pertinent information.

Pilots should call on the appropriate frequency prior to start-up and pass the following information:-

i) call sign and registration;
ii) requested flight level;
iii) parking bay number;
iv) fuel endurance;
v) persons on board;
vi) any changes to filed flight plan; and
vii) any other information required by ATC.

3.2.2 Fixed Service.

Messages to be transmitted over the Aeronautical Fixed Service (AFS) are accepted only:

a) if they satisfy the requirements of Annex 10, Vol. II, Chapter 3.3.3:
b) if they are prepared in the form specified in Annex 10;
c) if the text of any individual message does not exceed 200 groups.

When it is desired that a communication exceeding 200 words be transmitted over the Aeronautical Fixed Service, such a communication shall be filed in the form of separate messages, each text of which does not exceed 200 groups.

General Aircraft Operating Agency messages are only accepted for transmission to countries which have agreed to accept Class B traffic.

AFS/SITA.

An AFS/SITA interface link is available at the O R Tambo ATC Communications Centre. In view of this, airlines entering or overflying the Republic of South Africa, are required to address their flight plans and other ATC movement messages to the following SITA address: JNBXTYF.

The O R Tambo ATC Communication Centre will ensure the onward transmission of these ATC messages via AFS within the Republic of South Africa. The above does not apply to those carriers whose flights depart from airports in the following countries: Zambia, Zimbabwe, Mozambique, South Africa, Botswana and Namibia. Neither does the above apply to those airlines in respect of which repetitive flight plans have been agreed upon.

The above is intended to reduce the difficulties currently being experienced by airlines and ATC due to ATC not receiving flight plans transmitted on AFS.

ATS DIRECT SPEECH CIRCUIT REPUBLIC OF SOUTH AFRICA/O R TAMBO INTL.

As no ATS Direct Speech Circuit currently exists between South Africa, Johannesburg ACC (Johannesburg Oceanic) and Madagascar, Antananarivo ACC and between South Africa, Johannesburg ACC (Johannesburg Oceanic) and South America, Brazilia ACC, Recife ACC (alternate) agreement has been reached to utilise the following Public Switch Telephone Network (PSTN) and fax numbers:

Antananarivo ACC Tel: 09 261 20 2233912
Brazilia ACC Tel: 09 556 1 365 1586 Fax: 09 556 1 365 1768
Recife ACC Tel: 09 558 1 462 2742 Fax: 09 558 1 462 4927
The ATS/DS and AFTN circuits between Johannesburg and Ezeiza (SAM) have now been implemented via the CAFSAT satellite network. These have been operationally tested.

3.3 Broadcasting Service

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

a) meteorological broadcasts as detailed in GEN 3.5
b) automatic terminal information service (ATIS) broadcasts superimposed on the transmission from VOR stations serving certain major airports.

3.3.2 ATIS Broadcasts

ATIS broadcast are transmitted continuously throughout hours of service and are revised every 30 minutes, on the hour and 1/2 hour. Each broadcast is prefixed with an identifying letter in the phonetic alphabet, ALFA to ZULU

Broadcasts contain:

a) the latest METAR for the airport concerned;
b) information on the unserviceability of navigational, approach or landing aids; and when appropriate,
c) essential information on aerodrome conditions.

Aircraft having received the ATIS broadcasts are to inform Approach Control accordingly immediately after initial contact

3.4 Language used: English

3.5 Detailed information can be obtained in ENR 4 and AD 2

4 Requirements and conditions

The requirements and 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 Regulations (ANR's) of the RSA - see sections referring to Aviation Act and Air Navigation

5 Data Link Automatic Terminal Information Service (D-ATIS). Cape Town and Johannesburg FIR

5.1 Introduction

a) There will be an Air Traffic Service (ATS) air/ground data link application service for the provision of the Data link Automatic Terminal Information Service (D-ATIS) at three of South Africa International Airports with effect from 27 October 2005.
b) Service Airports:
   1) O R Tambo International Airport
   2) Cape Town International Airport
   3) King Shaka International Airport
c) The D-ATIS data link system installed at the 3 airports have been equipped with data link capability and dedicated data link communication links have been set up with SITA AIRCOM Service to enable aircraft to access D-ATIS service via VHF data link and Satellite data link.

5.2 Area of Operation

a) D-ATIS data link service will be available to aircraft equipped with air/ground data link capability.
b) The SITA data link service uses Internet working with Cooperating Data link Service Providers (Co-DSPs).

5.3 Data Link ATIS Service Connection

a) The SITA Data link Service Designation Address of each Airport D-ATIS system is "JNBATYA"

b) The D-ATIS is available on the following VHF frequency 131.725 MHz.
c) Data link to request D-ATIS information follows the AEEC 623 and the EUROCAE ED_89A Data link Applicant System Document (DLASD).
d) The Standard Message Identifier (SMI) on the line 3 of the data link message to be used is as follows; D-ATIS: RAI (B9) - Request ATIS Report (for downlink message).
e) In the request D-ATIS report message, the following formats shall be used;
   i) Airport ID: O R Tambo International FAOR, Cape Town International FACT and King Shaka International FALE
   ii) Arrival/Departure Indicator Codes shall be as follows:
   A - Arrival ATIS (ARR ATIS)
   D - Departure ATIS (DEP ATIS)
   C- Contract ATIS (Auto Update ATIS)
   T - Terminate C mode (Terminate Auto-Update ATIS)
   E - Not Used
   iii) The Arrival ATIS and Departure ATIS are identical for each Airport.
   iv) C-mode is automatically terminated.
f) Use of voice communication

   Pilots of suitably equipped aircraft that cannot establish communication with data link ATIS should read the broadcast of the radio ATIS on the VHF frequencies.

5.4 Data Link Failure

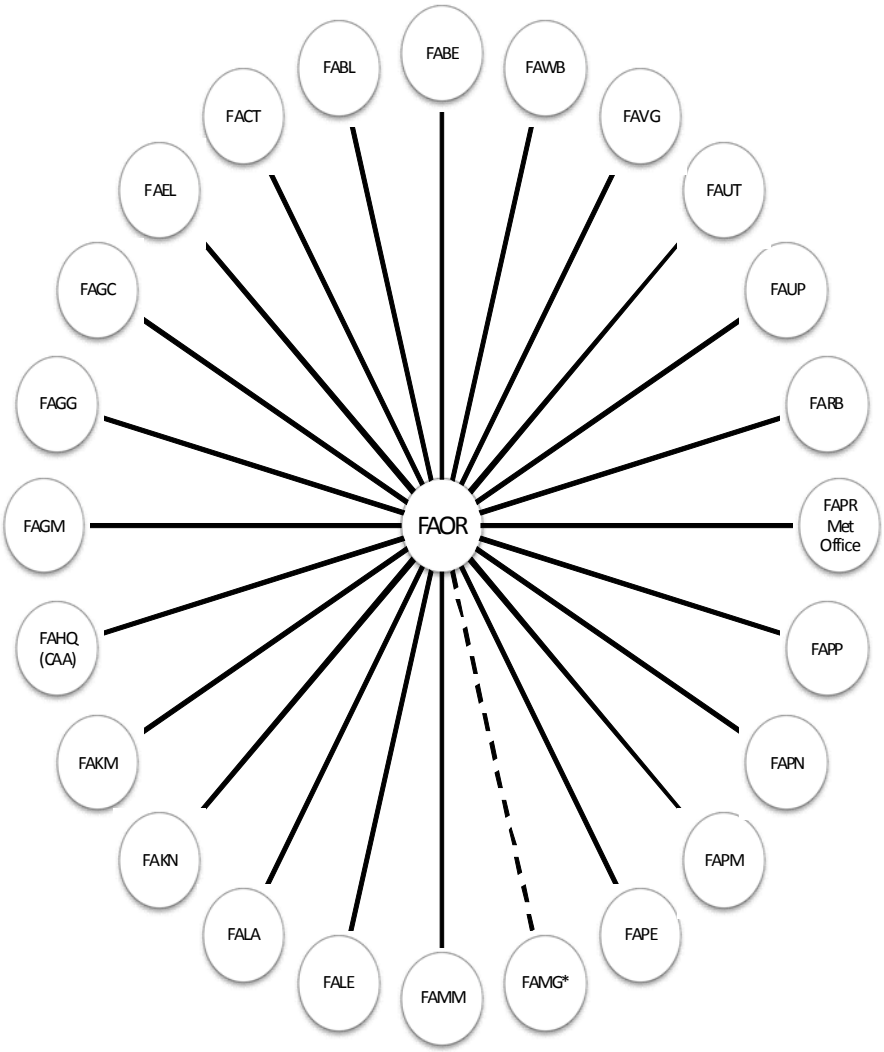
Pilots shall inform the ATC at each airport of problems encountered during the provision or alternatively call the Johannesburg technical support help line on +27 11 928 6476/7.

5.5 Hours of operation

a) FAOR: 24 Hours daily
b) FACT: 24 Hours daily
c) FALE: 24 Hours daily

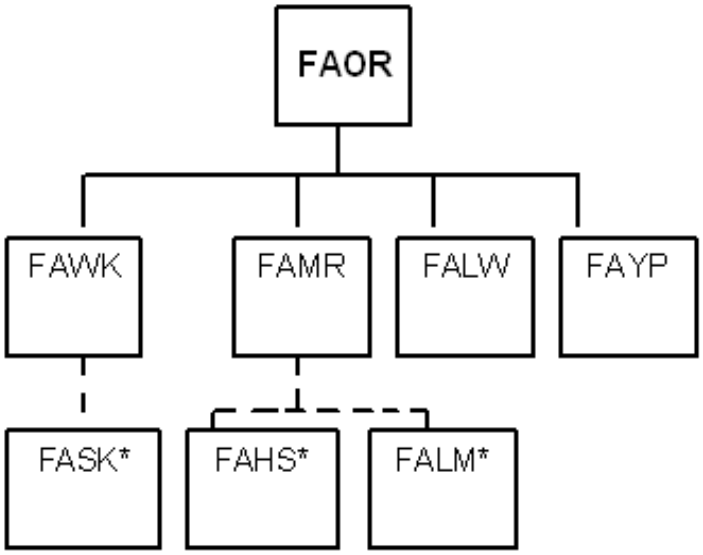
6 The South African Aeronautical Message Switching System (AMSS) is situated at the Air Traffic Control Centre at O.R. Tambo International Airport. The South African AMSS is the central Aeronautical Fixed Service (AFS) Hub for the SADC region, and therefore all AFS traffic in the region is switched through this central hub. The AMSS is monitored and maintained by the ATNS Communication Centre and is responsible for both national and International links as depicted below.

NATIONAL CIVILIAN AFTN/AMHS - SCHEMATIC



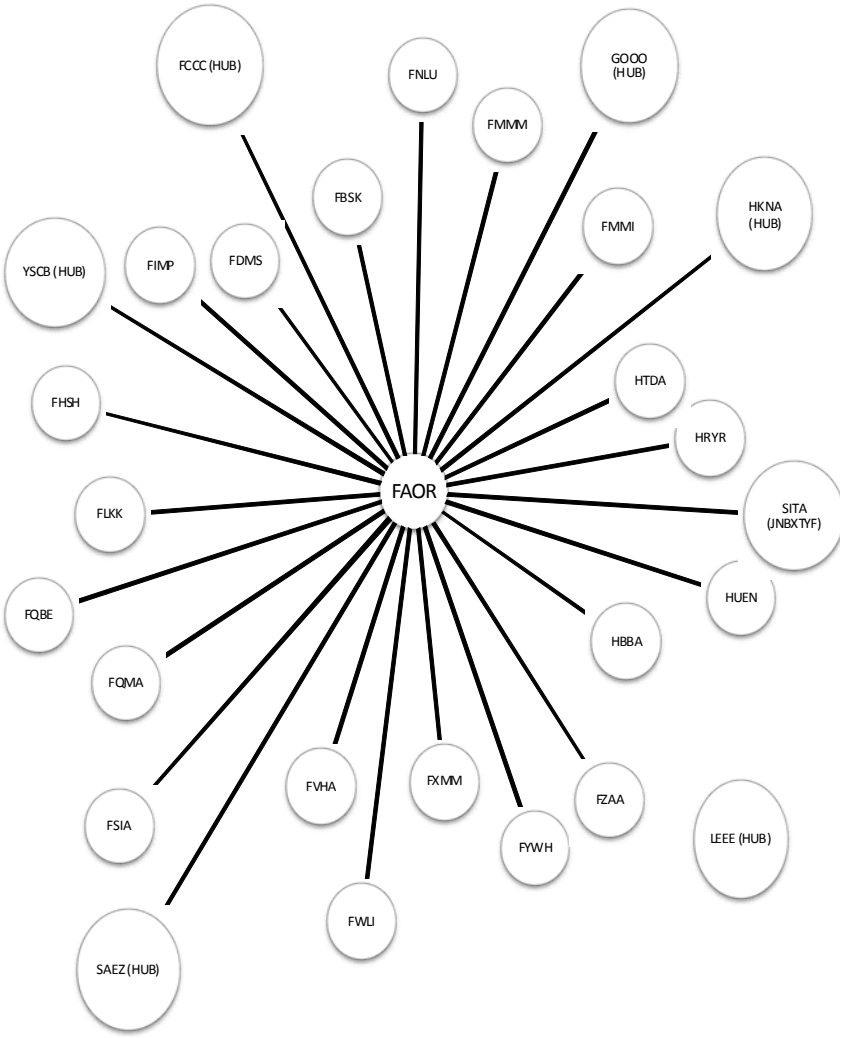
* FAMG is receiving only link utilising AFTN to e-mail

NATIONAL MILITARY AFTN - SCHEMATIC



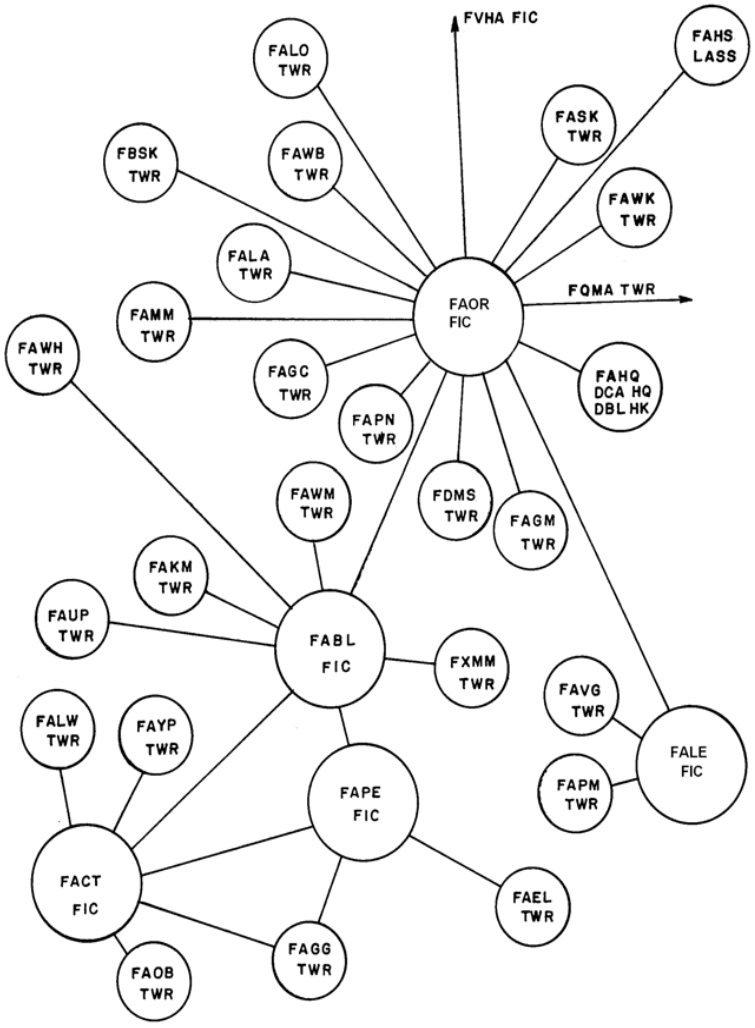
*FASK, FAHS and FALM are connected via a dumb terminal and are receive only

REGIONAL AND INTERNATIONAL AFTN - SCHEMATIC



Aeronautical Fixed Service (Telephone)

ATS DIRECT SPEECH CIRCUITS



GEN 3.5 METEOROLOGICAL SERVICES

1 Responsible service

1.1 The South African Weather Service (SAWS) is designated in terms of the SAWS Act No. 8 of 2001 as the aeronautical meteorological authority for provision of meteorological service for international air navigation.

Contact details:

The South African Weather Service
442 Rigel Avenue South,
Erasmusrand, 0181
Private Bag X097
Pretoria 0001

Tel: +27 12 367 6000
Fax: +27 12 367 6200
AFTN: FAPRYMYX

Website: www.weathersa.co.za

1.2 The Meteorological Authority is responsible for providing oversight over the provision of aeronautical meteorological service for international air navigation.

Contact details:

The Meteorological Authority Office
442 Rigel Avenue South,
Erasmusrand, 0181
Private Bag X097
Pretoria 0001

Tel: +27 12 367 6084
Fax: +27 12 367 6200
Email: metauthority@weathersa.co.za

1.3 Meteorological service provided by South African Weather Service is based on the requirements contained in the following ICAO documents:

a) Annex 3 — *Meteorological Service for International Air Navigation*
b) Doc 7030 — *Regional Supplementary Procedures*
c) Doc 7474 —*Regional Air Navigation Plan — AFI Region*

1.4 The list of services provided by SAWS include the following:

a) climatology services for the development and supply of climatological summaries;
b) forecast services for the supply of forecast meteorological information for the specific aerodrome, area or portion of airspace;
c) information dissemination service for the collection and dissemination of meteorological information;
d) meteorological briefing service to aeronautical users (air traffic services, operators and flight crew members) for the supply of written and oral meteorological information on existing and expected meteorological conditions;
e) meteorological reporting service for the supply of aerodrome meteorological reports;
f) meteorological watch services for the monitoring and prediction of meteorological conditions affecting aircraft operations in a specific area and at specific aerodromes;
g) provision of flight documentation;
h) meteorological support for search and rescue; and
i) any other meteorological service which is deemed as desirable by recognized aviation organizations and/or service providers or to which an operational requirement may exist.

2 Area of responsibility

2.1 The area of responsibility or flight information region (FIR) over which meteorological services are provided are as follows:

a) Johannesburg FIR;
b) Cape Town FIR; and
c) Johannesburg Oceanic FIR.

3 Meteorological observations and reports

3.1 Meteorological observations and reports are provided to cover the operational hours of the local ATS unit.

3.2 Reports of meteorological observations are issued as:

a) METAR and SPECI – for dissemination outside the aerodrome of origin (intended for flight planning); and
b) Local routine and local special report – for dissemination at the aerodrome of origin and intended for inbound and outbound aircrafts.

3.3 Details of meteorological observations and reports are provided in Table GEN 3.5-1.

4 Types of services

4.1 Briefing and consultancy

4.1.1 Personal briefing and consultation for flight crew members is provided at all aerodrome meteorological offices.

Contact details:

Name of Office	**Tel**
Cape Town	+27 21 935 5777
O.R. Tambo	+27 11 309 9329/9330/9332
Port Elizabeth	+27 41 581 0403
Durban	+27 32 436 3813
Bloemfontein	+27 51 433 3281

4.2 Forecasting service

4.2.1 Forecasting service is provided by aerodrome meteorological offices and comprises the following:
a) Terminal Aerodrome Forecast (TAF);
b) Landing Forecast (TREND);
c) Forecast for Take-Off (FTO); and
d) Route Forecast.

4.2.2 Forecast information is kept up to date through continuous review and cancelled whenever it cannot be kept under review.

4.2.3 Terminal aerodrome forecast (TAF)

a) TAFs valid for up to 30 hours are issued at intervals of 6 hours, with the period of validity beginning atone of the main synoptic hours (00, 06, 12, 18 UTC).

b) TAFs are filled at approximately two hours before the start of the period of validity. Only one TAF is valid for an aerodrome at any given time.

4.2.4 Landing Forecast (TREND)

TREND forecast is used by aircraft within one hour's flying time from the aerodrome. The validity period for a TREND forecast is two hours during which it supersedes the TAF issued for the same aerodrome.

4.2.5 Forecast for Take-Off (FTO)

Forecast for take-off is provided for international aerodromes 3 hours prior to the expected time of departure (ETD).

4.2.6 Route Forecast

Route forecast covering domestic and international flight routes is provided by the Johannesburg Meteorological Watch Office (MWO) based at O.R. Tambo International Airport.

a) Route forecast is provided in the form of significant weather charts (SIGWX).
b) SIGWX for international flight routes is issued by the WAFC – London.
c) SIGWX charts for domestic flight routes is issued by the MWO.

5 Notification required from operators

5.1 Pre-flight information for operators (i.e. briefing, consultancy, flight documentation and other meteorological information) is provided upon request.

5.2 The minimum amount of advance notice must for pre-flight information should be at least 6 hours before the expected time of departure.

6 Aircraft reports

6.1 The Aviation Weather Centre is the designated meteorological watch office for collection of air-reports received by voice communications within the following FIR/UIR:

a) Johannesburg FIR;
b) Cape Town FIR; and
c) Johannesburg Oceanic FIR.

6.2 Routine aircraft observations must be made (every 15 minutes) during en-route and climb-out phases of the flight and by flights equipped with air-ground data link.

6.3 Special and other non-routine aircraft observations must be made during all phases of the flight when the following conditions are observed:

a) moderate or severe turbulence; or
b) moderate or severe icing; or
c) severe mountain wave; or
d) thunderstorms, without hail, that are obscured, embedded, widespread or in squall lines; or
e) thunderstorms, with hail, that are obscured, embedded, widespread or in squall lines; or
f) heavy duststorm or heavy sandstorm; or
g) volcanic ash cloud; or
h) pre-eruption volcanic activity or a volcanic eruption.

6.4 Routine aircraft observations (AIREPs) reported by voice communication are required at the ATS collection centre/points described in Table GEN 3.5 – 2

6.5 Upon receipt of the air-reports, the ATS units relays them without delay to the associated MWO for preparation of SIGMET and or AIRMET. Air-reports are also relayed to the WAFC.

6.6 The means by which air-reports are reported and relayed must be consistent with the provisions in Table GEN 3.5 – 3.

7 VOLMET service

VOLMET service is provided by ATS units in accordance with the provisions of ICAO Annex 11.

8 SIGMET and AIRMET service

8.1 General

8.1.1 SIGMET and AIRMET is provided by the designated MWO.

8.1.2 The MWO maintains a 24 hour meteorological watch over three flight information regions (Table GEN 3.5 – 4 and GEN 3.5 – 5) and issue SIGMET and AIRMET in accordance with the provisions of ICAO Annex 3.

8.1.3 SIGMET for volcanic ash and tropical cyclones are based on the advisory information received from the volcanic ash advisory centre (VAAC) and tropical cyclone advisory centre (TCAC) respectively.

Contact details:

Aviation Weather Centre

Office NL61, Lower Roof (3rd floor)
O.R. Tambo International Airport
Postal address:
O.R. Tambo International Airport
P.O. Box 1194
O.R. Tambo International Airport
1627

Tel: +27 11 390 9329
Fax: +27 11 390 9332

Website: https://aviation.weathersa.co.za

Email: fajsfc@weathersa.co.za
fajs@weathersa.co.za

8.1.4 SIGMET is issued whenever the following weather conditions occur or are expected to occur:

a) thunderstorm
b) tropical cyclone
c) turbulence
d) icing
e) mountain wave
f) duststorm
g) sandstorm
h) volcanic ash
i) radioactive cloud

8.1.5 The criteria for issuance of SIGMET is consistent with the provisions of ICAO Annex 3.

8.1.6 AIRMET is issued whenever the following weather conditions occur and in accordance with the criteria defined in ICAO Annex 3:

a) surface wind speed
b) surface visibility
c) thunderstorms
d) mountain obscuration
e) cloud
f) icing
g) turbulence
h) mountain wave

8.1.7 SIGMET and AIRMET are cancelled whenever the observed or expected weather information no longer exist or is no longer expected.

8.2 Dissemination of SIGMET/AIRMET

8.2.1 SIGMET and AIRMET information in both text and graphical formats are available on AFTN (**FAPRYMYX**) and also on the website: https://aviation.weathersa.co.za

8.2.2 SIGMET for volcanic ash and tropical cyclone is based on advisory information prepared and issued by the Volcanic Ash Advisory Centre (VAAC) and Tropical Cyclone Advisory Centre (TCAC).

8.2.3 SIGMET/AIRMET information to aircraft in flight is disseminated by the ATS unit responsible for the FIR for which the SIGMET/AIRMET is issued.

9 Aerodrome warnings

9.1 Aerodrome warning for the protection of parked aircraft, aerodrome facilities and services are issued by the designated aerodrome meteorological offices whenever one of the following weather phenomenon occurs or expected to occur at an aerodrome:

a) strong surface winds and gusts
b) thunderstorm
c) hail
d) frost
e) hoar frost or rime
f) snow
g) freezing precipitation

9.2 The aerodrome meteorological office keeps aerodrome warnings under continuous review and cancels the warnings whenever conditions are no longer occurring or no longer expected to occur at an aerodrome.

Note 1:The warning is designated as “storm warning” and will be issued when the mean speed of the surface wind is expected to exceed 34 kt (Beaufort Scale 8) or when gusts in excess of 41 kt (Beaufort Scale 9) are expected to occur.

Note 2: A “frost warning” will be issued when the air temperature is expected to fall below 0°C on those dates when protective measures have generally not yet been taken and also when a substantial deposit of hoarfrost, e.g. on wing surfaces, is expected.

10 Other automated meteorological service (Refer to Table GEN 3.5 – 6)

Table GEN 3.5 - 1

List of meteorological observations and reports

Name of station/ Location indicator	Frequency of observations	Type of report	Hours of operation	Climatological tables
1	2	3	5	6
BLOEMFONTEIN/ Bram Fischer FABL	Routine half hourly plus special observations AUTO: 18:00 – 23:30	MET REPORT, METAR, SPECI, TREND	03:00 – 18:00	AVBL
CAPE TOWN/ Cape Town FACT	Routine half hourly (02:00 -18:30) plus special observations and hourly (19:00-02:00) AUTO: NIL	MET REPORT, METAR, SPECI, TREND	H24	AVBL
DURBAN/ King Shaka FALE	Routine half hourly plus special observations AUTO: NIL	MET REPORT, METAR, SPECI, TREND	H24	AVBL
JOHANNESBURG/ O.R. Tambo FAOR	Routine half hourly plus special observations AUTO: NIL	MET REPORT, METAR, SPECI, TREND	H24	AVBL
LANSERIA/ Lanseria FALA	Routine hourly plus special observations AUTO: 21:00 – 02:00	MET REPORT, METAR, SPECI, TREND	03:00 - 20:00	AVBL
NELSPRUIT/ Kruger Mpumalanga FAKN	Routine hourly plus special observations AUTO: 19:00 – 02:00	METAR, SPECI, TREND	03:00 – 18:00	AVBL
PILANESBURG/ Pilanesburg FAPN	Routine hourly observations	AUTO METAR	-	AVBL
POLOKWANE/ Polokwane FAPP	Routine hourly plus special observations AUTO: 19:00 – 02:00	METAR, SPECI, TREND	03:00 – 18:00	AVBL
PORT ELIZABETH/ Chief Dawid Stuurman FAPE	Routine half hourly (02:00 – 18:30) & Hourly (19:00 – 01:00) plus special observations AUTO: NIL	MET REPORT, METAR, SPECI, TREND	H24	AVBL

Name of station/ Location indicator	Frequency of observations	Type of report	Hours of operation	Climatological tables
1	2	3	5	6
UPINGTON/ Upington FAUP	Routine hourly plus special observations AUTO: 19:00 – 22:00	METAR, SPECI, TREND	23:00 – 18:00	AVBL

Table GEN 3.5 - 2

ATS collection centre/points

AIREP Collection centre	Collection points/area
Johannesburg	Johannesburg
	Bloemfontein
	Cape Town
	Beira
	Gaborone
	Routes
Johannesburg (routes crossing FIR/UIR)	Harare
	Manzini
	Lilongwe
	Lusaka
	Maputo
	Maseru
	Windhoek

Table GEN 3.5 - 3

Relating of air-reports by ATS units

Type of report	Means of reporting	Relayed to:
Special air-reports	Voice communication	MWO[1]
Routine and special air-reports	Data link	MWO and WAFC[2]

[1]Aviation Weather Centre.
[2]WAFC London.

Table GEN 3.5 - 4

Flight Information Region served

Name of MWO	Hours of Service	FIRs served	ICAO ID	SIGMET	AIRMET (valid 4 hrs)
Aviation Weather Centre	H24	Johannesburg FIR	FAJA	AVBL	AVBL
		Cape Town FIR	FACA	AVBL	AVBL
		Johannesburg Oceanic FIR	FAJO	AVBL	-

Table GEN 3.5 - 5

Issuance and validity of SIGMET/AIRMET

Responsible MWO	Type of information	Time of issue (before start of validity)	Validity (hrs)
Aviation Weather Centre	AIRMET	up to 4	up to 4
	SIGMET[3]	up to 4	up to 4
	Volcanic Ash SIGMET	up to 12	up to 6
	Tropical Cyclone SIGMET	up to 12	up to 6

[3] *SIGMET for any other weather phenomenon except tropical cyclone and volcanic ash.*

Table GEN 3.5 - 6

Other automated meteorological services

Service name	Information available	Area, route and aerodrome coverage	Contact details
Meteorological briefing service (oral and written information)	OPMET; satellite imagery; METAR QNH Analysis; Webcams, Graphical SIGMET/AIRMET, International fixed time prognostic charts (FL250 – FL630)	Africa, Africa/Asia, Asia, Australia, Europe, Middle East, North America, South America	Aviation Weather Centre Tel: +27 11 390 9329 Fax:+27 11 390 9332 Website: https://aviation.weathersa.co.za
	Domestic fixed time prognostic charts: * Additional (surface to FL100) * Low-level (up to FL180) * High level (above FL180)	Johannesburg FIR, Cape Town FIR and most parts of Southern Africa	

GEN 3.6 SEARCH AND RESCUE

1 Purpose

The purpose of the Search and Rescue (SAR) organization is to provide assistance to aircraft in distress and to search for, provide aid to, and coordinate the rescue of survivors of aircraft accidents and forced landings.

2 Responsible Authority

The Department of Transport is the custodian and champion of Search and Rescue Services in South Africa. It has the overall responsibility for planning, establishing and organisation, staffing, equipping and managing the SAR system in South Africa in collaboration with SASAR.

Search and Rescue services in South Africa are organized in accordance with the International Standards and Recommended Practices of ICAO and operate under the coordinating direction of the South African Search and Rescue Organization (SASAR) which acts on behalf of the Department of Transport as the authority responsible for the application of Annex 12 to the Chicago Convention and to ensure a coordinated and effective Search and Rescue service within the South African Search and Rescue Region.

Any changes, deletions or insertions to any documents in the South African AIP and other regulations, policies or standards involving Search and Rescue in any way, shall be liaised with the SASAR Secretariat and/or SASAR Executive Committee, where applicable for approval before publication.

All Air Traffic Service Units (ATSU's), as delegated by the Department of Transport, are designated SAR alerting posts.

The Aeronautical Rescue Coordination Centre (ARCC) Johannesburg is responsible for the conduct of SAR for missing aircraft, forced landings and aircraft crashes within the Aeronautical SRR under South African jurisdiction.

The ARCC Johannesburg must be alerted by all designated ATSU's to all aircraft in-flight experiencing emergencies within the Aeronautical SRR under South African jurisdiction, in order to monitor the progress and action with relevant SAR response where required.

Responsible Authority	SASAR Secretariat Department of Transport
Physical Address	Department of Transport 159 Struben Street Pretoria 0001
Postal Address	SASAR Secretariat Department of Transport Private Bag X193 Pretoria 0001
Contact Details	Director: Search and Rescue +27 12 309 3520

3 Organisation

SASAR has designated an operational facility namely the Aeronautical Rescue Coordination Centre (ARCC) in the Johannesburg Area Control Centre at OR Tambo International Airport known as the ARCC Johannesburg. It is primarily responsible for coordinating the conduct of SAR Operations within the Aeronautical South African SRR which is under the control of the ARCC Chief.

4 Rescue Coordination Centre

Responsible Organization	ARCC Johannesburg OR Tambo International Airport
Physical Address	ATNS Operational Complex Gate 14 Bonaero Drive Bonaero Park Kempton Park
Postal Address:	ARCC Private Bag X1 Bonaero Park Kempton Park 1622
Contact Details:	ARCC Chief +27 11 928 6432 +27 82 823 8493 arccchief@atns.co.za
24 Hour Alerting	ARCC Duty SMC +27 63 505 4164
Additional 24 Hour Alerting	+27 11 928 6454/5
Standby Contact	ARCC Duty SMC +27 63 505 5485
Email Address	arcc@atns.co.za
Alternate E-mail	sasar.arcc@gmail.com
AFTN	FAORYCYX
GPS Coordinates	260813.0S 281501.7E

4.1 Aeronautical Rescue Sub-Centres (RSC)

Each ATSU within the RSA can be appointed as an RSC on an ad-hoc basis provided they have been trained in SMC Duties.

4.2 Permanent RSCs

All neighboring territories within the Aeronautical SRR are considered permanent RSC's. These units are tasked permanently by the appropriate RCC to carry out certain duties of the RCC or on an ad-hoc basis when required.

Permanent RSC	Location, Address and Contact
Eswatini	Sikhuphe SAR Unit (FDSK) P.O. Box D361 The Gables H126 Eswatini Tel: +268 2333 5000/5248/5249 Fax: +268 2333 5229 AFTN: FDSKZQZX / FDSKZPZX Email: info@eswacaa.co.sz
Lesotho	Maseru RSC P.O. Box 629 Maseru Lesotho Tel: +266 22 350395 Tel: +266 22 350777 Ext. 101 AFTN: FXMMYDYX
Namibia	Eros Airport Aviation Road Olympia Windhoek Tel: +264 61 702070/1 Tel: +264 62 702490 Tel: +264 81 4097684 AFTN: FYHQYCYX

5 Procedures

5.1 Alerting Posts

A designated alerting post shall immediately inform the RCC of an emergency or potential emergency once it becomes aware of it.

The following organizations or institutions are designated as dedicated alerting posts:

ATSUs

Harbor Master's Offices

Coastal Radio Stations

South African Police Service (SAPS)

The Maritime Rescue Coordination Centre (MRCC)

The Aeronautical Rescue Coordination Centre (ARCC)

Any person or element of the SAR Organization, having reason to believe or has been informed that an aircraft is in distress, shall immediately give all available information to the relevant alerting post.

No person shall provide aeronautical search and rescue services except under the authority of SASAR in accordance with the provision of the South African Maritime and Aeronautical Search and Rescue Regulations 2016.

No person must provide search and rescue coordination functions unless appropriately designated and certificated by the Minister and Director-General respectively.

No person must provide on-scene SAR coordination functions unless appointed in that capacity by an RCC.

5.2 **Emergency Phases**

All ATSUs have been designated as alerting posts and are responsible for the declaration of the appropriate phase.

The relevant SAR Phase shall be declared and the ARCC notified telephonically, immediately when an ATSU is notified of an emergency irrespective of the departure or destination of the aircraft experiencing the emergency.

Three phases of emergency have been established for classifying emergency situations and are declared as follows:

5.2.1 **Uncertainty Phase (INCERFA)**

A situation wherein uncertainty exists as to the safety of an aircraft and its occupants. This phase will be declared when:

a) Radio contact is lost and not re-established within 15 minutes when radio contact was required.

NOTE: Where an aircraft is equipped with VHF only and continuous radio contact cannot be maintained throughout the flight, the pilot in command should state before departure the reporting point(s) at which overdue action must be taken in the event of non-receipt of the position report, or whether overdue action is required only at destination.

b) An aircraft is known or believed to be subject to irregular operation i.e. when it is:

i) Not following the correct track or maintaining the correct flight levels.

ii) Not in normal communication.

iii) Unable to use appropriate navigation aids.

iv) Experiencing navigational difficulties.

v) Experiencing hazardous weather conditions.

c) Experiencing impaired operating efficiency/technical difficulties, but not to the extent that the flight cannot be completed.

d) An aircraft operating on a flight plan stipulating alerting action after a specified time fails to arrive or is not in contact with the ATSU by the time specified in the flight plan and preliminary checks fail to reveal the whereabouts of the aircraft.

e) An aircraft which is proceeding to an unmanned aerodrome but which is operating on an “overdue action” flight plan, fails to report the arrival to the ATSU specified in the flight plan by the time specified and preliminary checks fail to reveal the whereabouts of the aircraft.

f) An aircraft is about to make or has made a landing other than a forced landing, where the position is in doubt, on an unprepared surface or on an aerodrome that is operationally unsuitable.

g) Information is received than an aircraft is missing.

NOTES:The evaluation of other circumstances, e.g. knowledge that the aircraft is experiencing difficulties, renders it advisable to declare the uncertainty phase whether the pilot declares an emergency or not!

5.2.2 **Alert Phase (ALERFA)**

A situation wherein apprehension exists as to the safety of an aircraft and its occupants.

This phase will be declared when:

a) The attempts made during the uncertainty phase to establish contact with the aircraft or to gain any news from other sources have failed and the aircraft is clearly overdue;
b) Information has been received which indicates that the operating efficiency of the aircraft for which the uncertainty phase was declared or that of another aircraft has become impaired, but not to the extent that a forced landing is likely;
c) There is reason to believe that the operation of an aircraft is being interfered with;
d) The transmission of a PAN-PAN-PAN!
e) An aircraft is known to be operating in other than normal circumstances, or is LOST and there is reason to believe that in consequence the safe conduct of the flight is in jeopardy.

NOTE: “Other than normal circumstances” may include all or any of the circumstances for which the declaration of INCERFA is required and any circumstances having comparable consequences. The ALERT phase shall be declared whether the pilot declares an emergency or not!

5.2.3 **Distress Phase (DETRESFA)**

A situation wherein there is reasonable certainty that an aircraft and its occupants are threatened by grave and imminent danger and require immediate assistance or has crashed.

This phase will be declared when:

a) Attempts made during the alert phase to establish contact with the aircraft and to gain information through more widespread enquiries have failed and the aircraft is clearly missing and probably in distress;
b) The fuel on board is considered exhausted or insufficient for the aircraft to reach safety;
c) Information is received which indicates that the operating efficiency of the aircraft has become impaired to the extent that a forced landing is likely;
d) Information is received, or it is reasonably certain that the aircraft is about to make or has made a forced landing, or has crashed;
e) The transmission of MAYDAY-MAYDAY-MAYDAY!
f) A downed aircraft is inadvertently located as the result of a sighting or of homing on an ELT transmission.

g) An aircraft which has been given approach or landing instructions at an aerodrome, fails to land within 5 minutes of the expected landing time, and communications cannot be re-established with the aircraft.

h) An aircraft fails to report after take-off when instructed or expected to do so and communications cannot be re-established before the expiration of 5 minutes.

Notes: Each ATSU is entrusted with the task of alerting services for all aircraft known to it, whether the aircraft is provided with air traffic services or not; and each ATSU serves as a collecting point of all information relating to the state of emergency of an aircraft operating within the FIR concerned.

As a result, an RCC will usually receive notification that an aircraft is, or is considered to be, in a state of emergency from the ATSU with which it is associated.

Time is of the essence and emergencies shall be reported to the Duty SMC immediately.

When the nature of the emergency is such that local rescue facilities are considered to be capable of dealing with the emergency, e.g. in certain incidents occurring at or near an aerodrome where the Aerodrome Emergency Management System or Emergency Response Plan is in force within the 10km radius as published, the ATSU will act as an Aeronautical Sub-Centre and direct the necessary and appropriate search and rescue units to the scene of the accident and notify the ARCC of such actions.

In respect of an aircraft for which no flight plan has been filed, when information that the aircraft is overdue or missing is received from any source, e.g. an ATSU, the aircraft operator, relatives of the pilot, or any other person in such cases the ARCC Duty SMC shall be notified, which will investigate and act according to the information gathered. Gathering of information shall be completed as per the published SAR Regulations.

5.3 Search and Rescue Measures with regards to Flight Plans

1) Search and rescue action

i) Search and rescue action shall be instituted automatically in respect of: -

a) All flights between aerodromes where air traffic services are provided; and

b) All flights conducted in controlled airspace, excluding flights crossing an airway at right angles, for which flight plans are filed prior to departure.

ii) Search and rescue action shall be instituted in respect of all domestic and international flights to aerodromes where air traffic services are not provided, for which flight plans are filed prior to departure and the pilot-in-command has specifically requested such search and rescue action.

iii) Search and rescue action shall be instituted in respect of flights for which flight plans are filed in flight when such action is specifically requested by the pilot-in-command.

iv) Pilots-in-command of flights for which search, and rescue action has been requested, who fail to comply with the search and rescue requirements, shall be responsible for any costs incurred by the air traffic service unit concerned for the provision of alerting or supporting services.

2) The Search and Rescue action referred to in regulation (II) above, will only be instituted after a specific time. Such time should not be less than one hour after the estimated time of arrival at the destination aerodrome and the air traffic services unit to which the arrival notification will be made.

3) For flights to be conducted in controlled airspace during a portion of the flight, and then landing at an unmanned aerodrome regulation (i) (b) and (ii) will apply. This means that it is essential for the pilot-in- command to ensure that the ATSU is informed when the flight is leaving or entering controlled airspace, otherwise search and rescue action will be taken on the missed position report whilst in controlled airspace.

e.g. A flight from Cape Town to Victoria West via SLV VOR at flight level 090 requested search and rescue action at destination. This flight will be operating in controlled airspace from Cape Town to SLV VOR (i.e. Cape Town controlled airspace and airway UA405). Should the pilot fail to report at SLV VOR, air traffic control would commence preliminary search and rescue action 5 minutes after the time of the expected report at SLV VOR. Alternatively, if a position report is received at SLV VOR, search and rescue would only be commenced at the time stated in the flight plan at destination if an arrival report or closure of flight plan report has not been received by the ATSU.

If the pilot-in-command of this flight has stated RMK/SARNIL in Field 18 of the flight plan and failed to report at SLV VOR, the responsible ATSU would nevertheless commence preliminary search and rescue action 5 minutes after the time of the expected report at SLV VOR.

4) For flights landing at aerodromes where ATSU are in operation, pilots may assume that the ATSU will close the flight plan on arrival at the aerodrome.

5) Search and rescue action in respect of missed position reports from aircraft flying in uncontrolled airspace will only be instituted in respect of aircraft which are capable of reporting positions throughout the flight. In this case the action instituted will be similar to that instituted for aircraft flying in controlled airspace. It should be noted, however, that when a flight is bound for an aerodrome where an ATSU is not in operation and the pilot-in-command states SAR/NIL in Field 18 of the flight plan, search and rescue action will not be instituted in respect of missed position reports outside controlled airspace.

6) Pilots who request search and rescue are per regulations (ii) and (iii) above assume the responsibility to ensure that an ATSU is informed on completion of, or abandoning, their flight. Search and rescue may be cancelled on R/T by using one of the following R/T phraseologies:

cancel my search and rescue.

If the pilot does not receive acknowledgement of his/her message on R/T, he/she must telephone notice of his/her arrival to the ATSU indicated in Field 18 of his/her flight plan before the expiry of the search and rescue time stated on the flight plan.

7) In order to avoid any misunderstanding between pilots and ATSU, Field 18 of the flight plan form must be endorsed as follows: -

i) RMK/SARNML must be indicated when the flight is bound for an aerodrome where an ATSU is in operation. RMK/SARNML must NOT be indicated when the flight is bound for an aerodrome where an ATSU IS NOT in operation.

This type of SAR shall mean the following: -

a) Search and rescue action will be instituted automatically in the event of a missed position report while the aircraft is flying within controlled airspace and/or in the event of non-arrival at destination.

b) Search and rescue action will not be provided while the aircraft is flying in uncontrolled airspace, except in an emergency.

ii) RMK/SARNMLENROUTE may be indicated when the flight is bound for an aerodrome where an ATSU is in operation and the whole or portion of the flight is conducted outside controlled airspace. RMK/SARNMLENROUTE MUST NOT be indicated when the flight is bound for an aerodrome where an ATSU is not in operation. This type of SAR shall mean the following: -

a) Search and rescue action will be instituted automatically in the event of a missed position report while the aircraft is flying within controlled airspace and/or in the event of a non-arrival at destination;

b) Search and rescue action will be instituted in the event of a missed position report while the aircraft is flying in uncontrolled airspace;

c) When requesting this type of SAR, the pilot-in-command of the aircraft must be reasonably certain that it will be possible to make position reports throughout the flight and that the required reports will be made.

iii) SAR after a specified time – this type of SAR may be indicated when the flight is bound for an aerodrome where an ATSU is not in operation and shall be shown as follows: -

SAR/ (air traffic services unit to be notified of arrival) (time by which notification of arrival will be made).

e.g. RMK/SARFABL0930. – meaning that BRAM FISCHER International Airport will be notified of ARRIVAL by 0930 (UTC).

It shall mean the following: -

a) Search and rescue action will be instituted automatically in the event of a missed position report while the aircraft is flying within controlled airspace.

b) Search and rescue action will be instituted automatically in the event of the ATSU which is to be notified of arrival not receiving the arrival notification by the time specified in the flight plan;

c) Search and rescue action will NOT be provided while the aircraft is flying in uncontrolled airspace, except in an emergency.

iv) RMK/SARNIL – used when search and rescue action is not required.

RMK/SARNIL may only be used when the flight is bound for an aerodrome where an ATSU is NOT in operation. In this case search and rescue action will be instituted automatically in the event of a missed position report while the aircraft is flying within controlled airspace. When the aircraft has reported leaving controlled airspace no further search and rescue action will be provided, except in an emergency.

v) SAR AFTER A SPECIFIED hour/s from ETA (EXPECTED TIME OF ARRIVAL) -

This type of SAR may be indicated when the flight is bound for an aerodrome where an ATSU is not in operation and shall be shown as follows:

SAR/ (air traffic services unit to be notified of arrival) (number of hours by which notification of arrival will be from the ETA).

E.g. RMK/SARFAORETA1HR

RMK/SARFALAETA2HR

It shall mean the following:

a) Search and rescue action will be instituted automatically in the event of a missed position report while the aircraft is flying within controlled airspace.

b) Search and rescue action will be instituted automatically in the event of the ATSU which is to be notified of the arrival, not receiving the arrival notification by the ETA of the aircraft plus the stipulated hour/s.

c) Search and rescue action will NOT be provided while the aircraft is flying in uncontrolled airspace, except in an emergency.

vi) SAR EN-ROUTE AFTER SPECIFIED TIME -

This type of SAR may be indicated when the flight is bound for an aerodrome where an Air Traffic Service is not in operation, and will be shown as follows:

SAR/ (Air Traffic Services Unit to be notified of arrival) (time by which notification of arrival will me made en-route).

e.g. SARENROUTEFABL0930.

It shall mean the following: -

a) Search and Rescue action will be instituted automatically in the event of a missed position report while flying in controlled airspace;
b) Search and Rescue action will be instituted automatically in the event of the Air Traffic Services Unit, which is to be notified of arrival not receiving the arrival notification by the time specified in the flight plan;
c) Search and Rescue action will be instituted in the event of a missed position report while the aircraft if flying in uncontrolled airspace;
d) When requesting this type of SAR, the pilot-in-command of the aircraft must be reasonable certain that it will be possible to make position reports throughout the flight and that the required reports will be made.

8) In this context an Air Traffic Services Unit shall mean a Unit manned by personnel authorized by the:

SACAA or South African National Defence Force (South African Air Force).

9) The attention of pilots is drawn to CAR 91.03.4 of the Rules of the Air, and General Operating Rules, regarding the constitution of a flight plan. It should be noted that if the data, as laid down in the CAR's, is not submitted, search and rescue action may not be provided. Pilots-in-command should therefore ensure that all relevant data is submitted to the appropriate ATSU, particularly when filing an in-flight flight plan.

10) Pilots are further reminded that a flight plan filed before departure will not be activated unless a time of departure has been received by an ATSU. When departing from an aerodrome where an ATSU is in operation it may be assumed that the flight plan will be activated by that unit. Conversely, when departing from an aerodrome where an ATSU is not in operation the pilot-in-command must ensure that an ATSU receives the time of departure.

5.3.1 **Activation of Flight Plan with Search and Rescue Requirement**

Search and rescue can only be instituted when a valid filed flight plan has been activated.

Activation of a valid flight plan search and rescue action will be automatic in the following instances:

a) Departure signal via AFTN and/or voice liaison between ATSU's,

b) Voice communication with ATSU's,

When the flight is of such a nature where voice communication with any ATSU will prove difficult, the following methods to activate a valid flight plan shall apply:

1) Notifying an ATSU by means of a telephone call requesting that the flight plan be activated.

2) Relay via another aircraft on frequency.

Cancellation of Flight Plan Search and Rescue

Due to the high costs and man hours involved in any Search and Rescue action, it is imperative that pilots/operators cancel Search and Rescue with the ATSU within the stipulated time as requested on the flight plan.
Any overdue SAR which turns out to be a false operation places unnecessary strain on limited resources.
This cancellation can be done by calling the ATSU which has been stipulated on the filed FPL or on Frequency or phoning an ATSU which has been stipulated on the filed FPL after landing.
The ATSU receiving this cancellation shall be responsible for:
a) Contacting the ATSU with whom SAR was filed on the flight plan (if different from the one receiving the notification) and advise them of the aircraft's safe arrival upon which the necessary Occurrence Log entry shall be made.

b) If the ATSU/ARCC is unsure if the pilot has cancelled his/her SAR: the ATSU/ARCC to contact the ATSU which has been nominated for SAR on the filed FPL.
If no cancellation was recorded, PRE-COMMS should begin.
c) If an 'ARR' message is received on the AIMU Flight planning queue, staff are to ACCEPT the ARR message. No further action is required by the AIMU.

5.4 Aircraft subject to an Emergency

An aircraft subject to an emergency should notify the appropriate ATSU without hesitation to ensure that effective action may be taken without delay. In this respect remember the "Five Golden Rules":

CONFESS your predicament to any ATSU to enable the organization to assist while there is still time.

COMMUNICATE with the ATSU, passing as much of the pertinent information in the first message.

CLIMB, if possible for improved direction-finding and radar coverage.

COMPLY with instructions and advice given and assist the ATSU to control communication on the frequency in use. Do not change frequency unless it is absolutely necessary.

CONSERVE – slow down and select power for maximum endurance.

5.5 Aircraft observing another aircraft in Distress

An aircraft observing another aircraft in distress, making a crash-landing, ditching, aircrew ejecting or bailing-out, or a dinghy, shall (where possible) take action as follows:

Keep the aircraft or personnel in distress in sight.

If at sea and a surface vessel is in sight and can be contacted without losing sight of the distressed personnel, guide it to the position;

If the aircraft in distress has not been able to transmit a distress signal, or if the captain of the aircraft observing the distress believes that further help is needed, transmit a message containing all relevant information to the controlling ground station on the frequency in use;

Obtain as accurate a position as possible by the best available means and transmit if necessary, the correct position to the controlling ground station;

Carry out instructions from the controlling ground station, or remain in position until instructed to return, or until circumstances compel departure.

5.6 Emergency Communication from Aircraft

Emergency communications from aircraft are divided into two categories as follows:

Distress: covers aircraft threatened by grave and imminent danger and in need of immediate assistance.

Urgency: identifies a very urgent message concerning the safety of an aircraft.

5.7 Distress Communication

The distress message sent out by an aircraft must be preceded by the distress signal MAYDAY preferably spoken three times and should:

Be transmitted on the air/ground frequency in use at that time.

Consist of as many as possible of the following elements, spoken directly and, if possible, in the following order:

The name of the station addressed (time and circumstances permitting)

The identification of the aircraft.

The nature of the distress condition.

The intention of the pilot in command.

Present position, level (flight level, altitude as appropriate) and heading.

Any other useful information.

5.7.1 Aircraft Intercepting a Distress Call

Whenever a distress transmission is intercepted by a pilot-in command of an aircraft, the pilot shall, if feasible:

a) Acknowledge the distress transmission;
b) Record the position of the craft in distress if given;
c) Take a bearing on the transmission;
d) Inform the appropriate RCC or ATSU of the distress transmission, giving all available information; and
e) At the pilot's discretion, while awaiting instructions, proceed to the position given in the transmission;
f) Listen out on the frequency used by the distress aircraft;
g) If no acknowledgement of the distress message is heard, call the aircraft in distress and acknowledge receipt.

5.7.2 Progress Reports from aircraft subject to an Emergency

After declaring an emergency, aircraft in flight should endeavor to maintain contact with an ATSU and should transmit progress reports as frequently as possible.

Before changing frequency, aircraft should advise the ground station of the frequency to which it intends changing. If the aircraft is not in contact with an ATSU, this information should be broadcast before the frequency change is made.

5.8 Urgency Call

In addition to being preceded by the radiotelephony urgency signal PAN, preferably spoken three times, the urgency message to be sent by an aircraft reporting an urgency condition must:

Be on the air-ground frequency in use at the time.

Consist of as many as required of the elements spoken distinctly and, if possible, in the following order:

Name of the station addressed (time and circumstances permitting)

Identification of the aircraft.

Nature of the urgency condition.

Intention of the pilot in command.

Present position, level (flight level, altitude as appropriate) and heading.

Any other useful information.

5.9 Action after crashed or forced Landing

The pilot of an aircraft which has crashed or force landed shall use his own discretion on whether to remain at the aircraft or attempt to reach help.

Factors which could influence this decision:

If the aircraft was operating on an SAR action flight plan and the aircraft has crashed or force landed in a desert area, a swamp area or a very sparsely populated area, it is advisable to remain at the aircraft and take such of the following action as may be appropriate or possible.

Take steps to conserve the strength of survivors, e.g. avoid unnecessary exertion in the sun.

Conserve available water and food supplies.

If a usable radio transmitter is available, make transmissions using the distress procedure, giving the aircraft's position and any other pertinent data, at H + 15 and H + 45. These transmissions should be kept as short as possible to conserve battery power. (H + 15 and H + 45 are 15 and 45 minutes past the hour, e.g. 07:15 and 07:45, 12:15, 12:45 etc.)

If flares are carried they should be conserved for use when search aircraft, ships or ground search parties are known to be in the vicinity. The danger of falling flares starting veld and bush fires must be borne in mind before using the flares.

If possible, place aircraft in a conspicuous position. Engine cowls, doors or other removable parts of the aircraft should be removed, polished-up and placed where they will reflect the rays of the sun. Fine sand can be used to remove paint from metal surfaces.

Light smoke fires.

If the aircraft has crashed or force landed in a settled area where help is near at hand it is better to leave the aircraft to look for help. In such cases SAP stations will render such assistance as they can.

The pilot should inform the unit he has called upon for help that he is operating on an "overdue action" flight plan and ask them to advise the nearest ATSU of his whereabouts.

5.10 Pilot Notification

The efficacy of the SAR action by ATSU's, ATCC's or the ARCC is directly related to the amount and accuracy of details notified in the reporting of an emergency and to any position reported in flight. When reporting in-flight emergencies or difficulties, early advice and the degree of apprehension felt by the pilot will enhance the assistance which can be provided by the ground organization.

When a pilot lands at a place other than the aerodrome included in the flight plan, the pilot should report the fact to the nearest ATSU or the ARCC.

5.11 Participation in Searches

No person shall participate in any SAR Operation without a formal tasking from the ARCC.

Search aircraft shall conduct their flights in accordance with Search Mission Coordinators (SMC's) instructions.

All tracks flown are to be carefully recorded and any portions of the assigned area which were not effectively searched due to fog, rain, etc., shall be recorded and brought to the attention of the SMC.

All aircraft participating in a SAR Operation shall be identified by a "RESCUE" callsign allocated to them by the designated SMC.

5.12 Flights into SAR Operational Areas

Aircraft may enter an area in which SAR operations are in progress, and which has been promulgated by Class 1 NOTAM, only with the express permission of the SMC in charge of a SAR operation.

All flights into, in or through such SAR areas shall be subject to the direction of the responsible RCC.

5.13 Assistance offered for SAR Operations

Private aircraft owners/operators willing to support the ARCC during SAR operations are to send an email to the ARCC indicating their willingness to assist. The information will be entered into a volunteer database.

For active search assistance, Private aircraft owners/operators shall be notified to report to the ARCC and may only proceed when they are formally tasked by the ARCC.

6 Emergency Locator Transmitter (ELT)

6.1 General

The essence of a successful SAR operation is the speed with which it can be accomplished. In each incident the SAR organisation will always assume that there are survivors who need help and whose chances of survival diminish with time. ELTs facilitate rapid location of a distress incident by day and night.

These battery operated radio transmitters emit a radio signal modulated by a distinctive downward swept audio tone. ELT's operate on 406 MHz for detection by the COSPAS-SARSAT satellite system and have a 121.5 MHz homing signal capability.

Note: While the installation and use of automatic ELT's saves lives, improper use will lead to false alarms and a resultant strain on scarce SAR resources.

RESPONSIBLE ORGANIZATION	LOCATION, ADDRESS AND CONTACT
ASMCC	Telkom maritime services (South Africa Mission Control Centre)
	Postal Address: Private Bag X1 Milnerton 7435
24 Hour alerting	+27 21551 2617
Additional 24 Hour alerting	+27 21 552 9752
E-mail	maritimeradio@ixmail.co.za (no attachment accepted)
Alternate Email	maritimeradio@telkom.co.za
AFTN	FACTYCYX

6.2 Monitoring 121.5MHZ

Pilots should monitor 121.5MHz before engine start and after shutdown, however aircraft on long over-water flights, or on flights over designated areas over which the carriage of an emergency locator transmitter (ELT) is required, shall continuously guard the VHF emergency frequency 121.5 MHz, except for those periods when aircraft are carrying out communications on other VHF channels or when airborne equipment limitations or cockpit duties do not permit simultaneous guarding of two channels.

Reception of 121,5Mhz transmissions must be reported to Air Traffic Services (ATS) or the ARCC immediately.

6.3 Inadvertent Activations

6.3.1 Inadvertent activation of ELTs has occurred on numerous occasions in South Africa. It can occur as a result of hard landing and accidental activation during aircraft servicing or mishandling.

To detect an inadvertent activation pilots should: prior to engine shut down at the end of each flight, tune the aircraft receiver to 121.5 MHz and listen for transmitted signals; and

If a signal is heard, ensure that their own aircraft's ELT is not operating. If it is found that it has been activated, switch it off and take the action described in 6.3.2.

Note: Maintenance may be required before an automatic activation unit is returned to the armed position.

6.3.2 Any person detecting the inadvertent activation of an ELT must report the activation immediately to the nearest ATS, ASMCC or the ARCC so that any SAR action that may have commenced because of the transmission may be terminated.

6.4 Testing of ELT'S

Operational testing of ELTs is not permitted unless done in a faraday cage. Testing of ELTs is to be done in beacon test mode as described in the beacon instruction manual.

Detailed ELT testing procedures can be found on the COSPAS-SARSAT website: https://cospas-sarsat.int

6.5 PLBs used in Aviation

PLBs must not be used to substitute mandatory ELT carriage requirements where applicable. Owners and operators of PLBs are to be mindful of the limitations of the PLBs when used in an aviation environment. Owners, operators or crew of an aircraft utilizing PLBs in the aviation environment are to ensure that the beacons are registered correctly and are COSPAS-SARSAT type approved.

6.6 Other Emergency Trackers

Although the ARCC does not monitor other emergency tracking devices, users shall make sure that the people or companies tracking them should know to notify the ARCC immediately when an emergency is reported.

6.7 Beacon Registration

All owners and operators shall comply with the ELT regulatory provisions as contained in the South African Beacon Emergency regulations.

NOTE: Registering of an aircraft does not automatically register the ELT and change of ownership on an aircraft does not automatically change the ELT information. ELT registrations is a separate registration that must be done in terms of the relevant registration regulations.

6.8 COSPAS-SARSAT

6.8.1 General

The COSPAS-SARSAT System provides distress alert and location information to search and rescue (SAR) services throughout the world for maritime, aviation and land users in distress.

The System is comprised of:

Satellites in low-altitude Earth orbit (LEOSAR), medium-earth orbit (MEOSAR) and geostationary orbit (GEOSAR) that process and/or relay signals transmitted by distress beacons.

Ground receiving stations, called “local user terminals” (LUTs), which process the satellite signals to locate the beacon.

Mission control centers (MCCs) that distribute the distress alert information to SAR authorities and RCC’s.

COSPAS-SARSAT operates on 406.00 MHz; location accuracy is normally better than 5 km through the polar orbiting satellites, whereas the geostationary satellites require position information to be included in the ELT alert transmission. Where this position is input from onboard navigation systems, the position accuracy is usually better than 1 km.

Satellite reception and processing of legacy analogue-technology 121.5 MHz beacon signals ended on 1 February 2009. 121.5MHz signals transmitted by ELT’s are only used for homing.

6.9 SRRs

6.9.1 Aeronautical SRR

The Aeronautical SRR covers the continental area of the sovereign territory of the Republic of South Africa, Namibia, Eswatini and Lesotho and associated flight information regions.

The South African Aeronautical area of responsibility is the area defined by the following points:

a) From a point at 200000.00S 0100000.00W along a straight line to a point at 180000.00S 0050000.00W,

b) Thence along a straight line to a point at 180000.00S 0100000.00E,

c) Thence along a straight line to the point where the international boundary between Namibia and Angola meet at the coast at 171500.00S 0114500.00E,

d) Thence East proceeding along the international boundaries between Namibia and Angola to a point at 175700.00S 0210000.00E,

e) Thence East along the international boundaries between Namibia, Angola, and Zambia to a point at where the international boundaries of Zambia, Zimbabwe and Botswana converge at 174730.00S 0251530.00E,

f) Thence West along the Botswana and Namibia international boundary to a point at 181930.00S 0210000.00E,

g) Thence South along the Botswana and Namibia international boundary to a point at 244600.00S 0200000.00E,

h) Thence South East along the South Africa and Botswana international boundaries to a point at 264927.00S 0210136.00E,

i) Thence East along the South Africa and Botswana, South Africa and Zimbabwe, South Africa and Mozambique, and Mozambique and Eswatini international boundary to a point at 265024.88S 0320805.29E,

j) Thence East along the South Africa and Mozambique international boundary to a point at 265030.00S 0325350.00E,

k) Thence along a straight line to a point at 275000.00S 0350000.00E,

l) Thence along a straight line to a point at 300000.00S 0400000.00E,

m) Thence along a straight line to a point at 300000.00S 0570000.00E,

n) Thence along a straight line to a point at 450000.00S 0570000.00E,

o) Thence along a straight line to a point at 450000.00S 0750000.00E,

p) Thence along a straight line to a point at 900000.00S 0450000.00E (South Pole),

q) Thence along a straight line back to the starting point at 200000.00S 0100000.00W.

6.9.2 **MARITIME**

The Maritime SRR covers the sea area bordering the continental areas above, commencing at the position where the international borders between Namibia and Angola coincide on the coast proceeding in a Westerly direction to:

18S 10W,

Then to the South Pole,

Then to 50S 75E,

Then to 50S 45E,

Then to 30S 40E,

Then to 26,5S 40E and

Then to the position where the international border between RSA and Mozambique coincide on the coast (26.5S 35E).

6.10 Special Events

Emergency response plans for aviation events involving an increase of flight activity, excluding the Airfield Emergency Management System (AEMS) outside the 10km radius of an airfield, must be forwarded to the ARCC, as these events have a greater risk of potential SAR operations.

The sharing of AEMS for all South African Airfields with the ARCC is mandatory in terms of South African Law.

7 Search and Rescue Signals

The search and Rescue Signals to be used are those prescribed in Annexure B to the Rules of the Air, Air Traffic Services, Search and Rescue and Overflight Regulations, 1975, which are identical to those contained in appendix “A” to Annex 12 to the Convention on International Civil Aviation.

Ground/Air Emergency signalling codes

The following codes are the internationally accepted codes for survivors to use to communicate with aircraft.

No.	Message	Code symbol
1	Require assistance	
2	Require medical assistance	
3	No or Negative	
4	Yes or affirmative	
5	Proceeding in this direction	

The following code will be used by rescue units to communicate with aircraft when no other means of communication exists.

No.	Message	Code symbol
1	Operation completed	
2	We have found all personnel	
3	We have found only some personnel	
4	We are not able to continue. Returning to base.	
5	Have divided into 2 groups each proceeding in direction indicated	
6	Information received that aircraft is in this direction.	
7	Nothing found. Will continue to search	

Note:
All FLT where the FLW types of SAR have been REQ:
1. SAR AFT a specified time: example (RMK/SARFAOR0930)
2. SAR AFT specified HR FM ETA: example (RMK/SARFAORETA1HR)
3. SAR AFT specified time en-route: example (RMK/SARFAOR0930ENROUTE),
Pilots will include a cellphone NR as an AFT HR CTC. This is to assist the aeronautical rescue coordination centre (ARCC) when SAR is overdue AFT office HR.

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GEN 4 CHARGES FOR AERODROMES/HELIPORTS AND AIR NAVIGATION SERVICES

GEN 4.1 AERODROME/HELIPORT CHARGES

For latest charges please refer to applicable Government Gazette.

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GEN 4.2 AIR NAVIGATION SERVICES CHARGES

For latest charges please refer to applicable Government Gazette.

1 VSAT Charges

1.1 IATA CLEARING HOUSE (ICH) Members

Under the authority of the Minister of Transport, effective 19 April 2001, all Southern African Development Community (SADC) VSAT network charges attributable to South Africa will be billed and collected by the International Air Transport Association (IATA) on behalf of Air Traffic and Navigation Services (ATNS) SOC LTD of South Africa (for all ICH Member Airlines only), which has been designated the agent of South Africa with respect to the VSAT network at the following:

International Air Transport Association (IATA), Route de Laeroport 33,
P.O. Box 416, CH-1215 Geneva 15 Airport, Switzerland.
Facsimile +41 (22) 799-2678
AFTN: LSGGIATA
SITA: GVALDXB
TELEX: 415586

1.2 Non-IATA Members

Under the Authority of the Minister of Transport effective 19 April 2001, all Southern African Development Community (SADC) VSAT Network charges attributed to South Africa on NON-IATA MEMBERS, will be billed and collected by Air Traffic and Navigation Services (ATNS) SOC LTD South Africa with respect to the VSAT Network at the following:

Air Traffic and Navigation Services SOC Limited
Private Bag X15 Kempton Park, 1620
Facsimile +27 11 607 1570

1.3 Using the FIR crossing charge in SADC VSAT equipped States, the FIR crossing charge denominated in United States Dollars (USD) was recently reviewed and will be effective from 1 June 2010, as follows:

The flat rate charge per FIR crossing will be 9.60 US Dollars. FIR crossing charge per flight, will be payable from the effective date until further notice. This charge will be revised on a regular basis in consultation with IATA and other representative user groups depending on changes in operating costs, number of additional remote sites, aircraft movements, and other variable cost elements. NOTAM will also be issued by other States / service providers.

2 SADC VSAT invoicing and Payment Advice

2.1 The Southern African Development Community (SADC) Very Small Aperture Terminal (VSAT) charge is incurred when flights cross international Flight Information Region (FIR) boundaries or international borders of States, where the air traffic control centers are equipped with SADC VSAT satellite communications system. The States

currently equipped with VSAT are: Angola, Botswana, Democratic Republic of Congo, Lesotho, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe, Madagascar, Burundi and Rwanda.

2.2 Payment terms are 30(thirty) days from the invoice date. Failure to settle accounts within the prescribed period may result in the service being denied which in actual fact means that aircraft/s will be grounded without further notice.

3 Primary Payment Method (for ICH members airlines only)

3.1 All IATA CLEARING HOUSE (ICH) member airline invoices must be settled in USD currency directly to the International Air Transport Association (IATA) to the following bank account:

United Bank of Switzerland
Swift: UBSWCHZH12A
For IATA USD Bank A/C No. 332.208.53K (Rubrique ATC USD)
8 rue du Rhône - 1211 Geneva 2 Depot
Switzerland

3.2 All NON-IATA AIRLINES to settle directly to ATNS Bank as per point 4 Other payments Options

Important: Please quote the invoice reference number (as printed on the invoice) on the back of the cheque or as a bank transfer reference.

4 Other Payment options.

To facilitate payment ATNS has introduced two alternative methods for payments,

a) Payment Option one - Direct to ATNS Soc Ltd (Credit Card).

Payments for invoices for SADC VSAT charges portion only, by VISA or MasterCard credit card. The credit card will be debited with the South African Rand equivalent of the US Dollar amount authorized. The exchange rate used for determining the Rand equivalent will be the Rand/US Dollar exchange rate ruling on the day of receipt by ATNS of the authorization. Please ensure that all fields are completed correctly to ensure that the correct credit card account is debited. This form should be faxed to ATNS Soc Ltd who will debit the credit card.

See attached form.

b) Payment Option two - Direct to ATNS Soc Ltd (Direct deposits)

For invoices, payment for the SADC VSAT portion only of the invoice may be made in ZAR (South African Rand) to the account of Air Traffic and Navigation Services Soc Ltd (ATNS) in South Africa. The Bank account details are:

Account Name: Air Traffic and Navigation Services SOC LTD - VSAT Current Account (ZAR)
BANK: FirstRand Bank Ltd
BRANCH: RMB Corporate Banking Johannesburg
BRANCH CODE: 255005
ACCOUNT Number: 62693726526
SWIFT CODE: FIRNZAJJ

Important: The exchange rate to be used in determining the Rand equivalent of the US Dollar amount invoiced is the month end Average rate on the date of the invoice. The rate to be used for each invoice will be printed on the SADC VSAT movement / data sheet attached to the invoice.

Please quote the invoice reference number on the deposit slip and fax it to ATNS Soc Ltd, Fax No. +27 11 607 1570

5 Payment options for SADC VSAT CHARGES for Non-IATA members as follows:

a) Payments by Credit Card (please complete attached form)

b) Payments by direct deposits (see banking details as per paragraph 4(b) above)

OTHER PAYMENT OPTIONS FOR SADC VSAT CHARGES

ALL OTHER CHARGES MUST BE PAID TO IATA, GENEVA

OPTION 1

If your company wishes to settle charges by credit card payment to ATNS Soc Ltd. in South Africa, please complete the form below - Please complete all the fields below:

Company Name:.....Company Tel no:.....

Credit Card Number

Last 3 digits at the back of your card (CVV)

Expires End

Mastercard		VISA	
Diners Club		Amex	

Invoice Reference

	A	T	C	-					-				-			USD			-			c
	A	T	C	-					-				-			USD			-			c
	A	T	C	-					-				-			USD			-			c
	A	T	C	-					-				-			USD			-			c
						Total Amount Authorised										USD			-			c

I hereby authorise ATNS Soc Ltd. to debit the above credit card account in the authorised amount. Kindly make a copy of the back and front of the credit card and fax together with this form.

....
Authorized Signature Date

.....
Name (Please Print)

Kindly fax this form to: ATNS Soc Ltd. (Attn: VSAT DEBTOR or the SUPERVISOR)
Fax: + 27 11 607 1570
If you have any questions, please call us on:
Tel: + 27 11 607 1148/1168/1217/1220/1275 (direct numbers)
+ 27 11 607 1000 (switchboard)

OPTION 2

If your company wishes to settle SADC VSAT in ZAR (South African Rand) to the account of ATNS Soc Ltd. in South Africa, please credit the FLW bank account. FirstRand Bank Ltd, RMB Corporate Banking Johannesburg Branch, Branch code no. 255005, Account no. 62693726526, Swift code. FIRNZAJJ, Beneficiary - ATNS Soc Ltd.

Please quote the IATA Invoice Reference to help ATNS identify your payment.

Please advise VSAT DEBTORS or SUPERVISOR - ATNS of your payment (contact details above). The exchange rate to be used for Option Two is printed on the SADC VSAT movement sheet attached to the IATA invoice. (Change to exchange rates will be made monthly).

6 Billing and collection for Polokwane International Airport

a) Gateway Airport Authority Limited (GAAL) is currently charging Billing for all approaches into Polokwane Airport (TMA Entry and Exit).
b) ATNS is contracted as an Agent for Billing and Collections on behalf of GAAL.
c) Banking Details for payment are as follows:

Account Holder: Air Traffic and Navigation Services SOC Ltd International

Bank: FirstRand Bank Limited

Branch: RMB Corporate Banking Johannesburg

Branch Code: 255005

Swift Code: FIRNZAJJ

Account Type1: ZAR (Current)

Account No1: 62693727847

Account Name: Air Traffic and Navigation Services SOC Ltd

Bank: FirstRand Bank Limited

Branch: Corporate Banking Johannesburg

Branch Code: 254655

Swift Code: FIRNZAJJXXX

Account Type2: Customer Foreign Currency account

Account No2: USD 046 5321

Reference: Your Account Number or Invoice Number

d) Below please find attached the list of approach Tariffs:

GAAL Approach Tariff			
MTOW	**DOM**	**REG**	**INTL**
<2500	R97.00	R193.00	R193.00
<6000	R147.00	R304.00	R330.00
<7000	R416.00	R829.00	R1,241.00
<8000	R539.00	R1,057.00	R1,067.00
<9000	R644.00	R1,208.00	R1,287.00
<10000	R706.00	R1,148.00	R1,395.00
<11000	R889.00	R1,567.00	R1,778.00
<12000	R966.00	R1,601.00	R1,932.00
<13000	R1,074.00	R1,749.00	R2,131.00
<14000	R1,119.00	R1,845.00	R2,223.00
<15000	R1,257.00	R2,076.00	R2,514.00
<16000	R1,334.00	R2,171.00	R2,653.00
<17000	R1,395.00	R2,274.00	R2,791.00
<18000	R1,488.00	R2,460.00	R2,975.00
<19000	R1,533.00	R2,525.00	R3,083.00
<20000	R1,594.00	R2,621.00	R3,205.00
<30000	R2,023.00	R4,028.00	R4,049.00
<40000	R2,376.00	R4,770.00	R5,402.00
<50000	R2,913.00	R5,797.00	R7,718.00
<60000	R3,296.00	R6,563.00	R7,787.00
<70000	R3,605.00	R7,193.00	R7,977.00
<80000	R3,864.00	R7,730.00	R8,172.00
<90000	R4,155.00	R8,312.00	R8,590.00
<100000	R4,472.00	R9,309.00	R9,943.00
<110000	R4,800.00	R10,024.00	R10,511.00
<120000	R5,153.00	R10,306.00	R10,719.00
<130000	R5,355.00	R11,089.00	R11,762.00
<140000	R5,552.00	R11,915.00	R12,943.00
<150000	R5,982.00	R12,822.00	R14,341.00
Please note that the above tariffs are exclusive of VAT			

Flight Class Code Description:	
DOM	Domestic
REG	Regional
INTL	International

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