

**AERONAUTICAL INFORMATION
PUBLICATION**

TONGA

GEN 0.1 PREFACE

1 PUBLISHING AUTHORITY

1.1 Ministry of Civil Aviation, Tonga

1.1.1 The Aeronautical Information Publication Tonga (AIP Tonga) is published under the authority of the Minister of Civil Aviation, Tonga.

1.2 Aeronautical Information Service Providers

1.2.1 Tonga Airports Limited (TAL), operating under an Instrument of Delegation from the Minister of Civil Aviation, provides an Aeronautical Information Services unit at Fua'amotu International Airport.

1.3 Aeronautical Information Publication

1.3.1 Aeronautical Information Management, a business unit of Airways Corporation of New Zealand, is contracted by TAL to publish the Tonga AIP.

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2 APPLICABLE ICAO DOCUMENTS

2.1 General

2.1.1 The following ICAO documents are applicable to operations within the Tonga Sector of the Auckland Oceanic FIR:

- (a) Annex 2 — *Rules of the Air*
- (b) Annex 3 — *Meteorology*
- (c) Annex 4 — *Aeronautical Charts*
- (d) Annex 5 — *Units of Measurement to be Used in Air and Ground Operations*
- (e) Annex 6 — *Operation of Aircraft*
- (f) Annex 9 — *Facilitation*
- (g) Annex 10 — *Aeronautical Telecommunications*
- (h) Annex 11 — *Air Traffic Services*
- (i) Annex 12 — *Search and Rescue*
- (j) Annex 14 — *Aerodromes*
- (k) Annex 15 — *Aeronautical Information Services*
- (l) Doc 8126 — *AIS Manual*
- (m) Doc 8168 — *Procedures for Air Navigations Services — Rules of the Air and Air Traffic Services (PANS — RAC)*
- (n) Doc 8400 — *ICAO Abbreviations and Codes*
- (o) Doc 8585 — *Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services*
- (p) Doc 8643 — *Aircraft Type Designators*
- (q) Doc 8697 — *Aero Chart Manual*
- (r) Doc 9432 — *Manual of Radio Telephony*
- (s) Doc 7030 — *Regional Supplementary Procedures*
- (t) Doc 9674 — *AN/946 World Geodetic System — 1984 (WGS-84) Manual*
- (u) Doc 7383 — *AIS/503 Aeronautical Information Services Provided by States*
- (v) Doc 7910 — *Location Indicator*

3 AIP STRUCTURE AND AMENDMENT INTERVAL

3.1 General

3.1.1 The AIP — Tonga includes this manual and the AIP Supplement — Tonga

3.1.2 There are two scheduled amendments to the AIP issued in each calendar year in accordance with the ICAO AIRAC schedule of effective dates. Scheduled amendments will be effective on the sixth and twelfth AIRAC effective dates of the year as shown in [Table GEN 0.1-1](#). Additional amendments may be published if operationally required.

3.1.3 AIP Supplements are published as required in accordance with the AIRAC schedule of effective dates.

**Table GEN 0.1 - 1
AIRAC Effective Dates and Amendment Schedule**

2010	2011	2012
14 JAN 10	13 JAN 11	12 JAN 12
11 FEB 10	10 FEB 11	9 FEB 12
11 MAR 10	10 MAR 11	8 MAR 12
8 APR 10	7 APR 11	5 APR 12
6 MAY 10	5 MAY 11	3 MAY 12
3 JUN 10	2 JUN 11	31 MAY 12
1 JUL 10	30 JUN 11	28 JUN 12
29 JUL 10	28 JUL 11	26 JUL 12
26 AUG 10	25 AUG 11	23 AUG 12
23 SEP 10	22 SEP 11	20 SEP 12
21 OCT 10	20 OCT 11	18 OCT 12
18 NOV 10	17 NOV 11	15 NOV 12
16 DEC 10	15 DEC 11	13 DEC 12

Note: Bold effective dates indicate a scheduled AIP amendment

3.2 Amendments

3.2.1 Amendments to the AIP — Tonga are issued as replacement pages, or in the case of Enroute Charts, as replacement charts.

3.3 Amendment Bulletin

3.3.1 A Bulletin will be issued with each amendment to the AIP — Tonga providing a summary of significant changes.

3.4 Annotation of Amendments

3.4.1 Changes to text or new information in the AIP — Tonga are identified by a vertical black line (revision bar) in the margin. Deletions are identified by a “D”. Changes in the Checklist of AIP Pages are identified by a grey shading. Changes to charts are indicated by a note in the right margin of the charts, giving the previous effective date and changes from the previous edition.

3.5 NIL Amendment Notification

3.5.1 In the event of there being no changes effective at a scheduled effective date, a “NIL Amendment” notification will be issued by NOTAM.

4 NOTIFICATION OF ERRORS AND OMISSIONS

4.1 General

4.1.1 Errors, omissions and suggestions for improvement of the AIP — Tonga, AIP Supplement — Tonga, and Enroute Charts should be notified immediately to:

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Fax (676) 27 942

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Email dcusack@tongaairports.com

GEN 0.2 RECORD OF AIP AMENDMENTS

1 AIP AMENDMENT DATES

1.1 General

1.1.1 Table GEN 0.2 - 1 lists AIP Amendments to the AIP — Tonga.

Table GEN 0.2 - 1
Record of Amendments

AMDT NR	EFFECTIVE DATE	INSERTED BY
1	27 OCT 05	INCORPORATED
2	16 FEB 06	INCORPORATED
3	8 JUN 06	INCORPORATED
4	7 JUN 07	INCORPORATED
5	31 JUL 08	INCORPORATED
6	20 NOV 08	INCORPORATED
7	9 APR 09	INCORPORATED
8	19 NOV 09	INCORPORATED
9	18 NOV 10	INCORPORATED
10		
11		
12		

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GEN 0.3 RECORD OF AIP SUPPLEMENTS

1 AIP SUPPLEMENTS

1.1 General

1.1.1 AIP Supplements are published as required in accordance with the AIRAC schedule of effective dates as shown in [Table GEN 0.1-1](#). Each issue includes a current checklist and entirely replaces previous issues.

Table GEN 0.3 - 1
Record of Supplements

NR	YEAR	SUBJECT	AIP SECTION(S) AFFECTED	PERIOD OF VALIDITY	CANCELLATION RECORD

Intentionally Blank

GEN 0.4 CHECKLIST OF AIP PAGES

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GEN 1 NATIONAL REGULATIONS AND REQUIREMENTS

GEN 1.1 DESIGNATED AUTHORITIES

1 INTRODUCTION

1.1 General

1.1.1 The addresses of the designated authorities concerned with the facilitation of international air navigation are as follows:

(a) Civil Aviation — Regulatory

Director of Civil Aviation
Ministry of Transport
PO Box 845
Nuku'alofa
TONGA

TEL (676) 24 045 or (676) 24 144
FAX (676) 24 145

AFTN NFTNYAYX
TELEX 66269 PRIMO TS

(b) Tonga Airports Limited — Operations

Chief Executive Officer
Tonga Airports Limited
Fua'amotu INTL
PO Box 876
Nuku'alofa
TONGA

TEL (676) 21 864
FAX (676) 27 942

AFTN NFTFYDYX
Email dcusack@tongaairports.com

(c) Meteorology

Director of Civil Aviation
Ministry of Transport
PO Box 845
Nuku'alofa
TONGA

TEL (676) 24 045

FAX (676) 24 145

(d) Customs

Deputy Commissioner of Revenue — Customs and Trade
Customs Department
Ministry of Finance
PO Box 146
Nuku'alofa
TONGA

TEL (676) 23 650

FAX (676) 24 124

TELEGRAPHIC CUSTOMS NUKU'ALOFA

(e) Immigration

Immigration Division
Ministry of Foreign Affairs
Government of Tonga
PO Box 352
Nuku'alofa
TONGA

TEL (676) 26 970 or (676) 23 600

FAX (676) 26 971 or (676) 23 360

TELEGRAPHIC MINPOL NUKU'ALOFA

(f) Health

Director of Health
Ministry of Health
PO Box 59
Nuku'alofa
TONGA

TEL (676) 23 200
FAX (676) 24 291 or (676) 24 210
TELEGRAPHIC HEALTH NUKU'ALOFA

(g) Agricultural Quarantine

Director of Agriculture
Ministry of Agriculture
PO Box 14
Nuku'alofa
TONGA

TEL (676) 24 257
FAX (676) 24 922
TELEGRAPHIC AGRIC NUKU'ALOFA

(h) Aircraft Accidents Investigation

Director of Civil Aviation
Ministry of Transport
PO Box 845
Nuku'alofa
TONGA

TEL (676) 24 045 or (676) 24 144
FAX (676) 24 145

AFTN NFTNYAYX
TELEX 66269 PRIMO TS

(i) Enroute and Aerodrome Charges

Chief Executive Officer
Tonga Airports Limited
Fua'amotu International
PO Box 876
Nuku'alofa
TONGA

TEL (676) 21 864
FAX (676) 27 942

AFTN NTFYDYX
Email dcusack@tongaairports.com

GEN 1.2 ENTRY, TRANSIT AND DEPARTURE OF AIRCRAFT

1 INTRODUCTION

1.1 General

1.1.1 International flights into, from or over Tonga territory shall be subject to the current Tonga regulations relating to civil aviation. These regulations correspond in all essentials to the Standards and Recommended Practices contained in Annex 9 to the Convention on International Civil Aviation.

1.1.2 Aircraft flying into or departing from Tonga territory shall make their first landing at, or final departure from Fua'amotu International Airport. However, Vava'u and Niuatoputapu airports may be used as ports of entry by prior special arrangement with the Chief Executive Officer provided notice is given not less than 48 hours in advance of the intended arrival time.

2 SCHEDULED FLIGHTS

2.1 General

2.1.1 All passengers, mail, cargo and crew of any overseas aircraft shall be subject *mutatis mutandis* to all applicable general or special local regulations dealing with the entry, transit and departure of persons, introduction, transit or exportation of goods, quarantine and health measures, immigration, passports, visas and travel documents.

2.2 Documentary Requirements for Clearance of Aircraft

2.2.1 It is necessary that the aircraft documents shown in [Table GEN 1.2 - 1](#) be submitted by airline operators for clearance on entry and departure of their aircraft to and from Tonga. All documents listed in [Table GEN 1.2 - 1](#) must follow the ICAO standard format as set forth in the relevant appendices to ICAO Annex 9 and are acceptable when furnished in English in legible handwriting. No visas are required in connection with such documents.

2.2.2 All documents are to be submitted to Customs as soon as practicable.

Table GEN 1.2 - 1
Aircraft Documents Required

REQUIRED BY	GENERAL DECLARATION	PASSENGER MANIFEST	CARGO MANIFEST
CUSTOMS	2	2	2
AGRICULTURE /QUARANTINE	1	1	1
IMMIGRATION	1	1	Nil

Notes

2.2.3 One copy of the General Declaration is endorsed and returned by Customs, signifying clearance.

2.2.4 If no passengers are embarking (disembarking) and no articles are laden (unladen), no aircraft documents except copies of the General Declaration need be submitted to the appropriate Customs authorities.

3 NON-SCHEDULED FLIGHTS

3.1 Procedures

3.1.1 All passengers, mail, cargo and crew of any overseas aircraft shall be subject *mutatis mutandis* to all applicable general or special local regulations dealing with the entry, transit and departure of persons, introduction, transit or exportation of goods, quarantine and health measures, immigration, passports, visas and travel documents.

3.1.2 The pilot of an aircraft on an unscheduled flight who intends to overfly Tonga or to use a Tonga airport for landing shall request such permission at least 24 hours prior to departure. The request shall be lodged and received by Tonga Airports Limited during the official working hours as specified in page NTF AD 2 - 2:

- (a) Name and address of the aircraft operator
- (b) Type and registration marks of the aircraft
- (c) Name, address and business of charterer
- (d) Proposed date and place of origin of flight
- (e) Routes including dates and times of arrival and departure
- (f) Number of passengers and/or nature and amount of freight
- (g) Purpose of flight

3.1.3 Prior approval for the flight must be obtained.

3.1.4 However, no such permission is required for flights that fall into the following category:

- (a) Overflights by civil aircraft that have the nationality of an ICAO Contracting State, provided that the requirements of the ICAO Convention on International Civil Aviation are complied with.

3.1.5 All flights by foreign state aircraft as defined by the Convention will require diplomatic clearance from the Tonga Foreign Affairs. Requests for such clearance should be submitted through the normal diplomatic channels, giving a minimum of seven full working days' notice.

3.2 Documentary Requirements for Clearance of Aircraft

3.2.1 Content and format of documentary requirements for clearance of aircraft is as follows:

- (a) General Declaration — as described in Annex 9 to the convention on International Civil Aviation.
- (b) Passenger Manifest — as described in Annex 9 to the convention on International Civil Aviation.
- (c) Cargo Manifest — as described in Annex 9 to the convention on International Civil Aviation.

4 PRIVATE FLIGHTS

4.1 General

4.1.1 Refer to [section 3.1](#).

5 PUBLIC HEALTH MEASURES APPLIED TO AIRCRAFT

5.1 General

5.1.1 Nil.

GEN 1.3 ENTRY, TRANSIT AND DEPARTURE OF PASSENGERS AND CREW

1 CUSTOMS REQUIREMENTS

1.1 The following Customs requirements are applicable:

- (a) Baggage or articles belonging to disembarking passengers and crew are immediately released except for those selected by Customs authorities for inspection.
- (b) No Customs formalities are normally required on departure.

2 IMMIGRATION REQUIREMENTS

2.1 General

2.1.1 No documents are required for passengers and crew arriving and departing on the same aircraft in transit or transferring to another flight at the same airport. These persons are not authorised to move outside the international airport transit area except on special authorisation from the authorities concerned.

2.1.2 Persons entering or leaving Tonga shall complete an arrival or departure card (one per person) and must hold a valid passport.

2.2 Passports

2.2.1 Persons entering or leaving Tonga must hold a passport valid on arrival for a period of at least six months except:

- (a) Carte de service (issued to officials of the South Pacific Commission now known as the Secretariat of the Pacific).
- (b) Persons who hold a valid certificate or document of identity that entitles the holder to re-admission into the country of issue, or other relevant official documentation.
- (c) Holders of ordinary diplomatic or official Tongan or Tongan national passports which must be valid only for the date of arrival.
- (d) Certificate of identity issued by the Government of Tonga.
- (e) Laissez-Passer (issued to officials of the United Nations).
- (f) Military Identity Card or movement order provided travelling on duty to Tonga.
- (g) Letter of authority from one of Tonga's diplomatic missions overseas and bearing the official stamp of that Tongan diplomatic mission.

- (h) Letter of authority issued by the Immigration Division, Ministry of Foreign Affairs, Government of Tonga, bearing the official stamp of either the Minister of Foreign Affairs or the Principal Immigration Officer.
- (i) Members of airline crews do not require a passport, unless such crew member intends to stay in Tonga for longer than 24 hours. The name of the said crew member should appear on the crew manifest presented to Border Control.

2.3 Visas

2.3.1 Visas are required for all non-Tongan passport holders unless the citizen is a visitor to Tonga, satisfies the conditions below and holds a valid passport from one of the following countries:

2.3.2 Australia, Austria, Barbados, Belgium, Brazil, Brunei Darussalam, Canada, Cook Islands, Cyprus, Denmark, Dominica, Federated States of Micronesia, Republic of Fiji, Finland, France, French Polynesian Territories (New Caledonia, Tahiti, Wallis and Futuna), Germany, Greece, Ireland, Italy, Japan, Kiribati, Luxembourg, Malaysia, Malta, Republic of the Marshall Islands, Monaco, Nauru, Netherlands, New Zealand, Niue, Norway, Palau, Papua New Guinea, Portugal, Russian Federation, Samoa, Seychelles, Singapore, Solomon Islands, Spain, St Kitts and Nevis, St Lucia, St Vincent and The Grenadines, Sweden, Switzerland, The Bahamas, Turkey, Tuvalu, Ukraine, United Kingdom, Great Britain and Northern Ireland, United States of America, Vanuatu.

2.3.3 Visas may be issued by:

Immigration Division
Ministry of Foreign Affairs
Government of Tonga
PO Box 352
Nuku'alofa
TONGA

TEL (676) 26 970 or (676) 23 600
FAX (676) 26 971 or (676) 23 360
TELEGRAPHIC MINPOL NUKU'ALOFA

2.3.4 Applications for visas should be made in writing at least one month before departure and must include proof of accommodation, maintenance in Tonga, and return or onwards tickets.

3 PUBLIC HEALTH REQUIREMENTS

3.1 General

3.1.1 Disembarking passengers are not required to present vaccination certificates except when coming directly from an area infected with cholera, plague, typhoid or recurrent fever, and includes the following countries:

- (a) Bangladesh
- (b) India
- (c) Myanmar (Burma)
- (d) Philippines
- (e) Thailand
- (f) Vietnam

3.1.2 A yellow fever vaccination certificate is required from travellers over one year of age coming from infected areas.

3.1.3 On departure, no health formalities are required.

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GEN 1.4 ENTRY, TRANSIT AND DEPARTURE OF CARGO

1 CUSTOMS REQUIREMENTS CONCERNING CARGO AND OTHER ARTICLES

1.1 General

1.1.1 The following Customs requirements are applicable:

- (a) Outwards clearance and eventually the payment of fees are required for local goods for exportation, payments are made through the Customs Department.
- (b) No clearance documents are required with respect to goods retained on board a transit aircraft, or cargo simply being trans-shipped from one flight to another at the same airport under Customs supervision.

2 AGRICULTURAL QUARANTINE REQUIREMENTS

2.1 Airport Facilities

2.1.1 Quarantine Office (Fua'amotu and Lupepau'u Airport) is open during normal working hours — Monday to Friday (0830 – 1630 Local Time).

2.1.2 Outside of normal working hours the Quarantine Office will be open for all scheduled international flights.

3 AGRICULTURAL IMPORT DOCUMENT REQUIREMENTS

Imports

3.1 Live Animals

3.1.1 Including domesticated animals and pets, livestock (farm animals), live insects (including bees), reptiles, rodents, snails, live fish and all other live animals.

3.1.2 The import document requirements for the importation of live animals are as follows:

- (a) Importation of live animals is prohibited unless an import permit has been obtained in advance of importation.
- (b) Original copy of a health certificate (Zoosanitary Certificate or Veterinary Certificate) from the country of origin must accompany the live animal.
- (c) Permit to import animal products can be obtained from the offices of Quarantine and Quality Management Division or Livestock Division, Ministry of Agriculture and Forestry at Nuku'alofa and Neiafu, Vava'u.

3.2 Animal Products

3.2.1 Including fresh meat products, dried/dehydrated meat products, eggs, blood, fat and any form of animal product such as animal skin (raw hides), hair/wool/offal etc.

3.2.2 The import document requirements for the importation of animal products are as follows:

- (a) Importation of animal products is prohibited unless an import permit has been obtained in advance of importation.
- (b) Original copy of a health certificate (Zoosanitary Certificate) from the country of origin must accompany the animal product consignment.
- (c) Permits to import animal products can be obtained from the offices of Quarantine and Quality Management Division or Live Stock Division, Ministry of Agriculture and Forestry at Nuku'alofa or Neiafu, Vava'u.
- (d) Commercially cooked, processed and packed (hermetically sealed) meat product from Australia, Fiji, New Zealand, Samoa and United States of America is exempt from requiring an import permit.

3.3 Plants (Live Stocks), Plant Material and Goods

3.3.1 Including plants in tissue culture, seeds, cut flowers, nursery stocks, fresh fruit and vegetables, tubers, roots, leaves, twigs, timber (logs, poles, damage, brachwood, firewood, bark and all woods) etc.

3.3.2 When importing Straw, Hay, Chaff, Soil or Forest Filter — importation of these specified articles is prohibited unless an import permit has been obtained in advance of importation.

3.3.3 The import document requirements for the importation of plants (live stocks), plant material and goods are as follows:

- (a) Importation of live plants or plant materials is prohibited unless an import permit has been obtained in advance of importation.
- (b) All imported plants and plant material shall be free from soil.
- (c) An approved packing material may be used around the roots of the plants after soil has been removed. Plants established in growing media except in sterile flasks are prohibited.
- (d) Original copy of Phytosanitary Certificate from the country of origin must accompany the live plants or plant material.
- (e) Permit to import plants and plant material can be obtained from the offices of Quarantine and Quality Management Division, Ministry of Agriculture and Forestry at Nuku'alofa or Neiafu.

3.4 Biological Goods/Agents

3.4.1 Including live bacteria, fungi, protoza, virus, viroids, micro-plasma-like organisms, etc. Importation is prohibited unless a permit is obtained in advance of importation.

3.4.2 The import document requirements for the importation of biological goods/agents as follows:

- (a) Soil — importation of soil is prohibited unless a permit is obtained in advance of importation.

4 AGRICULTURAL EXPORT DOCUMENT REQUIREMENTS

Exports

4.1 Live Animals

4.1.1 Including domesticated animals and pets, livestock (farm animals), live insects (including bees), reptiles, rodents, snails, live fish and all other live animals.

4.1.2 The export document requirements for the exporting of live animals are as follows:

- (a) Quarantine may issue Zoosanitary Certificates or veterinary certificates based on inspection of animals (live) and animal products performed at the request of exporters where such a certificate is a requirement of the importing country.
- (b) Zoosanitary Certificates or veterinary certificates are to be issued only for animals or animal products produced in Tonga, or for animal or animal products produced in another country where the entry of such animals or animal products is accompanied by a Zoosanitary Certificate or veterinary certificates issued by the relevant authority of the country of origin.
- (c) The issue of a Zoosanitary Certificate or veterinary certificates shall not release the exporter from compliance with any import regulation of which the animal or animal products are consigned.

4.2 Animal Products

4.2.1 Including fresh meat product, dried/dehydrated meat products, eggs, blood, fat and any form of animal product such as animal skin (raw hides), hair/wool/offal etc.

4.2.2 The export document requirements for the exporting of animal products are as follows:

- (a) Quarantine may issue Zoosanitary Certificates or veterinary certificates based on inspection of animals (live) and animal products performed at the request of exporters where such a certificate is a requirement of the importing country.
- (b) Zoosanitary Certificates or veterinary certificates are to be issued only for animals or animal products produced in Tonga, or for animal or animal products produced in another country where the entry of such animals or animal products is accompanied by a Zoosanitary Certificate or veterinary certificates issued by the relevant authority of the country of origin.
- (c) The issue of a Zoosanitary Certificate or veterinary certificates shall not release the exporter from compliance with any import regulation of which the animal or animal products are consigned.

4.3 Plants (Live Stocks), Plant Material and Goods

4.3.1 Including plants in tissue culture, seeds, cut flowers, nursery stocks, fresh fruit and vegetables, tubers, roots, leaves, twigs, timber (logs, poles, dumage, brachwood, firewood, bark and all woods) etc.

4.3.2 Including plants in tissue culture, seeds, cut flowers, nursery stocks, fresh fruit and vegetables, tubers, roots, leaves, twigs, timber (logs, poles, dumage, brachwood, firewood, bark and all woods) etc.

- (a) Quarantine may issue Phytosanitary Certificates based on inspection of plants and plant material performed at the request of exporters where such a certificate is a requirement of the importing country.
- (b) Phytosanitary Certificates are to be issued only for plants or plant material produced in Tonga, or for plants or plant material produced in another country where the entry of such plants or plant material is accompanied by a Phytosanitary Certificate issued by relevant authority of the country of origin.
- (c) The issue of a Phytosanitary Certificate shall not release the exporter from compliance with any import regulation of which the plants or plant material are consigned.

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GEN 1.5 AIRCRAFT INSTRUMENTS, EQUIPMENT AND FLIGHT DOCUMENTS

1 COMMERCIAL AIR TRANSPORT AIRCRAFT

1.1 General

1.1.1 Commercial air transport aircraft operating in Tonga must adhere to the provisions of ICAO Annex 6 — Operation of Aircraft, Part I — *International Commercial Air Transport — Aeroplanes*, Chapter 6 (Aeroplane Instruments, Equipment and Flight Documents) and Chapter 7 (Aeroplane Communication and Navigation Equipment).

2 SPECIAL EQUIPMENT TO BE CARRIED

2.1 General

2.1.1 Special operational requirements for equipment to be carried on aircraft operating in Tonga may be found in Tonga Civil Aviation Regulations — Reg 20, 21, 22, 23 of 1992.

3 CARRIAGE OF SURVIVAL RADIO IN TONGA AIRSPACE

3.1 General

3.1.1 Aircraft shall be equipped with survival radio equipment, operating on VHF in accordance with the relevant provisions of ICAO Annex 10, stowed so as to facilitate its ready use in an emergency. The equipment shall be portable, not dependent for operation upon the aircraft's power supply, and capable of being operated away from the aircraft by unskilled persons.

3.1.2 Aircraft shall also be equipped with signalling devices and survival equipment including means of sustaining life as required under the Civil Aviation Regulations:

- (a) Tonga Civil Aviation Regulations 1992
- (b) Tonga Civil Aviation Regulations Amendment 1996

4 CARRIAGE OF ACAS II

4.1 General

4.1.1 All turbine-engine aeroplanes of a maximum certificated take-off mass in excess of 5,700kg or authorised to carry more than 19 passengers shall be equipped with an airborne collision avoidance system (ACAS II).

4.1.2 An airborne collision avoidance system shall operate in accordance with the relevant provisions of ICAO Annex 10, Volume IV.

4.1.3 Further references to the application of ACAS II in the Tonga Sector of the Auckland Flight Information Region (FIR) are as provided for in the New Zealand Civil Aviation Rules Part 121 and Part 125.

5 CARRIAGE OF A PRESSURE-ALTITUDE REPORTING TRANSPONDER

5.1 General

5.1.1 All aeroplanes in the Fua'amotu TMA and the Fua'amotu CTR shall be equipped with a pressure-altitude reporting transponder which operates in accordance with the relevant provisions of ICAO Annex 10, Volume IV.

GEN 1.6 SUMMARY OF NATIONAL REGULATIONS AND INTERNATIONAL AGREEMENTS/ CONVENTIONS

1 NATIONAL REGULATIONS

1.1 General

1.1.1 Following is a list of civil aviation legislation, air navigation regulations, in force in Tonga. It is essential that anyone engaged in air operations be acquainted with the relevant regulations. Refer to Civil Aviation Authority — Tonga for procurement details.

- (a) Tonga Civil Aviation Act 1990
- (b) Tonga Civil Aviation Regulations Amendment 1996
- (c) Tonga Civil Aviation Regulations 1992

2 INTERNATIONAL AGREEMENTS/CONVENTIONS

2.1 Conventions and Protocols

2.1.1 Montreal Convention 1944, Warsaw Convention 1929, Rome Convention 1952, The Hague Protocol 1955, Tokyo Convention 1963. The Hague Convention 1970, Montreal Convention 1971, Montreal Supplementary Protocol 1988, Montreal Convention 1991, and Montreal Convention 1999.

2.2 International Agreements

2.2.1 International agreements with Tonga are listed below:

- (a) Air services agreements with New Zealand and Samoa.
- (b) MOU with Brunei and Australia.

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GEN 1.7 DIFFERENCES FROM ICAO STANDARDS, RECOMMENDED PRACTICES AND PROCEDURES

1 ANNEX 1 — PERSONNEL LICENSING

1.1 Nil.

2 ANNEX 2 — RULES OF THE AIR

2.1 Nil.

3 ANNEX 3 — METEOROLOGY

3.1 Nil.

4 ANNEX 7 — AIRCRAFT NATIONALITY AND REGISTRATION MARKS

4.1 Nil.

5 ANNEX 8 — AIRWORTHINESS OF AIRCRAFT

5.1 Nil.

6 ANNEX 9 — FACILITATION

6.1 Nil.

7 ANNEX 10 — AERONAUTICAL TELECOMMUNICATIONS

7.1 Nil.

8 ANNEX 11 — AIR TRAFFIC SERVICES

8.1 Nil.

9 ANNEX 12 — SEARCH AND RESCUE

9.1 Nil.

10 ANNEX 13 — AIRCRAFT ACCIDENT

10.1 Nil.

11 ANNEX 14 — AERODROMES

11.1 Nil.

12 ANNEX 15 — AERONAUTICAL INFORMATION SERVICES

12.1 Nil.

13 ANNEX 16 — ENVIRONMENTAL PROTECTION

13.1 Nil.

**14 ANNEX 17 — SECURITY — SAFEGUARDING INTERNATIONAL CIVIL
AVIATION AGAINST ACTS OF UNLAWFUL INTERFERENCE**

14.1 Nil.

15 ANNEX 18 — THE SAFE TRANSPORT OF DANGEROUS GOODS BY AIR

15.1 Nil.

GEN 2 TABLES AND CODES

GEN 2.1 MEASURING SYSTEM, AIRCRAFT MARKINGS, HOLIDAYS

1 UNITS OF MEASUREMENT

1.1 General

1.1.1 The units of measurement used in this AIP are in accordance with the International System of Units (SI) adopted as standard in ICAO Annex 5. The Annex also specifies non-SI units for permanent use and alternate units for temporary use.

1.1.2 The table of units shown in [Table GEN 2.1 - 1](#) will be used by aeronautical stations in Tonga for air and ground operations.

Table GEN 2.1 - 1
Units of Measurement

ITEM	UNITS
Distance used in navigation, position reporting etc	Nautical miles (NM) and tenths
Altitudes and heights	Feet (ft)
Speed, including wind speed	knots (kt)
Vertical speed	Feet per minute

2 TIME SYSTEM

2.1 General

2.1.1 Co-ordinated Universal Time (UTC) is used by air navigation services and in publications issued by the Aeronautical Information Service. Reporting of time is expressed to the nearest minute, e.g. 22:45:40 is reported as 2246.

2.1.2 Date and time is expressed as a six figure group of day, hours and minutes, e.g. 4th February 2001, 4.35pm UTC is expressed as 041635. However, in NOTAM and preflight information bulletins, a ten figure group of year, month, day, hours and minutes is used, e.g. 0102041635.

2.1.3 Local time in Tonga is UTC +13 hours.

2.2 Time Signals

2.2.1 There are no stations transmitting time signals in Tonga.

2.2.2 Station WWVH at Kauai, Hawaii (female voice), and WWV at Fort Collins, Colorado (male voice), transmit time pips continuously on 2.5, 5, 10, 15, and 20 MHz, with self-explanatory voice announcements every minute.

3 GEODETIC REFERENCE DATUM

3.1 Name/Designation of Datum

3.1.1 World Geodetic System 1984 datum (WGS 84) is used.

3.2 Area of Application

3.2.1 The World Geodetic System 1984 datum (WGS 84) applies to all charts and data within the Tonga Sector of the Auckland Oceanic FIR.

3.2.2 The area of application for the published geographical co-ordinates coincides with the area of responsibility for Tonga Air Traffic Services.

3.3 Use of an Asterisk to Identify Published Geographical Co-ordinates

3.3.1 The geographical co-ordinates including latitude and longitude are expressed in terms of the WGS84.

4 AIRCRAFT NATIONALITY AND REGISTRATION MARKS

4.1 The nationality mark for aircraft registered in Tonga is A3. The nationality mark is followed by a hyphen and a registration mark consisting of three letters in roman characters, e.g. A3-FQL.

5 PUBLIC HOLIDAYS

5.1 Public holidays for Tonga are listed in [Table GEN 2.1 - 2](#).

Table GEN 2.1 - 2
Public Holidays

EVENT	DATE
New Year's Day	1 JAN
Good Friday	Note: Actual dates for Good Friday and Easter Monday will vary from year to year.
Easter Monday	
ANZAC Day	25 APRIL
King's Birthday	1 AUG
Emancipation Day	4 JUN
Tupouto'a's Birthday	1 AUG
Constitution Day	4 NOV
Tupou 1 Birthday	4 DEC
Christmas Day	25 DEC
Boxing Day	26 DEC

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GEN 2.2 ABBREVIATIONS USED IN AIS PUBLICATIONS

1 INTRODUCTION

1.1 General

1.1.1 The abbreviations used in the AIP are generally in accordance with those listed in ICAO Procedures for Air Navigation Services, ICAO Abbreviations and Codes PANS-ABC (Doc 8400).

1.1.2 Abbreviations are correct in the use of upper and/or lower case where there is an applicable international standard, such as for units of measurement (ICAO ANNEX 5). Upper case is always used in communications on the aeronautical fixed service, such as transmission on the international AFTN.

1.1.3 Abbreviations followed by a # are to be transmitted as spoken words when using radiotelephony.

A

A	Amber
A/A	Air-to-air
AAL	Above aerodrome level
ABM	Abeam
ABN	Aerodrome beacon
ABT	About
ABV	Above
AC	Alto cumulus
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 (<i>message type designator</i>)
ACPT	Accept or accepted
ACT	Active or activated or activity
AD	Aerodrome
ADA	Advisory area
ADDN	Addition or additional
ADF	Automatic direction-finding equipment
ADIZ #	Air defence identification zone (<i>pronounced "AYDIZ"</i>)
ADJ	Adjacent
ADR	Advisory route
ADS	Automatic dependent surveillance
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 ... (<i>time or place</i>)
AFTN	Aeronautical fixed telecommunications network
A/G	Air to ground
AGA	Aerodromes, air routes and ground aids
AGL	Above ground level
AGN	Again
AIC	Aeronautical information circular
AIP	Aeronautical information publication
AIRAC	Aeronautical information regulation and control
AIREP #	Air report
AIS	Aeronautical information services
ALA	Lighting area
ALERFA #	Alert phase
ALR	Alerting (<i>message type designator</i>)
ALRS	Alerting service
ALS	Approach lighting system
ALT	Altitude
ALTN	Alternate or alternating (<i>light alternates in colour</i>)
ALTN	Alternate (<i>aerodrome</i>)
AMA	Area minimum altitude
AMD	Amend or amended
AMDT	Amendment (<i>AIP Amendment</i>)
AMS	Aeronautical mobile service
AMSL	Above mean sea level
AMSS	Aeronautical mobile satellite service
ANS	Answer
AOC	Aerodrome obstacle chart
AP	Airport
APCH	Approach
APP	Approach control office or Approach control or Approach control service
APR	April
APRX	Approximate or approximately
APSG	After passing
APV	Approve or approved or approval
AREA #	Area chart
ARFOR	Area forecast
ARNG	Arrange
ARO	Air traffic services reporting office
ARP	Aerodrome reference point

ARP	Air-report (<i>message type designator</i>)
ARR	Arrive or arrival
ARS	Special air-report (<i>message type designator</i>)
ARST	Arresting [<i>specify (part of) aircraft arresting equipment</i>]
AS	Altostratus
ASC	Ascend to or Ascending to
ASDA	Accelerate-stop distance available
ASPH	Asphalt
AT ...	At (<i>followed by time at which weather change is forecast to occur</i>)
ATA	Actual time of arrival
ATC	Air traffic control (<i>in general</i>)
ATD	Actual time of departure or Along Track Distance
ATFM	Air traffic flow management
ATIS #	Automatic terminal information service
ATM	Air traffic management
ATN	Aeronautical telecommunication network
ATP	At .. (<i>time or place</i>)
ATS	Air traffic services
ATTN	Attention
ATZ	Aerodrome traffic zone
AUG	August
AUTH	Authorised or Authorisation
AUW	All up weight
AUX	Auxiliary
AVASIS	Abbreviated visual approach slope indicator system
AVBL	Available or Availability
AVG	Average
AVGAS #	Aviation gasoline
AWS	Automatic weather station
AWTA	Advise at what time able
AWY	Airway
AZM	Azimuth

B

B	Blue
BA	Braking action
BASE #	Cloud base
BCFG	Fog patches
BCN	Beacon (<i>Aeronautical ground light</i>)
BCST	Broadcast
BDRY	Boundary
BECMG	Becoming
BFR	Before
BKN	Broken
BL ...	Blowing (<i>followed by DU=dust, SA=sand or SN=snow</i>)
BLDG	Building
BLO	Below clouds
BLW	Below ...
BOMB	Bombing
BR	Mist
BRF	Short (<i>used to indicate the type of approach desired or required</i>)
BRG	Bearing
BRKG	Braking
BS	Commercial broadcasting station
BTL	Between layers
BTN	Between
BWR	Basic Weather Report

C

C	Degrees Celsius (<i>Centigrade</i>)
CASO #	Civil Aviation Safety Order (<i>pronounced "KAYSO"</i>)
CAT	Category
CAT	Clear air turbulence
CAVOK #	Visibility, cloud and present weather better than prescribed values or conditions (<i>pronounced "CAVOKAY"</i>)
CB #	Cumulonimbus (<i>pronounced "SEEBEE"</i>)
CC	Cirrocumulus
Cd	Candela(s)
CDN	Co-ordination (<i>message type designator</i>)
CF	Change frequency to or Course Fix (used with GPS approaches — often equivalent to IF)
CGL	Circling guidance light(s)
CH	Channel
CHG	Modification (<i>message type designator</i>)
CI	Cirrus
CIT	Near or over large town(s)
CIV	Civil
CK	Check
CL	Centreline
CLA	Clear type of ice formation
CLBR	Calibration
CLD	Cloud
CLG	Calling
CLR	Cleared or Cleared to ... or Clearance
CLSD	Close or Closed or Closing
CM	Centimetre
CMB	Climb to or Climbing to
CMPL	Completion or Completed or Complete
CNL	Cancel or Cancelled
CNS	Communications, navigation and surveillance
CONS	Continuous
COM	Communications
CONC	Concrete
COND	Condition(s)

CONST	Construction or Constructed
CONT	Continue or Continued
COOR	Co-ordinate or Co-ordination
COP	Change-over point
COR	Correct or Corrected or Correction
COT	At the coast
COV	Cover or Covered or Covering
CPL	Current flight plan (<i>message type designator</i>)
CRZ	Cruise
CS	Cirrostratus
CTA	Control area
CTAM	Climb to and maintain
CTC	Contact
CTL	Control
CTN	Caution
CTR	Control zone
CU	Cumulus
CUF	Cumuloform
CUST	Customs
CW	Continuous wave
CWY	Clearway

D

d	Day
D ...	Danger area (<i>followed by identification</i>)
DA	Decision altitude
DCKG	Docking
DCT	Direct (<i>in relation to flight plan clearances and type of approach</i>)
DEC	December
DEG	Degrees
DENEB	Fog dispersal operations
DEP	Depart or Departure
DES	Descend to or Descending to
DEST	Destination
DETRESFA #	Distress phase
DEV	Deviation or Deviating
DFTI	Distance from touchdown indicator
DH	Decision height
DIF	Diffuse
DIST	Distance
DIV	Divert or Diverting or Diversion
DLA	Delay or Delayed
DME	Distance measuring equipment
DNG	Danger or Dangerous
DOM	Domestic
DP	Dewpoint temperature
DPT	Depth
DR ...	Low drifting (<i>followed by DU=dust, SA=sand or SN=snow</i>)
DR	Dead reckoning
DRG	During
DS	Duststorm
DTAM	Descend to and maintain
DTG	Date-time group
DTRT	Deteriorate or Deteriorating
DTW	Dual tandem wheels
DU	Dust
DUC	Dense upper cloud
DUR	Duration
DVOR	Doppler VOR
DW	Dual wheels
DZ	Drizzle

E

E	East or Eastern longitude
EAT	Expected approach time
EB	Eastbound
EET	Estimated elapsed time
EFC	Expect further clearance
ELTA #	Emergency locator beacon — aircraft
ELEV	Elevation
ELR	Extra long range
ELT	Emergency locator transmitter
EM	Emission
EMBD	Embedded in a layer (<i>to indicate cumulonimbus embedded in layers of other clouds</i>)
EMERG	Emergency
END	Stop-end (<i>related to RVR</i>)
ENE	East north-east
ENG	Engine
ENRT	En-route
EOBT	Estimated off-blocks time
EQPT	Equipment
ER	Here ... or Herewith
ERC #	En-route chart
ESE	East-south-east
EST	Estimate or Estimated
ETA	Estimated time of arrival
ETD	Estimated time of departure
ETO	Estimated time over a significant point
EV	Every
EXC	Except
EXER	Exercises or Exercising or to Exercise
EXP	Expect or Expected or Expecting
EXTD	Extend or Extending

F

F	Fixed
FAC	Facilities
FAF	Final approach fix
FAL	Facilitation of international air transport
FAP	Final approach point
FATO	Final approach and take-off area
FAX	Facsimile transmission
FBL	Light (<i>used to indicate the intensity of weather phenomena, interference or static reports, eg FBL RA=light rain</i>).
FC	Funnel cloud
FCST	Forecast
FCT	Friction coefficient
FEB	February
FG	Fog
FIC	Flight information centre
FIR	Flight information region
FIS	Flight information service
FISA	Automated flight information service
FL	Flight level
FLD	Field
FLG	Flashing
FLR	Flares
FLT	Flight
FLTCK	Flight check
FLUC	Fluctuating or Fluctuation or Fluctuated
FLW	Follow(s) or Following
FLY	Fly or Flying
FM ...	From (<i>followed by time weather change is forecast to begin</i>)
FM	From
FMU	Flow management unit
FNA	Final approach
FPL	Filed flight plan (<i>message type designator</i>)
FPM	Feet per minute
FPR	Flight plan route
FR	Fuel remaining
FREQ	Frequency
FRI	Friday
FRNG	Firing
FRONT #	Front (<i>relating to weather</i>)
FRQ	Frequent
FSL	Full stop landing
FSS	Flight service station
FST	First
ft	Foot or Feet (<i>dimensional unit</i>)
FU	Smoke
FZ	Freezing drizzle
FZFG	Freezing fog
FZRA	Freezing rain

G

G	Green
G/A	Ground-to-air
G/A/G	Ground-to-air and air-to-ground
GCA	Ground controlled approach system or Ground controlled approach
GEN	General
GEO	Geographic or true
GES	Ground earth station
GLD	Glider
GND	Ground
GNDCK	Ground check
GNSS	Global navigation satellite system
GP	Glide path
GPS	Global Positioning System
GR	Hail or soft hail
GRASS	Grass landing area
GRID	Processed meteorological data in the form of grid values (<i>in aeronautical meteorological code</i>)
GRVL	Gravel
GS	Small hail and/or snow pellets
GS	Ground speed

H

H24	Continuous day and night service
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)
HGT	Height or Height above
HJ	Sunrise to sunset
HLDG	Holding
HN	Sunset to sunrise
HO	Service available to meet operational requirements
HOL	Holiday
HOSP	Hospital aircraft
hPa	Hectopascal
HR	Hours
HS	Service available during hours of scheduled operations
HURCN	Hurricane
HVY	Heavy
HVY	Heavy (<i>used to indicate the intensity of weather phenomena, e.g. HVY RA=heavy rain</i>)
HX	No specific working hours
HYR	Higher
HZ	Dust haze
Hz	Hertz (<i>cycles per second</i>)

I

IAC	Instrument approach chart
IAF	Initial approach fix
IAO	In and out of clouds
IAR	InterSection of air routes
IAS	Indicated air speed
IBN	Identification beacon
IC	Diamond dust (<i>very small ice crystals in suspension</i>)
ICAO	International Civil Aviation Organisation
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
IMPR	Improve or improving
IMT	Immediate or Immediately
INA	Initial approach
INBD	Inbound
INC	In cloud
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
ISA	International standard atmosphere
ISOL	Isolated

J

JAN	January
JTST	Jetstream
JUL	July
JUN	June

K

kg	Kilogram/s
kHz	Kilohertz
km	Kilometre/s
km/h	Kilometres per hour
kPa	Kilopascal/s
kt	Knot
kW	Kilowatt/s

L

L	Left (<i>runway identification</i>)
L	Locator (<i>see LM, LO</i>)
LAN	Inland
LAT	Latitude
LDA	Landing distance available
LDAH	Landing distance available, helicopter
LDG	Landing
LDI	Landing direction indicator
LEN	Length
LF	Low frequency (<i>30 to 300 kHz</i>)
LGT	Light or Lighting
LGTD	Lighted
LIH	Light intensity high
LIL	Light intensity low
LIM	Light intensity medium
LLZ	Localiser
LM	Locator, middle
LMT	Local mean time
LNG	Long (<i>used to indicate the type of approach desired or required</i>)
LO	Locator, outer
LOC	Local or Locally or Location or Located
LONG	Longitude

LORAN #	Long range air navigation system
LRG	Long range
LSQ	Line squall
LTD	Limited
LV	Light and variable (<i>wind</i>)
LVE	Leave or Leaving
LVL	Level
LYR	Layer or Layered
 M	
M	Mach number (<i>followed by figures</i>)
m	Metres (<i>preceded by figures</i>)
MAA	Maximum authorised altitude
MAG	Magnetic (<i>preceded by figures</i>)
MAINT	Maintenance
MAP	Aeronautical maps and charts
MAPt	Missed approach point
MAR	March
MAR	At sea
MAX	Maximum
MAY	May
MCA	Minimum crossing altitude
MCA	Ministry of Civil Aviation
MCW	Modulated continuous wave
MDA	Minimum descent altitude
MDF	Medium frequency direction-finding station
MDH	Minimum descent height
MEA	Minimum en-route altitude
MEHT	Minimum eye height over threshold (<i>for visual approach slope indicator systems</i>)
MET #	Meteorological or Meteorology
METAR #	Aviation routine weather report (<i>in aeronautical meteorological code</i>)
MF	Medium frequency (<i>300 to 3,000 kHz</i>)
MHz	Megahertz
MID	Mid-point (<i>related to RVR</i>)
MIFG	Shallow fog
MIL	Military
min	Minute/s
MKR	Marker radio beacon
MLS	Microwave landing system
MM	Middle marker
MNM	Minimum
MNPS	Minimum navigation performance specifications
MNT	Monitor or Monitoring or Monitored

MNTN	maintain
MOA	Military operating area
MOC	Minimum obstacle clearance <i>(required)</i>
MOD	Moderate <i>(used to indicate the intensity of weather phenomena, interference or static reports, e.g. MOD RA=moderate rain.)</i>
MON	Above mountains
MON	Monday
MOV	Move or Moving or Movement
MPS	Metres per second
MRA	Minimum reception altitudes <i>(VHF/UHF)</i>
MRG	Medium range
MRP	ATS/MET reporting point
MS	Minus
MSA	Minimum safe altitude
MSG	Message
MSL	Mean sea level
MT	Mount or Mountain
MTU	Metric units
MTW	Mountain waves
MWO	Meteorological watch office
MX	Mixed type of ice formation <i>(white and clear)</i>

N

N	No distinct tendency (<i>in RVR during previous 10 minutes</i>)
N	North or
	Northern latitude
NAV	Navigation
NB	Northbound
NBFR	Not before
NC	No change
NDB	Non-directional radio beacon
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 you
NM	Nautical miles
NML	Normal
NNE	North north-east
NNW	North north-west
NOF	International NOTAM office
NORDO #	Non-radio equipped
NOSIG #	No significant change (<i>used in trend-type landing forecasts</i>)
NOTAM #	A notice 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
NOV	November
NR	Number
NRH	No reply heard
NS	Nimbostratus
NSC	Nil significant cloud
NSW	Nil significant weather
NW	North-west
NWB	North-westbound
NXT	Next

O

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 (<i>light</i>)
OCH	Obstacle clearance height
OCNL	Occasional or Occasionally
OCS	Obstacle clearance surface
OCT	October
OHD	Overhead
OKTA #	Eighths of sky cover
OM	Outer marker
OMNI #	Omnidirectional
OPA	Opaque, white type of ice formation
OPC	The control indicated is operational control
OPMET #	Operational meteorological (<i>information</i>)
OPN	Open or Opening or Opened
OPR	Operator or Operate or Operative or Operating or Operational
OPS #	Operations
O/R	On request
ORD	Indication of an order
OSV	Ocean station vehicle
OTLK	Outlook (<i>used in SIGMET messages for volcanic ash and tropical cyclones</i>)
OTP	On top
OTS	Organised track system
OUBD	Outbound
OVC	Overcast

P

P...	Prohibited area (<i>followed by identification</i>)
PAL #	Pilot activated lighting
PALS	Precision approach lighting system (<i>specify category</i>)
PANS #	Procedures for air navigation services
PAPI #	Precision approach path indicator
PAR	Precision approach radar
PARL	Parallel
PAX	Passenger(s)
PCD	Proceed or Proceeding
PCN	Pavement classification number
PE	Ice pellets
PER	Performance
PERM	Permanent
PIREP #	Pilot's report
PJE	Parachute jumping exercise
PLA	Practice low approach
PLN	Flight plan
PLVL	Present level
PN	Prior notice required
PNR	Point of no return
PO	Dust devils
POB	Persons on board
POSS	Possible
PPI	Plan position indicator
PPR	Prior permission required
PPSN	Present position
PRI	Primary
PRKG	Parking
PROB #	Probability
PROC	Procedure
PROV	Provisional
PS	Plus
PSG	Passing
PSN	Position
PTN	Procedure turn
PTS	Polar track structure
PWR	Power

Q

QBI	Compulsory IFR flight
QDM	Magnetic heading (<i>zero wind</i>)
QDR	Magnetic heading
QFE	Atmospheric pressure at aerodrome level (<i>or at runway threshold</i>)
QFU	Magnetic orientation of runway
QNH	An altimeter sub-scale setting to obtain elevation when on the ground
QTE	True bearing
QUAD	Quadrant

R

R	Red
R	Right (<i>runway identification</i>)
R...	Restricted area (<i>followed by identification</i>)
RA	Rain
RAC	Rules of the air and air traffic services
RAFC	Regional area forecast centre
RAG	Runway arresting gear
RAG	Ragged
RAI	Runway alignment indicator
RB	Rescue boat
RCA	Reach cruising altitude
RCC	Rescue co-ordination centre
RCF	Radiocommunication failure (<i>message type designator</i>)
RCH	Reach or Reaching
RCL	Runway centreline
RCLL	Runway centre line light(s)
RCLR	Recleared
RDH	Reference datum height (<i>for ILS</i>)
RDL	Radial
RDO	Radio
RE ...	Recent (<i>used to qualify weather phenomena, e.g. RERA=recent rain</i>)
REC	Receive or Receiver
REDL	Runway edge light(s)
REF	Reference to...or Refer to....
REG	Registration
RENL	Runway end light(s)
REP	Report or Reporting or Reporting point

REQ	Request or Requested
RERTE	Re-route
RG	Range (<i>lights</i>)
RIF	Re-clearance in flight
RITE	Right (<i>direction of turn</i>)
RL	Reporting leaving
RLA	Relay to
RLCE	Request level change en route
RLLS	Runway lead-in lighting system
RLNA	Request level not available
RMK	Remark(s)
RNAV #	Area navigation (<i>pronounced "ARNAV"</i>)
RNG	Radio range
RNP	Required navigation performance
ROBEX	Routine OPMET Bulletin exchange (<i>scheme</i>)
ROC	Rate of climb
ROD	Rate of descent
ROFOR	Route forecast
RON	Receiving only
RPL	Repetitive flight plan
RPLC	Replace or Replaced
RPS	Radar position symbol
RQMNTS	Requirements
RQP	Request flight plan (<i>message type designator</i>)
RQS	Request supplementary flight plan (<i>message type designator</i>)
RR	Report reaching
RSC	Rescue sub-centre
RSCD	Runway surface condition
RSP	Responder beacon
RSR	En-route surveillance radar
RTE	Route
RTF	Radio telephone
RTG	Radiotelegraph
RTHL	Runway threshold lights
RTN	Return or Returned or Returning
RTODAH	Rejected take-off distance available, helicopter
RTS	Return to service
RTT	Radio teletypewriter (<i>military</i>)
RTZL	Runway touchdown zone light(s)
RUT	Standard regional route transmitting frequencies
RV	Rescue vessel
RVR	Runway visual range
RWY	Runway

S

s	Second(s)
S	South or Southern latitude
SA	Sand
SALS	Simple approach lighting system
SAN	Sanitary
SAP	As soon as possible
SAR	Search and rescue
SARPS	Standards and recommended practices (ICAO)
SAT	Saturday
SB	Southbound
SC	Stratocumulus
SCT	Scattered
SDBY	Standby
SE	South-east
SEB	South-eastbound
SEC	Seconds
SECT	Sector
SELCAL #	Selective calling system
SEP	September
SER	Service or Servicing or Served
SEV	Severe <i>(used to qualify icing and turbulence reports)</i>
SFC	Surface
SG	Snow grains
SGL	Signal
SH	Showers <i>(followed by RA=rain, SN=snow, PE=ice pellets, GR=hail, GS=small hail and/or ice pellets or combinations thereof, e.g. SHRASN=showers of rain and snow)</i>
SHF	Super high frequency [3 000 to 30 000 MHz]
SID #	Standard instrument departure
SIF	Selective identification feature
SIGMET #	Information concerning en-route weather phenomena which may affect the safety of aircraft operations
SIGWX	Significant weather
SIMUL	Simultaneous or Simultaneously
SIWL	Single isolated wheel load
SKC	Sky clear
SKED	Schedule or Scheduled
SLP	Speed limiting point
SLW	Slow
SMC	Surface movement control
SMR	Surface movement radar
SN	Snow

SPARS #	Special aerodrome reports
SPECI #	Aviation selected special weather report (<i>aeronautical meteorological code</i>)
SPECIAL #	Special meteorological report (<i>in abbreviated plain language</i>)
SPL	Supplementary flight plan (<i>message type designator</i>)
SPOT #	Spot wind
SQ	Squall
SQL	Squall line
SR	Sunrise
SRA	Surveillance radar approach
SRE	Surveillance radar element of a precision approach radar system
SRG	Short range
SRR	Search and rescue region
SRY	Secondary
SS	Sandstorm
SS	Sunset
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
STD	Standard
STF	Stratiform
STN	Station
STNR	Stationary
STOL	Short take-off and landing
STS	Status
STWL	Stopway lights
SUBJ	Subject to
SUN	Sunday
SUP	Supplement (<i>AIP Supplement</i>)
SUPPS	Regional supplementary procedures
SVC	Service message
SVCBL	Serviceable
SW	South-west
SWB	South-westbound
SWY	Stopway

T

T	Temperature
TA	Transition altitude
TACAN #	UHF tactical air navigation aid
TAF #	Aerodrome forecast
TAIL #	Tailwind
TAL	Tonga Airports Limited
TAR	Terminal area surveillance radar
TAS	True air speed
TAX	Taxiing or Taxi
TC	Tropical cyclone
TCU	Towering cumulus
TDO	Tornado
TDZ	Touchdown zone
TECR	Technical reason
TEL	Telephone
TEMPO	Temporary or Temporarily
TEND	Trend forecast
TFC	Traffic
TGL	Touch-and-go landing
TGS	Taxiing guidance system
THR	Threshold
THRU	Through
THU	Thursday
TIL #	Until
TIP	Until past ... (<i>place</i>)
TKOF	Take-off
TL ...	Till (<i>followed by the time by which weather change is forecast to end</i>)
TLOF	Touchdown and lift-off area
TMA	Terminal control area
TNA	Turn altitude
TNH	Turn height
TO	To...(<i>place</i>)
TOC	Top of climb
TODA	Take-off distance available
TODAH	Take-off distance available, helicopter
TOP #	Cloud top
TORA	Take-off run available
TP	Turning point
TR	Track
TRA	Temporary reserved airspace
TRANS	Transmits or Transmitter
TRL	Transition level
TROP	Tropopause

TS	Thunderstorm (<i>in aerodrome reports and forecasts, TS used alone means thunder heard but no precipitation at the aerodrome</i>)
TS ...	Thunderstorm (<i>followed by RA=rain, SN=snow, PE=ice pellets, GR=hail, GS=small hail and/or snow pellets or combinations thereof, e.g. TSRASN=thunderstorm with rain and snow</i>)
TT	Teletypewriter
TUE	Tuesday
TURB	Turbulence
T-VASIS #	"T" visual approach slope indicator system
TVOR	Terminal VOR
TWR	Aerodrome control tower or Aerodrome control
TWY	Taxiway
TWYL	Taxiway-link
TYP	Type of aircraft
TYPH	Typhoon

U

U	Upward (<i>tendency in RVR during previous 10 minutes</i>)
UAB	Until advised by ...
UAC	Upper area control centre
UAR	Upper air route
UDF	Ultra high frequency direction-finding station
UFN	Until further notice
UHDT	Unable higher due traffic
UHF	Ultra high frequency [300 to 3,000 MHz]
UIC	Upper information centre
UIR	Upper flight information region
ULR	Ultra long range
UNA	Unable
UNAP	Unable to approve
UNL	Unlimited
UNREL	Unreliable
U/S	Unserviceable
UTA	Upper control area
UTC	Co-ordinated universal time

V

VA	Volcanic ash
VAC	Visual approach chart
VAL	In valleys
VAN	Runway control van
VAR	Visual-aural radio range
VAR	Magnetic variation
VASIS #	Visual approach slope indicator system
VC	Vicinity of the aerodrome (<i>followed by FG=fog, FC=funnel cloud, SH=showers, PO=dust/sand whirls, BLDU=blowing dust, BLSA=blowing sand or BLSN=blowing snow, e.g. VCFG=vicinity fog</i>)
VCY	Vicinity
VDF	VHF direction-finding station
VER	Vertical
VFR	Visual flight rules
VHF	Very high frequency (<i>30 to 300 MHz</i>)
VIP	Very important person
VIS	Visibility
VLF	Very low frequency (<i>3 to 30 kHz</i>)
VLR	Very long range
VMC	Visual meteorological conditions
VOLMET #	Meteorological information for aircraft in flight
VOR	VHF omni-directional radio range
VORSEC #	VOR/DME Minimum Sector Altitude Chart
VORTAC #	VOR and TACAN combination
VOT	VOR airborne equipment test facility
VRB	Variable
VSA	By visual reference to the ground
VSP	Vertical speed
VTOL	Vertical take-off and landing

W

W	West or
	Western longitude
W	White
WAC	World Aeronautical Chart — ICAO 1:1 000 000
WAFc	World area forecast centre
WB	Westbound
WBAR	Wing bar lights
WDI	Wind direction indicator
WDSpr	Widespread
WED	Wednesday
WEF	With effect from or effective from
WI	Within
WID	Width
WIE	With immediate effect or
	Effective immediately
WILCO #	Will comply
WINTeM	Forecast upper wind and temperature for aviation
WIP	Work in progress
WKN	Weaken or
	Weakening
WNW	West north-west
WO	Without
WPT	Way-point
WRNG	Warning
WS	Wind shear
WSW	West south-west
WT	Weight
WTSPT	Waterspout
WX	Weather

X

X	Cross
XBAR	Crossbar (<i>of approach lighting system</i>)
XNG	Crossing
XS	Atmospherics

Y**Y**

Yellow

YCZYellow caution zone (*runway lighting*)**YR**

Your

Z**Z**

Co-ordinated universal time

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Blank**

GEN 2.3 CHART SYMBOLS

1 INTRODUCTION

1.1 General

1.1.1 Symbols for enroute charts are shown in the chart legend of the Auckland Oceanic FIR/Nadi FIR enroute chart.

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GEN 2.4 LOCATION INDICATORS

1 INTRODUCTION

1.1 General

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

1.2 AFS Addresses

1.2.1 Table GEN 2.4 - 1 lists AFS addresss by station name.

Table GEN 2.4 - 1
AFS ASdress Encode/Decode

ENCODE		DECODE	
NAME	LOCATION INDICATOR		NAME
Eua	NFTE*	NFTE*	Eua
Fua'amotu Intl	NFTF	NFTF	Fua'amotu Intl
Ha'apai	NFTL*	NFTL*	Ha'apai
Niuafo'ou	NFTO*	NFTO*	Niuafo'ou
Niutatoputapu	NFTP*	NFTP*	Niutatoputapu
Vava'u	NFTV*	NFTV*	Vava'u

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GEN 2.5 LIST OF RADIO NAVIGATION AIDS

1 RADIO NAVIGATION AIDS

1.1 Decode

1.1.1 Table GEN 2.5 - 1 lists radio navigation aids alphabetically by station ID.

Table GEN 2.5 - 1
List of Radio Navigation Aids by ID

ID	STATION NAME	FACILITY	PURPOSE
FM	Fua'amotu	NDB	AE
HA	Ha'apai	NDB	A
TBU	Fua'amotu	VOR	AE
TBU	Fua'amotu	DME	AE
TP	Niutoputapu	NDB	AE
TV	Vava'u	NDB	AE
Key A = Approach Facility, E = Enroute Facility, AE = Combined Approach and Enroute Facility			

1.2 Encode

1.2.1 Table GEN 2.5 - 1 lists radio navigation aids alphabetically by station name.

Table GEN 2.5 - 2
List of Radio Navigation Aids by Location

STATION NAME	FACILITY	ID	PURPOSE
Fua’amotu	VOR	TBU	AE
Fua’amotu	DME	TBU	AE
Fua’amotu	NDB	FM	AE
Ha’apai	NDB	HA	A
Niutoputapu	NDB	TP	AE
Vava’u	NDB	TV	AE
Key A = Approach Facility, E = Enroute Facility, AE = Combined Approach and Enroute Facility			

GEN 2.6 CONVERSION TABLES

1 CONVERSION TABLES

1.1 Unit Conversions

1.1.1 Unit conversions are provided in [Table GEN 2.6 - 1](#).

Table GEN 2.6 - 1
Unit Conversions

TO CONVERT	INTO	MULTIPLY BY	DIVIDE BY
Celsius	Fahrenheit	1.8 and add 32	
Centimetres	Inches	0.3937	2.54*
Fahrenheit	Celsius	Subtract 32 and Multiply by 0.555	Subtract 32 and Divide by 1.8
Feet	Metres	0.3048*	
Imp. Gallons	US Gallons	1.200956	
Imp. Gallons	Litres	4.546092	
Inches	Centimetres	2.54*	
Kilograms	Pounds	2.2046226	
Kilometres	US and International Nautical Miles	0.5399568	
Kilometres	UK Nautical Miles	0.5396118	
Kilopascals	Pounds per square inch	0.14504	
Litres	Imp. Gallons	0.22	
Litres	US Gallons	0.2643	
Metres	Feet	3.2808	0.3048*

TO CONVERT	INTO	MULTIPLY BY	DIVIDE BY
Pounds	Kilograms	0.453592	
Pounds per square inch	Kilopascals	6.894757	
US and International Nautical Miles	Kilometres	1.852*	
UK Nautical Miles	Kilometres	1.853184	
US Gallons	Imp. Gallons	0.83267	
US Gallons	Litres	3.78412	

* Factors are exact.

GEN 2.7 SUNSET/SUNRISE TABLES

1 SUNSET/SUNRISE TABLES

1.1 General

1.1.1 Table GEN 2.7 - 1 lists the beginning and end of civil twilight in Fua'amotu and Vava'u.

1.1.2 The times listed in Table GEN 2.7 - 1 are given in LST (Local Standard Time) and UTC (Universal Time Co-ordinate).

Table GEN 2.7 - 1
Morning Civil Twilight/Evening Civil Twilight

LOCATION	MCT	JAN 7	JAN 14	JAN 21	JAN 28	FEB 7	FEB 14	FEB 21	FEB 28	MAR 7	MAR 14	MAR 21	MAR 28
	ECT												
FUA'AMOTU	LST	0541	0545	0550	0556	0602	0606	0611	0614	0616	0619	0622	0624
	UTC	1641	1645	1650	1656	1702	1706	1711	1714	1716	1719	1722	1724
	LST	1952	1953	1953	1949	1946	1942	1936	1931	1926	1919	1912	1906
	UTC	0652	0653	0653	0659	0656	0642	0636	0631	0626	0619	0612	0606
VAVA'U	LST	0543	0547	0551	0557	0602	0606	0609	0612	0614	0616	0618	0620
	UTC	1643	1647	1651	1657	1702	1706	1709	1712	1714	1716	1718	1720
	LST	1942	1943	1943	1941	1938	1934	1929	1925	1920	1914	1908	1902
	UTC	0642	0643	0643	0641	0638	0634	0629	0625	0620	0614	0608	0602

LOCATION	MCT	APR 7	APR 14	APR 21	APR 28	MAY 7	MAY 14	MAY 21	MAY 28	JUN 7	JUN 14	JUN 21	JUN 28
	ECT												
FUA'AMOTU	LST	0627	0629	0631	0633	0637	0639	0642	0645	0648	0650	0652	0653
	UTC	1727	1729	1731	1733	1737	1739	1741	1745	1748	1750	1752	1753
	LST	1857	1851	1847	1841	1837	1833	1831	1830	1829	1830	1832	1833
	UTC	0557	0551	0547	0541	0537	0533	0531	0530	0529	0530	0532	0533
VAVA'U	LST	0622	0623	0625	0627	0629	0631	0634	0637	0640	0642	0644	0645
	UTC	1722	1723	1725	1727	1729	1731	1734	1737	1740	1742	1744	1745
	LST	1854	1849	1845	1839	1836	1833	1831	1830	1829	1830	1832	1833
	UTC	0554	0549	0545	0539	0536	0533	0531	0530	0529	0530	0532	0533

LOCATION	MCT	JUL	JUL	JUL	JUL	AUG	AUG	AUG	AUG	SEP	SEP	SEP	SEP
	ECT	7	14	21	28	7	14	21	28	7	14	21	28
FUA'AMOTU	LST	0652	0652	0652	0650	0646	0640	0636	0631	0622	0615	0609	0602
	UTC	1752	1752	1752	1750	1746	1740	1736	1731	1722	1715	1709	1702
	LST	1836	1838	1841	1843	1846	1849	1850	1852	1855	1856	1858	1900
	UTC	0536	0538	0541	0543	0546	0549	0500	0552	0555	0556	0558	0600
VAVA'U	LST	0646	0646	0644	0642	0638	0635	0630	0626	0616	0611	0606	0557
	UTC	1746	1746	1744	1742	1738	1735	1730	1726	1716	1711	1706	1657
	LST	1836	1838	1841	1843	1846	1847	1848	1850	1851	1852	1854	1856
	UTC	0536	0538	0541	0543	0546	0547	0548	0550	0551	0552	0554	0556

LOCATION	MCT	OCT	OCT	OCT	OCT	NOV	NOV	NOV	NOV	DEC	DEC	DEC	DEC
	ECT	7	14	21	28	7	14	21	28	7	14	21	28
FUA'AMOTU	LST	0553	0547	0542	0536	0531	0528	0525	0524	0528	0527	0531	0534
	UTC	1653	1647	1642	1636	1631	1628	1625	1624	1624	1627	1631	1634
	LST	1903	1905	1908	1812	1917	1921	1928	19.2	1938	1942	1946	1949
	UTC	0603	0605	0608	0612	0617	0621	0628	0632	0638	0642	0646	0649
VAVA'U	LST	0550	0545	0540	0535	0531	0528	0526	0526	0527	0529	0532	0536
	UTC	1650	1645	1640	1636	1631	1628	1626	1626	1627	1629	1632	1636
	LST	1857	1859	1901	1904	1909	1913	1918	1922	1928	1932	1936	1939
	UTC	0557	0559	0601	0604	0609	0613	0618	0622	0628	0632	0636	0639

GEN 3 SERVICES

GEN 3.1 AERONAUTICAL INFORMATION SERVICES

1 RESPONSIBLE SERVICE

1.1 Civil Aviation Authority

1.1.1 The CAA of Tonga has a statutory obligation to ensure that aeronautical information services are provided in Tonga.

1.2 Aeronautical Information Service Providers

1.2.1 Tonga Airports Limited (TAL), under an Instrument of Delegation, provides AIS within the Tonga Sector of the Auckland Oceanic FIR.

1.3 International NOTAM Office

1.3.1 NOTAM for the Tonga Sector are promulgated by the New Zealand NOTAM Office on behalf of Tonga Airports Limited. The address for the New Zealand NOTAM office is as follows:

International NOTAM Office
Airways Corporation of New Zealand Ltd
PO Box 14-131
Christchurch Airport
Christchurch
New Zealand

TEL (643) 358 1688
FAX (643) 358 9192

AFTN NZCHYNYX
Email NOF@airways.co.nz

1.4 Hours of Service

1.4.1 The hours of service for the AIS unit at Fua'amotu International Airport is arranged to coincide with the approved scheduled and non scheduled domestic aircraft operations in Tonga. Air Traffic Control provides certain AIS functions when this AIS unit is not operational to facilitate aircraft operations.

1.5 Extension of Watch

1.5.1 AIS services may be extended in certain cases such as:

- (a) disrupted regular air transport flights;
- (b) approved special air transport flights;
- (c) disaster relief flights;
- (d) medical evacuation (medievac) flights; or
- (e) visiting overseas military and state flights.

2 AREA OF RESPONSIBILITY**2.1 Tonga's Area of Responsibility**

2.1.1 The Aeronautical Information Service is responsible for the collection and dissemination of information for the entire territory of Tonga and for the airspace encompassed by the Tonga Sector of the Auckland Oceanic FIR.

3 AERONAUTICAL PUBLICATIONS

3.1 Integrated Aeronautical Information Package

3.1.1 The Tonga AIS operates in accordance with ICAO Annex 15 requirements. Aeronautical Information is published as an integrated package of the following components:

- (a) The Aeronautical Information Publication (AIP — Tonga)
- (b) Amendment service to the AIP (AIP AMDT — Tonga)
- (c) AIP Supplements (AIP SUP — Tonga)
- (d) NOTAM and Pre-flight Information Bulletin (PIB)
- (e) Checklist and summaries

3.2 AIP Tonga

3.2.1 Information published in the AIP Tonga is obtained from various organisations responsible for providing services to the air navigation system. As the AIP provider, TAL is responsible for the accurate publication of this information and for ensuring that the information is published in accordance with the applicable standards. The originating organisation is responsible for accuracy and completeness of the original information.

3.3 AIP Amendment Service

3.3.1 Amendments to the AIP are issued 11 times every year, and 28 days on AIRAC CYCLE 2 through 12 refer Table GEN 0.1 - 1 on page GEN 0.1 - 3.

3.4 AIP Supplements

3.4.1 The AIP Supplement — Tonga is published for temporary changes of long duration (3 months and longer) and information of short term duration which consists of extensive text and/or graphic. AIP Supplements may be issued on any of the available AIRAC dates.

3.4.2 The AIP Supplement — Tonga is issued as a separate document, with each edition entirely replacing the previous edition. A Checklist of current AIP Supplement is published on the front page of the AIP Supplement document.

3.4.3 A Trigger NOTAM must be originated giving a brief description of the contents, the effective date/time and the serial number of the AIP Amendment or Supplement. This NOTAM must come into force on the same date as the amendment or supplement in which it refers. The text of the Trigger NOTAM is included in the PIB to ensure that pilots and operators are reminded that changes of operational significance will take place at a given effective date.

3.5 Aeronautical Information Circulars

3.5.1 Aeronautical Information Circulars (AIC) contain information of interest to pilots and aircraft operators, and are distributed to holders of the AIP. They are issued as and when required by the Ministry of Transport, Tonga.

3.5.2 AIC are originated whenever it is desirable to promulgate:

- (a) a long term forecast of any major change in legislation, regulations, procedures and facilities.
- (b) information of a purely explanatory or advisory nature likely to affect flight safety.
- (c) information or notification of an explanatory or advisory nature concerning technical, legislative or purely administrative matter.

3.5.3 Each AIC is numbered consecutively on a calendar year basis. A checklist of AIC currently in force is issued as an AIC in January each year and the serial number 1 is reserved for this.

3.6 NOTAM and Pre-flight Information Bulletins (PIB)

3.6.1 The AIS Briefing Office will provide, on request, customised Pre-flight Information Bulletins (PIB) for regular air transport operations. Pre-flight Information Bulletins for itinerant operations may be requested from:

AIS Briefing Office
Fua'amotu International
PO Box 876
Nuku'alofa
Tonga

TEL (676) 35 222
FAX (676) 35 210

AFTN (676) NTFYNYX
Email ais@tongaairports.com

3.6.2 A Pre-flight Information Bulletin (PIB) request must be made 2 hours prior to take-off.

3.7 Checklists and Summary of NOTAM

3.7.1 A summary of current NOTAM is produced at the beginning of each month by the Christchurch International NOTAM Office (NOF).

3.8 Sale of Publication

3.8.1 The AIP — Tonga, AIP Supplement — Tonga are available from Airways New Zealand Limited.

3.8.2 Copies of these documents and enroute charts are available from Airways New Zealand at the address below:

Airways New Zealand Limited
PO Box 294
Wellington 6015
New Zealand

TEL	(64) 4 471 1899
FAX	(64) 4 471 5813
TELEX	NIL
AFS	NZHQYOTX
Email	aim@airways.co.nz
Website	www.airways.co.nz

4 AIRAC SYSTEM

4.1 Amendments to the AIP — Tonga are published in accordance with the ICAO AIRAC schedule. The AIRAC schedule is established to ensure co-ordination between adjacent states for the implementation of changes, and to ensure information is available to interested organisations (e.g. airline flight operations) in sufficient time to assess and implement changes relevant to their operation.

4.1.1 Amendments may be published on any scheduled date. The schedule has an interval of 28 days starting from and including 10 January 1991. States are not required to publish on every available date, but should ensure that any changes are co-ordinated with available dates. The scheduled publication dates for AIP — Tonga are listed in [Table GEN 0.1 - 1](#).

4.1.2 To allow interested organisations sufficient time to assess and implement changes, amendments are distributed to users at least 28 days before the effective date. In the case of changes that are likely to have significant operational impact, amendments should be distributed to users at least 56 days before the effective date.

5 PRE-FLIGHT INFORMATION SERVICE AT AERODROMES

5.1 Pre-flight briefing at Fua'amotu INTL is provided by the:

AIS Briefing Office
Fua'amotu INTL
TONGA

TEL (676) 35 222
FAX (676) 35 210
Email ais@tongaairports.com
AFTN NTFYNYX

5.1.1 Pre-flight briefings at all other national airports will be available from the applicable ATS Unit.

GEN 3.2 AERONAUTICAL CHARTS

1 RESPONSIBLE SERVICE

1.1 General

1.1.1 Tonga Airports Limited is responsible for the provision of aeronautical charts. Aeronautical charts are published by Airways New Zealand.

2 MAINTENANCE OF CHARTS

2.1 General

2.1.1 Aeronautical charts are maintained by Airways New Zealand. Amendments to aeronautical charts are published as per AIP New Zealand AIRAC cycle.

2.2 Purchase Arrangements

2.2.1 Refer to [GEN 3.1. paragraph 3.8.](#)

2.3 Aeronautical Chart Series Available

2.3.1 The following charts series are published in the AIP — Tonga:

- (a) Aerodrome Chart — ICAO
- (b) Instrument Approach Chart — ICAO
- (c) Enroute Chart

2.4 List of Aeronautical Charts Available

2.4.1 The following charts series are available:

2.4.2 Enroute Chart — Auckland Oceanic FIR

2.5 Index to the World Aeronautical Charts (WAC) — ICAO 1:1 000 000

2.5.1 Nil published.

2.6 Topographical Charts

2.6.1 Aeronautical Topographical Charts are not published. Limited topographical charts are published by:

Ministry of Lands and Survey Natural Resources
Nuku'alofa
TONGA

TEL (676) 23 611
FAX (676) 23 216

2.7 Corrections to Charts not Contained in the AIP

2.7.1 Reserved.

GEN 3.3 AIR TRAFFIC SERVICES

1 RESPONSIBLE SERVICE

1.1 General

1.1.1 Tonga Airports Limited (TAL), operating under an Instrument of Delegation from the Ministry of Transport, Tonga is the responsible authority for the provision of air traffic services within the area indicated under [GEN 3.3. paragraph 2.1.1](#).

1.1.2 The services are provided in accordance with the provisions contained in the following ICAO documents:

- (a) Annex 2 — *Rules of the Air*
- (b) Annex 11 — *Air Traffic Services*
- (c) Doc 4444 — *Procedures for Air Navigation Services — Rules of the Air and Air Traffic Management (PANS — ATM)*
- (d) Doc 8168 — *Procedures for Air Navigation Services — Aircraft Operations (PANS — OPS)*
- (e) Doc 7030 — *Regional Supplementary Procedures*

1.1.3 Differences to these provisions are detailed in [GEN 1.7](#).

2 AREA OF RESPONSIBILITY

2.1 General

2.1.1 Air traffic services are provided in the Tonga Sector of the Auckland Oceanic FIR.

3 TYPES OF SERVICES

3.1 General

3.1.1 The following types of services are provided:

- (a) Flight Information Service (FIS) and Alerting Service (ALRS)
- (b) Approach Control (APP)

3.1.2 The following types of services are provided at aerodromes:

- (a) Aerodrome Control (TWR)
- (b) Aerodrome Flight Information Service (AFIS)

4 CO-ORDINATION BETWEEN THE OPERATORS AND ATS

4.1 General

4.1.1 Co-ordination between the operator and air traffic services is effected in accordance with 2.15 of ICAO Annex 11 and 2.1.1.4 and 2.1.1.5 of Part VIII of the Procedures for Air Navigation Services — *Rules of the Air and Air Traffic Management* (Doc 4444, PANS — ATM).

5 ATS UNITS ADDRESS LIST

5.1 General

5.1.1 Table GEN 3.3 - 1 lists the contact addresses for all ATS units in Tonga.

Table GEN 3.3 - 1
ATS Unit Contact Addresses

UNIT NAME	POSTAL ADDRESS	TELEPHONE	FAX	TELEX	AFS ADDRESS
FUA'AMOTU APP	Chief Executive Officer Tonga Airports Limited	(676) 35 395 (676) 35 393	(676) 35 395		NFTFZTZX
FUA'AMOTU TWR	Fua'amotu International Airport	(676) 7752 295			NFTFZTZX
FUA'AMOTU RADIO	PO Box 876 Nuku'alofa Tonga				NFTFYSYX

6 MINIMUM FLIGHT ALTITUDE

6.1 Minimum Safe Altitude

6.1.1 The route minimum safe altitude (MSA) is found by identifying the controlling obstacle within the total area of the navigational tolerance, based on the type and coverage of the navigation facilities, plus a 5NM buffer. Within this area the MSA is the lowest altitude, rounded up to the next 100ft, which provides an obstacle clearance of at least 1,000ft.

6.1.2 Set heading and minimum crossing altitudes are based on a 1.6% (100ft/NM) gradient while maintaining enroute terrain clearances.

6.1.3 Route MSA are shown on each sector of enroute charts for domestic routes. These provide the basis for establishing the minimum cruising altitude for the direction of flight. The requirements for subsequent sectors should be anticipated by crossing the facility or reporting point at or above a cruising level that is not below the MSA for the next sector. Greater obstacle clearances may be needed in adverse weather conditions or when navigational guidance is inadequate.

6.2 Minimum Reception Altitude and Minimum Enroute Altitude

6.2.1 Where an acceptable navigational signal coverage is a requirement for a sector to be flown, a minimum reception altitude (MRA) or minimum enroute altitude (MEA) will be published.

6.2.2 For a VOR route, the published MRA will ensure adequate signal strength for accurate navigation. Although some low sensitivity VOR receivers may not display a warning at altitudes below the published MRA, the altitude or flight level for IFR flights using VOR as the primary means of navigation must be at or above the published MRA.

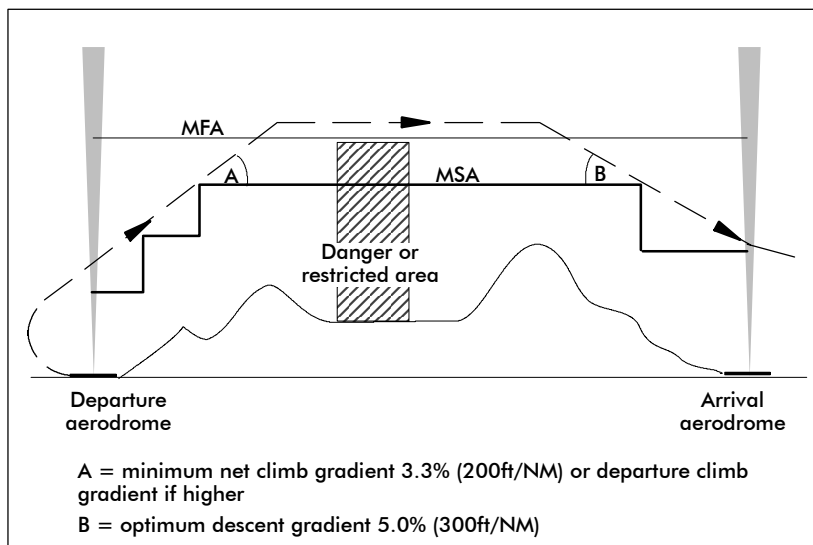
6.2.3 The published MEA for an NDB route will ensure acceptable navigational signal coverage for the sector to be flown. Where an MEA is published, IFR flights using NDB as the primary means of navigation, must be at or above the published MEA.

6.3 Minimum Flight Altitude

6.3.1 As shown in [Figure GEN 3.3 - 1](#), the minimum flight altitude (MFA) for an IFR route sector will be the higher of the following:

- (a) Route minimum safe altitude (MSA).
- (b) Minimum reception altitude (MRA) for a VOR sector.
- (c) Minimum enroute altitude (MEA) for an NDB sector.
- (d) Danger or restricted area upper limit plus 1,000ft.

**Figure GEN 3.3 -1
Minimum Flight Altitude**



6.3.2 The requirements of the IFR table of cruising levels must then be taken into account.

6.3.3 Where the next route sector MFA is higher, that sector must not be entered below the higher level unless there is a promulgated crossing altitude.

6.3.4 Aircraft with approved enroute area navigation equipment are not required to comply with MRA and MEA restrictions.

6.4 Climb to MFA

6.4.1 To ensure obstacle clearance, aircraft on departure are required to climb to MSA at the promulgated minimum net climb gradient appropriate to the departure procedure being flown. Unless a more restrictive requirement is published, once above MSA, aircraft may continue to climb at a minimum net climb gradient of not less than 3.3% (200ft/NM) to MFA.

6.5 Descent Below MFA

6.5.1 Descent below MFA prior to arrival may only be commenced in the following circumstances:

- (a) In accordance with published DME steps, or
- (b) Prior to the first DME step when:
 - (i) A positive fix has been established by an unambiguous DME readout for at least 15 seconds, or by the use of an off-track VOR or NDB provided the angle of intersection is 45° or greater, and
 - (ii) A positive tracking indication has been received by navigation equipment for at least 15 seconds, and
 - (iii) During descent, aircraft navigation equipment is actively monitored to ensure continuity of guidance, and
 - (iv) Descent is restricted to the higher of MSA or danger or restricted area upper limit plus buffer, and based on an optimum descent gradient of 5% (300ft/NM) to the first DME step.

6.5.2 Within 10NM of the aid or fix from which it is intended to conduct an instrument approach, descent is limited to the higher of minimum holding altitude, procedure commencement altitude or MSA.

Note

Outside controlled airspace the IFR table of cruising levels applies.

6.6 Emergency Descent Below MFA

6.6.1 Where an enroute emergency necessitates a descent below MEA or MRA, pilots should be aware that the navigational tolerance used to define the MSA may not be valid if the utilisation of the primary means of navigation can be continued. A decision to continue to divert to another route must consider the accuracy of navigation prior to the emergency.

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GEN 3.4 COMMUNICATION SERVICES

1 RESPONSIBLE SERVICE

1.1 General

1.1.1 The responsible service for the provision of telecommunication and navigation facility services in Tonga is Tonga Airports Limited.

1.1.2 Aeronautical telecommunication services for ATS and the Tonga air navigation service are administered by Tonga Airports Limited. The following services are provided:

- (a) Radio Navigation
- (b) Communications

Tonga Airports Limited,
PO Box 876,
Nuku'alofa,
TONGA

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

- (a) Annex 10 — *Aeronautical Telecommunications*
- (b) Doc 8400 — *Procedures for Air Navigation Services — ICAO Abbreviations and Codes (PANS — ABC)*
- (c) Doc 8585 — *Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services*
- (d) Doc 7030 — *Regional Supplementary Procedures*
- (e) Doc 7910 — *Location Indicators*

2 AREA OF RESPONSIBILITY

2.1 General

2.1.1 Communication services are provided for the Tonga Sector of the Auckland Oceanic FIR.

3 TYPES OF SERVICE

3.1 Radio Navigation Services

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

- (a) LF/MF non-directional beacon (NDB)
- (b) VHF omni-directional radio range (VOR)
- (c) Distance measuring equipment (DME)

3.2 Mobile/Fixed Service

Mobile Service

3.2.1 Air-ground communications in Tonga airspace are conducted by radiotelephony (RTF) in the VHF and HF bands. Frequencies and services are published in [Table ENR 2.1 - 1](#).

3.2.2 VHF is the primary frequency band for all operations with HF being used when outside VHF coverage.

Fixed service

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

- (a) they satisfy the requirements of ICAO Annex 10, Vol. II, Chapter 3, 3.3;
- (b) they are prepared in the form specified in ICAO Annex 10;
- (c) the text of an individual message does not exceed 200 groups.

3.2.4 General aircraft operating agency messages are only accepted for transmission to countries that have agreed to accept Class "B" traffic.

Telephone facilities

3.2.5 Except at the larger aerodromes, telephone facilities for use by pilots at aerodromes in Tonga are generally not available.

3.3 Broadcasting Service

3.3.1 Nil.

3.4 Language Used

3.4.1 English.

3.5 Where Detailed Information Can Be Obtained

3.5.1 Details of the various facilities available for enroute traffic can be found in Part 2 (ENR).

3.5.2 Details of the facilities available at the individual aerodromes can be found in the relevant sections of Part 3 (AD). In cases where a facility is serving both enroute traffic and aerodromes, details are given in the relevant sections of Part 2 (ENR) and Part 3 (AD).

3.6 Hours of Service

3.6.1 The hours of service for aeronautical ground services are published in the AIP Supplements — Tonga or by NOTAM.

3.7 Extended Service

3.7.1 Extended service may be provided by an aeronautical ground services unit (ATS or RFFS) as an extension to its promulgated hours of service either by opening watch earlier or by closing watch later.

3.7.2 Extended service is normally provided only in the following cases:

- (a) disrupted regular air transport flights (domestic and international);
- (b) approved special air transport flights;
- (c) disaster relief flights;
- (d) medivac flights;
- (e) visiting overseas military and state flights.

Note

The majority of ground services staff do not have telephones and transport may not be available. Once a unit has closed watch it is generally not possible to recall staff to duty and services cannot be provided before the next promulgated opening watch time. Staff may also be affected by duty time limitations. Provided sufficient notice is given, all reasonable efforts will be made to accommodate requests, but there may be occasions when extended service cannot be provided.

4 REQUIREMENTS AND CONDITIONS

4.1 General

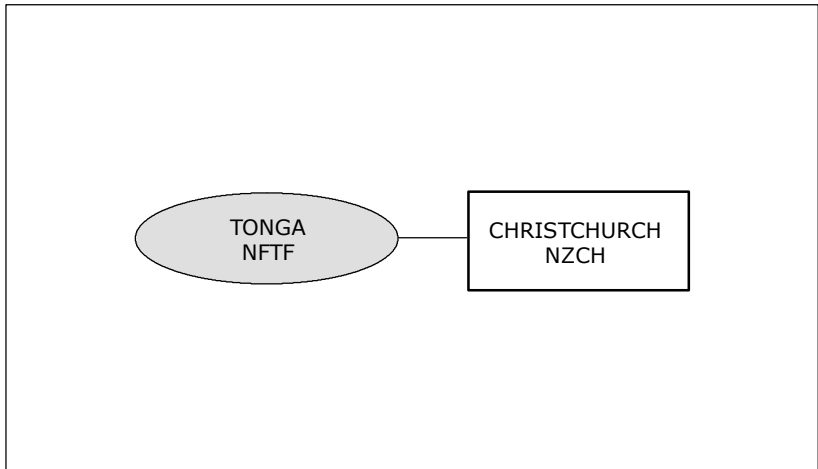
4.1.1 The requirement of the Tonga Airports Ltd and the general conditions under which the communication services are available for international use, as well as the requirements for the carriage of radio equipment, are contained in the Air Regulations of Tonga REGS 21, 22 and 23.

5 AFTN CIRCUITS

5.1 General

5.1.1 AFTN circuits are shown in [Figure GEN 3.4 - 1](#).

Figure GEN 3.4 - 1
AFTN Circuits

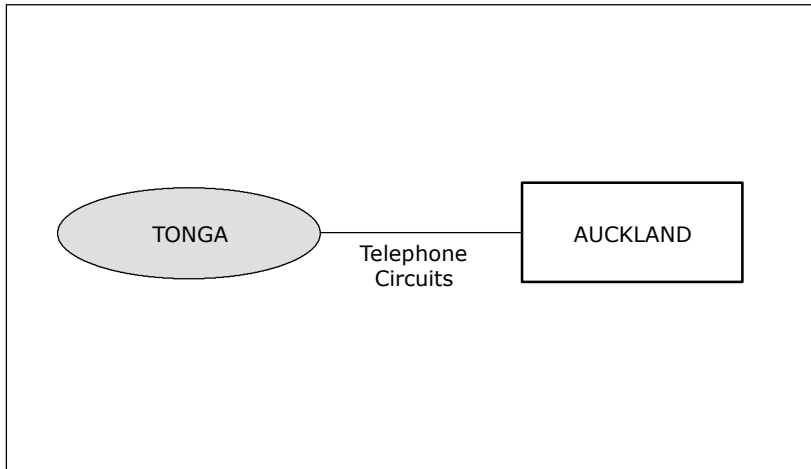


6 ATS SPEECH CIRCUITS

6.1 General

6.1.1 ATS speech circuits are shown in [Figure GEN 3.4 - 2](#).

Figure GEN 3.4 - 2
ATS Speech Circuits



GEN 3.5 METEOROLOGICAL SERVICES

1 RESPONSIBLE SERVICE

1.1 General

1.1.1 Meteorological offices are located at Fua'amotu AD, Vava'u AD.

1.1.2 The meteorological services for civil aviation are provided by Vava'u, Lifuka AD, Niuatoputapu, Niuafu'ou, Fua'amotu AD.

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

- (a) Annex 3 — Meteorological Service for International Air Navigation
- (b) WMO Technical Regulation Chapter 3.1
- (c) Differences to these provisions are detailed in Tonga Civil Aviation Act 1990 Part 3, Section 7.2i
- (d) DOC 7030 — Regional Supplementary Procedures.

2 AREA OF RESPONSIBILITY

2.1 General

2.1.1 Meteorological services are provided for the Tonga Sector of the Auckland Oceanic FIR.

3 METEOROLOGICAL OBSERVATIONS AND REPORTS

3.1 Description of Observation System

Surface Wind

3.1.1 Surface wind measurements for aviation aerodrome weather reports are made at varying distances from the runway, never greater than 500m.

3.1.2 In the aerodrome weather reports the surface wind direction is given in degrees relative to geographic North (true) and speed in knots.

Visibility

3.1.3 When the visibility is 5km or less it shall be expressed in metres and in increments of 100 metres. When it is more than 5km but less than 10km the units will be kilometres, and when it is 10km or more it shall be given as 10km except when the conditions for use of CAVOK apply.

Present Weather

3.1.4 Present weather is reported as follows:

(a) Precipitation

- (i) DZ Drizzle
- (ii) RA Rain
- (iii) GR Hail

(b) Obscurations

- (i) FG Fog (Reported when visibility is less than 1000m except when qualified by 'MI' or 'VC')
- (ii) BR Mist (Reported when visibility is at least 1000m but not more than 3000m)

(c) Obscurations (lithometeors)

3.1.5 The following should be used only when the obscuration consists predominantly of lithometeors and the visibility is 3000m or less.

- (i) HZ Haze
- (ii) FU Smoke
- (iii) VA Volcanic Ash

- (d) Other Phenomena
 - (i) SQ Squall
 - (ii) FC Funnel Cloud (Tornado or Waterspout)

Present Weather

3.1.6 The characteristics of the present weather phenomena are indicated as follows:

- (a) Characteristics
 - (i) TS Thunderstorm
 - (ii) SH Shower
 - (iii) MI Shallow (less than 2m above ground)
 - (iv) BC Patches (fog patches or aerodrome partially covered by fog)

Relative Intensity or Proximity of Present Weather

3.1.7 The relative intensity or, as appropriate, the proximity to the aerodrome of the present weather phenomena is indicated as follows:

- (a) Relative Intensity or Proximity
 - (i) FBL – Light
 - (ii) MOD Moderate
 - (iii) HVY + Heavy
 - (iv) VC Vicinity

Cloud

3.1.8 Cloud amount is reported using the abbreviations "FEW" (1 – 2 oktas), "SCT" (3 – 4 oktas), "BKN" (5 – 7 oktas) or "OVC" (8 oktas). If there are no clouds and the abbreviation "CAVOK" is not appropriate, the abbreviation "SKC" may be used. When several layers or masses of cloud are observed, their amount and height are reported as follows:

- (a) the lowest layer or mass, regardless of amount as FEW, SCT, BKN or OVC;
- (b) the next layer or mass, covering more than 2/8 as SCT, BKN, or OVC as appropriate;
- (c) the next higher layer or mass, covering more than 4/8 as BKN or OVC as appropriate;
- (d) CB whenever observed and not reported in the layers above.

CAVOK

3.1.9 The term "CAVOK" (KAV-OH-KAY) may replace the information on visibility, present weather and cloud amount, type and height when the following simultaneous conditions exist at the time of observation:

- (a) Visibility — 10km or more
- (b) Cloud — no cloud below 5,000ft and no cumulonimbus
- (c) Weather — no precipitation and no thunderstorm

Air Temperature and Dew Point Temperature

3.1.10 Air temperature and dew point temperature if required will be given in whole degrees Celsius.

Pressure Values

3.1.11 Pressure values are given in hectoPascals, and rounded down to the nearest lower whole hectoPascal. For example QNH 995.6 hPa is given as "QNH 995".

Extra Information

3.1.12 Visibility and cloud height are estimated by meteorological staff, but when additional information or advice is necessary for landing or take-off purposes complementary meteorological information may be supplied by the appropriate ATS staff and passed by radio.

Units of Measurement

3.1.13 The units of measurement for meteorological purposes are in accordance with ICAO Annex 5.

Table GEN 3.5 - 1
Meteorological Observations and Reports

NAME OF STATION/ LOCATION INDICATOR	TYPE & FREQ OF OBSERVATION/ AUTOMATIC OBSERVING EQUIPMENT	TYPES OF MET REPORTS & SUPPLEMENTARY INFORMATION INCLUDED	OBSERVATION SYSTEM & SITES	HOURS OF OPERATION	CLIMATOLOGICAL INFORMATION

4 TYPES OF SERVICES

4.1 General

4.1.1 The main meteorological office is situated at Fua'amotu.

4.1.2 Daily Area Forecasts (ARFOR) for the Tonga Sector of the Auckland Oceanic FIR and TAF are available at this office.

4.1.3 Route Forecasts (ROFOR) are available upon request

4.1.4 Weather maps and charts for domestic and international flights are also available at the Fua'amotu Meteorological Office.

5 NOTIFICATION REQUIRED FROM OPERATORS

5.1 General

5.1.1 Requests for forecasts, briefing, flight documentation and any other meteorological information or any changes in existing meteorological reports shall be made, sufficiently in advance (ref ICAO Annex 3, 2.3) to the meteorological office. The minimum amount of advance notice required shall be 3 hours for domestic operations and 6 hours for intercontinental flights.

5.1.2 It should be understood that the specific value of any of the elements given in a forecast is necessarily approximate. Accordingly, the value of the element in question should be interpreted as representing the most probable mean of a range of values which the element may assume during the period of the forecast concerned. Similarly, when the time of the occurrence or change of an element is given in a forecast the time should be interpreted as representing the most probable mean of a range of times.

6 AIRCRAFT REPORTS

6.1 General

6.1.1 Special observation (AIREP SPECIAL) shall be made by all aircraft whenever a significant meteorological condition is observed or encountered and is considered likely to cause a hazard to air navigation. The report shall be made to the Fua'amotu Meteorological Office through the ATS Unit receiving such report.

6.1.2 Observations shall be made by all aircraft as soon as it is practicable, of meteorological conditions encountered during climb-out or approach phases of flight, not previously reported to the pilot-in-command, which in their opinion are likely to affect the safety of other aircraft operations.

6.1.3 Pilots should notify Air Traffic Services immediately of any phenomenon which indicates that a volcanic eruption has occurred.

7 VOLMET SERVICE

7.1 General

7.1.1 Nil.

8 SIGMET SERVICE

8.1 General

8.1.1 SIGMET Service for the Tonga sector of the Auckland Oceanic FIR is provided by the Fiji Meteorological Service.

9 OTHER AUTOMATED METEOROLOGICAL SERVICES

9.1 General

9.1.1 Nil.

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GEN 3.6 SEARCH AND RESCUE

1 RESPONSIBLE SERVICES

1.1 General

1.1.1 The search and rescue service in Tonga is provided by New Zealand, and is co-ordinated by the Rescue Co-ordination Centre (RCC) in Wellington, which is responsible for the provision of search and rescue service in the New Zealand Search and Rescue Region (SRR).

Rescue Co-ordination Centre

RCC	LOCATION	TELEPHONE	AREA OF RESPONSIBILITY
WELLINGTON	LOWER HUTT	64-4-577 8030	New Zealand SRR

1.1.2 The organisation of the service is based on the utilisation of civil and military facilities. The military facilities are based in New Zealand and New Caledonia and occasionally in Fiji.

1.1.3 The service is provided in accordance with the provisions contained in ICAO Annex 12 — *Search and Rescue*.

2 AREA OF RESPONSIBILITY

2.1 General

2.1.1 The RCC is responsible for SAR operations within the New Zealand SRR.

3 TYPES OF SERVICE

3.1 General

3.1.1 Details of all rescue units are given in [Table GEN 3.6 - 1](#).

3.2 Search and Rescue Units

3.2.1 Search and Rescue Air Units, aircraft, capabilities and equipment are shown in [Table GEN 3.6 - 1](#).

**Table GEN 3.6 - 1
Search and Rescue Units**

NAME	LOCATION	FACILITIES	REMARKS
AUCKLAND	AUCKLAND	P3K, C130H ELR*	

*On deployment from Auckland

4 SAR AGREEMENTS

4.1 General

4.1.1 SAR agreement between the Government of Tonga and the New Zealand Government has been signed by both parties.

5 CONDITIONS OF AVAILABILITY

5.1 General

5.1.1 All services listed in [Table GEN 3.6 - 1](#) are continuously available.

6 PROCEDURES AND SIGNALS USED

6.1 Procedures and Signals Used by Aircraft

6.1.1 Procedures for pilots-in-command observing an accident or intercepting a distress call and/or message are outlined in ICAO Annex 12, Chapter 5.

6.2 Communications

6.2.1 Transmission and reception of distress messages within the New Zealand Search and Rescue Region are handled in accordance with ICAO Annex 10, Volume II, Chapter 5, paragraph 5.3.

6.2.2 For communications during search and rescue operations, the codes and abbreviations published in *ICAO Abbreviations and Codes* (Doc 8400) are used.

6.2.3 The carriage of an emergency location transmitter (ELT) is mandatory within Tonga. For this reason, in accordance with ICAO Standards and Recommended Practices, aircraft are required to continuously guard the international emergency frequency 121.5 MHz. This requirement does not apply 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 or more channels.

6.2.4 The frequency 121.5 MHz is guarded continuously by Fua'amotu.

6.3 Procedures for an Aircraft Requiring SAR Escort

6.3.1 If the pilot-in-command of an aircraft, while flying over water or a sparsely inhabited area, has any reason to believe that the operating efficiency of the aircraft is impaired, the appropriate Air Traffic Services unit should be notified so that the RCC is forewarned should the position deteriorate. If, at this stage or later, the pilot-in-command considers it advisable, interception and escort by a search and rescue aircraft may be requested.

6.3.2 Disparity in speeds and normal altitudes between some aircraft and SAR aircraft may not permit continuous escort in the accepted sense. The SAR aircraft may turn back along the intended track of the aircraft requiring escort before the interception, so that the latter is catching up with the former. It is most important that radiotelephony (RTF) contact is established between the two aircraft as early as possible and maintained throughout the operation.

6.4 RTF Procedures

General

6.4.1 Distress and urgency traffic shall comprise all RTF messages relating to the distress or urgency condition respectively. Distress and urgency conditions are defined as follows:

Distress

6.4.2 A condition of being threatened by serious and/or imminent danger and of requiring immediate assistance.

Urgency

6.4.3 A condition concerning the safety of an aircraft or other vehicle, or of some person on board or within sight, but which does not require immediate assistance.

6.4.4 The RTF distress signal MAYDAY or the urgency signal PAN PAN, preferably spoken three times, shall be used at the commencement of the first distress or urgency communication respectively. The signals should, if it is considered necessary, be used at the commencement of any subsequent communication.

6.4.5 In cases of distress or urgency communications, in general, the transmissions by RTF should be made slowly and distinctly, each word being clearly pronounced to facilitate transcription.

6.5 RTF Distress Communications

Action by the Aircraft in Distress

6.5.1 In addition to being preceded by the distress signal MAYDAY the distress message shall:

- (a) Be on the air-ground frequency in use at the time, and
- (b) Consist of as many as possible of the following elements spoken distinctly and, if possible, in the following order:
 - (i) name of the station addressed (time and circumstances permitting)
 - (ii) identification of the aircraft
 - (iii) nature of the distress condition
 - (iv) intention of the pilot-in-command
 - (v) present position, heading and height

Notes

If insufficient time exists for transmission of the entire message, priority is to be given to present position.

The above provisions may be supplemented by the following measures:

- (a) Transmitting the distress message on the emergency frequency 121.5 MHz or another aeronautical mobile frequency likely to be heard in the area.
- (b) Transmitting the distress message on the maritime mobile services RTF calling frequencies.
- (c) Broadcasting the distress message, if time and circumstances make this course preferable.
- (d) Using any means at the pilot's disposal to attract attention and make known the distress condition.
- (e) Any other station taking any means at its disposal to assist an aircraft in distress.
- (f) Any variation on the elements listed in items (a) to (e) when the transmitting station is not itself in distress, provided that such circumstances are clearly stated in the distress message.

The station addressed will normally be that station communicating with the aircraft or in whose area the aircraft is operating.

6.6 Imposition of Silence

6.6.1 The station in distress, or the station in control of distress traffic, shall be permitted to impose silence either on all stations of the mobile service in the area or on any station which interferes with the distress traffic. It shall address these instructions to "all stations" or to one station only, according to the circumstances. In either case it shall use:

- (a) STOP TRANSMITTING
- (b) the RTF distress signal MAYDAY

Note

The use of the above signals shall be reserved for the station in distress and for the station controlling distress traffic.

6.7 Action By All Other Stations

6.7.1 Distress communications have absolute priority over all other communications and a station aware of them shall not transmit on the frequency concerned unless:

- (a) The distress is cancelled or the distress traffic is terminated
- (b) All distress traffic has been transferred to other frequencies
- (c) The station controlling communications gives permission, or
- (d) It has itself to render assistance.

6.7.2 Any station which has knowledge of distress traffic, and which cannot itself assist the station in distress, shall nevertheless continue listening to such traffic until it is evident that assistance is being provided.

6.8 Termination of Distress Communication and of Silence

6.8.1 When an aircraft is no longer in distress it shall transmit a message cancelling the distress condition. The distress communication and silence conditions shall be terminated by transmitting a message, including the words "DISTRESS TRAFFIC ENDED", on the frequency or frequencies being used for the distress traffic. This message shall be originated only by the station controlling communications when it is authorised to do so by the appropriate authority.

6.9 RTF Urgency Communication

Action by an Aircraft Reporting an Urgency Condition

6.9.1 In addition to being preceded by the urgency signal PAN PAN the urgency signal shall:

- (a) Be on the air-ground frequency in use at the time, and
- (b) Consist of as many as required of the following elements spoken distinctly and, if possible, in the following order:
 - (i) name of the station addressed
 - (ii) identification of the aircraft
 - (iii) nature of the urgency condition
 - (iv) intention of the pilot-in-command
 - (v) present position, heading and height
 - (vi) any other useful information

Notes

The above provisions may be supplemented by the following measures:

- (a) Transmitting the urgency message on the emergency frequency 121.5 MHz or another aeronautical mobile frequency, if considered necessary or desirable.
- (b) Transmitting the urgency message on the maritime mobile service RTF calling frequencies.
- (c) Broadcasting the urgency message, if time and circumstances make this course preferable.
- (d) Any variation on the elements listed in items b) (i) to (vi) when the transmitting station is not itself in an urgency condition, provided that such circumstances are clearly stated in the urgency message.

The station addressed will normally be that station communicating with the aircraft or in whose area the aircraft is operating.

6.10 Action by all Other Stations

6.10.1 Urgency communications have priority over all other communications except distress. All stations shall take care not to interfere with transmissions of urgency traffic.

6.11 Procedures for a Pilot-in-Command Observing a Distress Incident

6.11.1 When a pilot-in-command observes that either another aircraft or a surface craft is in distress, unless the pilot is unable, or in the circumstances of the case, considers it unreasonable or unnecessary, they shall:

- (a) Keep the craft in distress in sight until no longer necessary or until no longer able to remain in the vicinity of the distress craft.
- (b) If position is not known with certainty, take such action as will facilitate the determination of it.
- (c) Report to the RCC or aeronautical station as much of the following information as is possible:
 - (i) type of aircraft in distress, its identification and condition
 - (ii) its position, expressed in geographical co-ordinates or in distance and true bearing from a distinctive landmark
 - (iii) time of observation (in UTC)
 - (iv) number of persons observed
 - (v) whether the persons have been seen to abandon the craft in distress
 - (vi) number of persons observed to be afloat, and
 - (vii) apparent physical condition of survivors
- (d) Act as instructed by the RCC.

6.11.2 If the pilot-in-command of the first aircraft to reach the place of the accident is unable to establish communication with an aeronautical station, that pilot should take charge of the activities of all other aircraft that arrive until handing control over to the aircraft best able to provide communication.

6.12 Procedures for a Pilot-in-Command Intercepting a Distress Message

6.12.1 Whenever a distress message is intercepted on radio by a pilot-in-command of an aircraft, other than a search aircraft, the pilot shall:

- (a) If possible take a bearing on the transmission.
- (b) Listen out and if no acknowledgement is heard, acknowledge receipt and relay the message to the appropriate aeronautical station by any means available.
- (c) If necessary, exercise control of communications until the aeronautical station is able to take control.
- (d) Plot the position of the craft in distress if given.
- (e) At the pilot's discretion, while awaiting instructions, proceed to the position given in the distress message.

6.13 Non-radio Distress and Urgency Signals

6.13.1 In a distress situation, if radio is not available, any of the following distress signals may be used as an alternative means of obtaining assistance:

- (a) Rockets or shells throwing red lights, fired one at a time or at short intervals.
- (b) A parachute flare showing a red light.

6.13.2 In an urgency situation, if radio is not available, the following urgency signals may be used as an alternative:

- (a) A succession of green pyrotechnic lights, or
- (b) A succession of green flashes with signal apparatus.

6.13.3 In addition to the above, the following signals used either together or separately, mean that an aircraft wishes to notify difficulties which compel it to land without requiring immediate assistance:

- (a) The repeated switching on and off of the landing lights, or
- (b) The repeated switching on and off of the navigation lights, or
- (c) A succession of white pyrotechnic lights.

6.13.4 If a forced landing has been made, every effort should be made to attract attention using the "Ground–Air Visual Signal Code" shown in [Table GEN 3.6 - 2](#).

Table GEN 3.6 - 2
Ground/Air visual signal codes

NO	MESSAGE	CODE SYMBOL
1	Require assistance	V
2	Require medical assistance	X
3	No or negative	N
4	Yes or affirmative	Y
5	Proceeding in this direction	↑

Instructions for use

- (a) Make signals not less than 8ft (2.5m).
- (b) Take care to lay out signals exactly as shown.
- (c) Provide as much colour contrast as possible between signals and background.
- (d) Make every effort to attract attention by other means such as radio, flares, smoke, reflected light.

6.14 Procedure for Directing a Surface Craft to a Distress Incident

6.14.1 When it is necessary for a pilot-in-command to direct surface craft to the place where an aircraft or a surface craft is in distress, the pilot should do so by transmitting precise instructions by any means available. If such precise instructions cannot be transmitted, they should be given by carrying out the following procedure:

- (a) Circle the surface craft at least once.
- (b) Cross the projected course of the surface craft close ahead at low altitude;
 - (i) rocking the aircraft, or
 - (ii) opening and closing the throttle, or
 - (iii) changing the propeller pitch.
- (c) Heading in the direction in which the surface craft is to be directed.
- (d) Repeat these procedures until the surface craft acknowledges.

Note

Due to the high noise level on board surface craft, sound signals may be less effective than the visual signals and are regarded as an alternative means of attracting attention.

6.15 Current Maritime Signalling Procedures

6.15.1 For acknowledging receipt of signals:

- (a) Hoisting of the "Code Pennant" (vertical red and white stripes) close up (meaning understood).
- (b) Flashing of a succession of "T"s by signal lamp in the Morse Code.
- (c) Changing of heading.

6.15.2 For indicating inability to comply:

- (a) Hoisting of the international flag "N" (blue/white checks, 16 squares).
- (b) Flashing a succession of "N"s in the Morse Code.

6.16 Procedure to Signify that Assistance from a Surface Craft is No Longer Required

6.16.1 When assistance of a surface craft is no longer required an aircraft should cross the wake of the surface craft close astern at low altitude:

- (a) Rocking the aircraft, or
- (b) Opening and closing the throttle, or
- (c) Changing the propeller pitch.

Note

Due to the high noise level on board surface craft, sound signals may be less effective than the visual signals and are regarded as alternative means of attracting attention.

7 VISUAL INSPECTIONS BY ATS UNIT

7.1 In certain situations the pilot in an emergency may request an ATS unit to conduct a visual inspection of the aircraft in-flight, e.g. undercarriage malfunction. Where available, ATS units will seek assistance from the operator's engineering staff or its handling agents for expert advice to the pilot. In the absence of such assistance ATS personnel will report their visual observations to the pilot. Such reports are for information only and do not constitute authoritative advice in any form whatsoever.

8 EMERGENCY LOCATOR TRANSMITTERS (ELT)

8.1 General

8.1.1 The essence of a successful search and rescue operation is the speed with which it can be accomplished. It must be presumed that in each incident there are survivors who need help and whose chances of survival diminish with every passing minute. Emergency location beacons facilitate rapid location of a distress incident by day and night and their carriage is compulsory in Tonga registered aircraft. These electronic, battery operated transmitters emit a distinctive downward swept audio tone on 121.5 MHz, 243 MHz or 406 MHz, depending on whether they are an Emergency Location Transmitter — Aircraft (ELT) or an Emergency Position Indicating Radio Beacon (EPIRB).

8.2 Emergency Activation

8.2.1 To prevent valuable air search time being wasted it is imperative that:

- (a) Any emergency beacon that is not automatically activated is switched on as soon as possible after any emergency and **left on until rescue**. THE SWITCHING ON AND OFF OF ANY BEACON MAY VOID A RADIO SEARCH PROCEDURE.
- (b) In the event of all survivors leaving the crash scene the emergency beacon must be carried with them. The prime objective of the search is for the survivors, not the wreckage.

8.3 Emergency Location Transmitter Reporting Procedures

8.3.1 On receiving an ELT signal, a pilot shall report the following information to the nearest ATS unit:

- (a) aircraft position and time the signal was first heard;
- (b) aircraft position and time the signal was last heard;
- (c) aircraft position at maximum signal strength;
- (d) aircraft level, strength and frequency of emergency signal (121.5 MHz/243 MHz).

8.4 ELT Testing

8.4.1 Operational testing of beacons should, if possible, be carried out only in shielded areas under controlled conditions. False signals on the distress frequencies can interfere with actual distress transmissions as well as decrease the degree of urgency that should be attached to such signals. Aircraft operational testing is authorised on 121.5 MHz or 243 MHz as follows:

- (a) Tests should be no longer than three audio sweeps.
- (b) Tests shall be conducted **ONLY** within the time period made up of the first five minutes after every hour. Emergency tests outside of this time shall be co-ordinated with the nearest ATS unit. Airborne ELT tests are **NOT** permitted.

8.5 Inadvertent Activation

8.5.1 Inadvertent activation of emergency locator beacons has occurred on numerous occasions in Tonga. It can occur as a result of aerobatics, hard landings or accidental activation during aircraft servicing. To prevent transmissions due to inadvertent activation pilots-in-command shall:

- (a) prior to engine shut down at the end of each flight, tune the aircraft receiver to 121.5 MHz (or 243 MHz if applicable) and listen for ELT signals; and
- (b) if an ELT is heard, check the aircraft's beacon to determine whether it is the one in operation. If it is found that it has been activated, switch off immediately and report the occurrence to the nearest ATS unit.

Note

Maintenance may be required before an automatic activation is returned to the armed position.

Reminders to ensure that the ELTA is switched off at the end of flights should be placed on the checklist or placards. Use of other effective reminders is encouraged.

To prevent inadvertent activation, batteries must be removed before a beacon is dispatched for maintenance.

Any case where inadvertent activation of an emergency locator beacon is detected must be reported immediately to the nearest ATS unit in order that any SAR action, commenced as a result of the beacon transmissions, may be terminated.

9 AERODROME EMERGENCIES

9.1 Aerodrome Emergency Plan

9.1.1 The objective of an Aerodrome Emergency Plan is to prepare an aerodrome to cope with an emergency occurring on or within the vicinity of the aerodrome. The plan sets out the procedures for co-ordinating the response of different aerodrome services and those agencies in the surrounding community that could be of assistance in an emergency.

9.1.2 Examples of the type of emergencies are:

- (a) aircraft malfunctions
- (b) sabotage, including bomb threats
- (c) unlawfully seized aircraft
- (d) dangerous goods occurrences
- (e) building fires and natural disasters

9.1.3 Aerodrome Emergency Plans exist at Fua'amotu and Vava'u international airports.

9.2 Procedures to Activate Aerodrome Emergency Services

9.2.1 The ATS unit on the aerodrome is responsible for alerting the emergency services, following a request from a pilot or when an aircraft is considered to be in any of the following emergency phases:

Local Standby Phase

9.2.2 When an aircraft approaching the aerodrome is known, or is suspected, to have developed some defect, but the trouble is not such as would normally prevent effecting a safe landing.

9.2.3 Declaration of the LOCAL STANDBY PHASE will bring the aerodrome-based emergency services to a state of readiness but, in general, although off-aerodrome components may be notified, they will remain at their posts.

Full Emergency Phase

9.2.4 When an aircraft approaching the airport is, or is suspected to be, in such trouble that there is danger of an accident.

9.2.5 Declaration of the FULL EMERGENCY PHASE will bring all facilities, both on the aerodrome and in the city or community, such as medical and ambulance services, Police and Fire Services, to a rendezvous point on the aerodrome. It will also alert the hospital to prepare for possible reception of injured and for road traffic control to be instituted along the route between the city and aerodrome to clear the way for emergency vehicles.

Aircraft Accident Phase

9.2.6 AIRCRAFT ACCIDENT ON AIRPORT or AIRCRAFT ACCIDENT OFF AIRPORT when an aircraft accident has occurred on or in the vicinity of the airport.

9.2.7 Declaration of the AIRCRAFT ACCIDENT PHASE will bring all facilities into immediate action.

9.2.8 When an emergency occurs in-flight and adequate communications exist, the pilot-in-command is responsible for advising the ATS unit accordingly and for nominating the desired state of readiness of the aerodrome emergency services.

9.2.9 If adequate communications with aircraft do not exist, the ATS specialist will assess the situation and bring the aerodrome emergency services to the state of readiness considered appropriate.

GEN 4 CHARGES FOR AERODROMES/ HELIPORTS AND AIR NAVIGATION SERVICES

GEN 4.1 AERODROME/HELIPORT CHARGES

1 AERODROME AND HELIPORT CHARGES

1.1 General

1.1.1 Tonga Civil Aviation (Aerodromes and Licensing Charges) Regulations 1996 prescribe the charges for the landing and parking of aircraft. An extract from these regulations, which came into effect on 20 August 1996 is reproduced in [Table GEN 4.1 - 1](#).

1.2 Landing Charges

1.2.1 Subject to the provisions of [paragraph 1.2.2](#) and [paragraph 1.2.3](#), Landing Charges in accordance with the following scale per one tonne, (1,000kg) weight shall be charged and payable in respect of each landing at an aerodrome by an aircraft engaged in the carriage of passengers, cargo or mail.

Table GEN 4.1 - 1
Landing Charges

DOMESTIC OPERATIONS	
\$3.50 per tonne	
INTERNATIONAL OPERATIONS	
Fua'amotu International Airport	
B747	\$4,197.00
MD11/DC10 Series	\$2,976.00
B767	\$1,908.00
B737	\$687.00
All other aircraft	\$10.90 per tonne
Lupepau'u (Vava'u) International Airport	
All aircraft	\$8.00 per tonne

1.2.2 In calculating the landing charges in accordance with the per tonne scale set out in [Table GEN 4.1 -1](#), the weight of the aircraft shall be the maximum permissible take-off weight of the aircraft as authorised by the aircraft flight manual or the equivalent document, reckoned to the nearest 1,000kg.

1.2.3 Aircraft with a maximum permissible take-off weight exceeding 5,000kg solely for training aircrew will only be charged 25% of the rate in [Table Gen 4.1 - 1](#).

1.2.4 The landing charges detailed in [section 1.2](#) of the schedule are inclusive of all terminal navigational aid charges.

1.2.5 The following aerodrome lighting surcharges are in addition to the above charges when flights operate between sunset and sunrise.

- (a) If a night landing is made between sunset and sunrise and take-off is made within one hour of that landing, a fixed charge of \$50.00 will be made.
- (b) If the duration of an aircraft on the ground after sunset and before sunrise exceeds the period specified in [paragraph 1.2.5\(a\)](#), each additional or part thereof shall be charged at \$35.00.

1.2.6 For the determination of applicability of aerodrome lighting charges, the actual time of sunset and sunrise referred to in [paragraph 1.2.5](#), are as defined in the Twilight Tables contained in the AIP — Tonga.

1.2.7 Payment of landing and where applicable lighting charges, shall be made in Tongan currency in the following manner:

- (a) Domestic operators shall forward within 30 days of the end of each month, a return on the number of landings for that month, together with payment for the landing charges thereon unless other arrangements have been approved by the Secretary for Civil Aviation.
- (b) Scheduled international operators shall forward within 42 days of the end of each month, a return on the number of landings for that month, together with payment for the landing charges thereon unless other arrangements have been approved by the Secretary for Civil Aviation.
- (c) Non-scheduled international operators shall pay landing charges before take-off unless other arrangements have been approved by the Secretary for Civil Aviation.

1.2.8 Charges will be reduced to 50% for rotary wing aircraft.

1.2.9 The following aircraft shall be exempt from the payment of charges:

- (a) foreign military aircraft
- (b) diplomatic aircraft
- (c) state aircraft
- (d) aircraft being used for government ceremonial purposes
- (e) search aircraft engaged in air/sea rescue operations
- (f) aircraft engaged in disaster relief or emergency medical evacuation
- (g) aircraft engaged in the calibration of the State's navigation facilities
- (h) aircraft carrying out a test flight solely for the purposes of establishing serviceability
- (i) aircraft that have received an exemption in writing from the Secretary for Civil Aviation.

1.2.10 Subject to the provisions of paragraph 1.2 above of the schedule, charges shall be levied and payable for the parking of aircraft at any aerodrome for any period in excess of three hours and shall be paid in accordance with the following scale.

1.3 Lighting Charges

1.3.1 The following aerodrome lighting surcharges are in addition to the landing charges when flights operate between sunset and sunrise.

- (a) If a night landing is made between sunset and sunrise and take-off is made within one hour of that landing, a fixed charge of \$50.00 will be made.
- (b) If the duration of an aircraft on the ground after sunset and before sunrise exceeds the period specified in [paragraph 1.3.1 \(a\)](#), then there will be an additional charge of \$35.00 for each additional hour or part hour.

2 PARKING AND CHARGES

2.1 Period and Rates for Parking

2.1.1 Subject to the provision of GEN 4.1 paragraph 1.2.9 of this schedule, charges shall be levied and payable for the parking of aircraft at any aerodrome for any period in excess of 3 hours and shall be paid in accordance with Table GEN 4.1 - 2.

Table GEN 4.1 - 2
Period and Rates for Parking

AIRCRAFT WEIGHT	BETWEEN 3 & 8 HOURS	EACH ADDITIONAL HOUR
Not exceeding 5 tonnes	\$5.00	\$1.00
Between 6 and 50 tonnes	\$30.00	\$7.00
Exceeding 50 tonnes	\$60.00	\$12.00

2.1.2 For the purposes of the calculation of fees, the weight of an aircraft shall be assessed as the maximum permissible take-off weight as authorised by the aircraft manual or other equivalent document reckoned to the nearest 1,000kg.

2.1.3 Payments for parking charges shall be made in Tongan currency in the timeframe and manner as prescribed in GEN 4.1 paragraph 1.2.7 of this schedule.

2.1.4 Aircraft normally operational from and based at aerodromes within Tonga shall be exempted from the payment of parking charges.

3 PASSENGER SERVICE CHARGES

3.1 General

3.1.1 The Passenger Service charge is \$25.

3.1.2 The following passengers are exempt from paying the Passenger Service charge:

- (a) Head of State
- (b) Diplomatic
- (c) Transit passengers max of 24 hours
- (d) Under 12 years old
- (e) Crew
- (f) Passengers for government ceremonial purposes
- (g) Disaster relief or emergency medical evacuation
- (h) Rescue operation, military aircraft crew
- (i) Personnel by Secretary in writing

4 SECURITY

4.1 General

4.1.1 Nil.

5 NOISE — RELATED ITEMS

5.1 General

5.1.1 Nil.

6 OTHER

6.1 General

6.1.1 Licences OAC (Refer to the Civil Aviation — Aerodromes and Licensing Charges Regulations 1996).

7 EXEMPTIONS AND REDUCTIONS

7.1 Exemptions

7.1.1 The following are exempt from the passenger service charge:

- (a) Diplomatic aircraft
- (b) Test or training flights
- (c) Aircraft engaged in flights of a humanitarian nature, including search and rescue flights
- (d) Emergency landings

7.2 Reductions

7.2.1 Nil.

7.3 Surcharges

7.3.1 Nil.

7.4 Cargo

7.4.1 Nil.

8 METHODS OF PAYMENT

8.1 General

8.1.1 Nil.

GEN 4.2 AIR NAVIGATION CHARGES

1 CHARGES

1.1 General

1.1.1 Nil.

2 EXEMPTIONS/REDUCTIONS

2.1 General

2.1.1 Nil.

3 METHODS OF PAYMENT

3.1 General

3.1.1 Nil.

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ENR 1 GENERAL RULES AND PROCEDURES

ENR 1.1 GENERAL RULES AND PROCEDURES

1 GENERAL RULES

1.1 Introduction

1.1.1 The air traffic rules and procedures applicable to air traffic in Tonga territory conform to Annexes 2 and 11 to the Convention on International Civil Aviation and to those portions of the *Procedures for Air Navigation Services — Rules of the Air and Air Traffic Services* applicable to aircraft and of the *Regional Supplementary Procedures* applicable to the PAC region, except for the differences noted in [GEN 1.7](#).

2 ATC SEPARATION

2.1 Provision of ATC Separation

2.1.1 Separation **IS** provided:

- (a) between IFR flights in Class A airspace;
- (b) between IFR flights in Class C airspace;
- (c) between IFR and VFR flights in Class C airspace;
- (d) between IFR and SVFR flights in Class C airspace;
- (e) between SVFR flights in Class C airspace when the flight visibility is reported to be less than 5km; and
- (f) between flights in the aerodrome traffic circuit at controlled aerodromes.

2.1.2 Separation **IS NOT** provided:

- (a) between IFR flights in Class G airspace;
- (b) between IFR and VFR flights in Class G airspace;
- (c) between SVFR flights in Class C airspace when the flight visibility is reported to be 5km or greater; and
- (d) between VFR flights except when in the aerodrome traffic circuit at controlled aerodromes.

Note

Flights operating outside controlled airspace are considered separated from flights within controlled airspace, except that flights entering or leaving controlled airspace shall be provided with separation from flights operating within controlled airspace while they are within an area of conflict.

The separation standards detailed in the following paragraphs are the minimum and may be increased, at the request of the pilot or by ATC, if considered necessary in the interests of safety.

In Class C airspace and in other circumstances as applicable, traffic information is passed when it is known that the relevant flights are or will be in such proximity as to be significant to each other. The provision of traffic information is not intended to relieve the pilot of the responsibility of continued vigilance to see and avoid other aircraft, but is intended to help visual surveillance by drawing attention to possible traffic.

Following the passing of traffic information, pilots may request traffic avoidance advice. The provision of traffic avoidance advice is intended to assist pilots but does not absolve them of the responsibility to avoid collision with other aircraft.

2.2 Vertical Separation

2.2.1 Vertical separation is achieved by requiring aircraft to fly at different levels separated by the following minima:

| Below FL290

- (a) 1,000ft, except that within CTR when the lower flight is VFR or SVFR, a minimum of 500ft may be applied, providing both aircraft are medium or lightweight category aircraft.

At or above FL290

- (a) 2,000ft*
- (b) When climbing or descending, unless ATC has specified a climb/descent rate and/or time or place of commencement, pilots must initiate climb or descent promptly on acknowledgement of the clearance or advise ATC so that separation from other traffic will not be compromised. The change of level must be made at an optimum rate consistent with the normal operating performance and configuration characteristics of the aircraft to 1,000ft above/below the assigned level, then reduced as appropriate until assigned level is reached. At other times in climb or descent, pilots must advise ATC if they wish to level off at an interim level or substantially change the rate of climb or descent.

Note

* Reduced vertical separation minima (RVSM) applies between FL290 and FL410 in the Auckland Oceanic FIR. For further information on vertical separation within the Auckland Oceanic FIR, refer to the AIP — New Zealand.

2.3 Horizontal Separation

2.3.1 Horizontal separation may consist of:

- (a) longitudinal separation
- (b) lateral separation
- (c) geographical separation

2.4 Longitudinal Separation

2.4.1 Longitudinal separation of aircraft is applied so that the spacing between the estimated positions of the aircraft concerned is never less than the prescribed minimum. This minimum will be expressed as a distance or time.

2.4.2 Longitudinal separation is achieved by requiring aircraft to depart at a specified time; to lose time to arrive over a specified location at a specified time; or to hold at a specified location until a specified time.

2.5 Lateral Separation

2.5.1 Aircraft are considered to be laterally separated provided their positions along track are outside an area known as the area of conflict. The area of conflict is established by applying the navigation tolerance for the navigation aid being used for track guidance plus a buffer area, to the two tracks. The point at which the buffer areas cease to overlap is termed the lateral separation point and is normally expressed as a distance from a DME station.

2.5.2 If DME is not available, entry to, or exit from an area of conflict may be determined by the passage of an aircraft over:

- (a) a point beyond the lateral separation point determined by a radio navigation aid; or
- (b) a point beyond the lateral separation point determined by visual reference (applicable only to an aircraft leaving an area of conflict by day in MET conditions suitable for flight by visual reference at the cleared level).

2.5.3 When two aircraft will enter an area of conflict, action will be taken by ATC in sufficient time to ensure that vertical or longitudinal separation exists before the second aircraft passes the lateral separation point on its route. Should doubt exist that an aircraft can reach its assigned altitude before lateral separation is lost, the pilot-in-command must confirm his/her ability to meet the terms of his/her clearance.

2.6 Geographical Separation

2.6.1 Geographical separation is achieved by requiring aircraft below 6500ft AMSL, which are operating by visual reference, to follow tracks identified by prominent geographical features or landmarks which have been determined as being geographically separated from other tracks or procedures.

2.7 Use of DME for Separation Purposes

2.7.1 ATC use of DME to establish or maintain horizontal separation is normally subject to direct speech between aircraft and the ATC unit concerned.

3 REDUCTION IN SEPARATION MINIMA

3.1 Visual Separation

3.1.1 Standard vertical or horizontal separation may be reduced in the vicinity of aerodromes if:

- (a) adequate separation can be provided by the aerodrome controller when each aircraft is continuously visible to this controller; or
- (b) each aircraft is continuously visible to the pilot of the other aircraft concerned and the pilots thereof report that they can maintain their own separation; or
- (c) in the case of one aircraft following another, the pilot of the succeeding aircraft reports that the other aircraft is in sight and separation can be maintained.

3.1.2 The acceptance of a clearance to "maintain own visual separation from" or to "follow" another aircraft is an acknowledgement that the pilot will keep the other aircraft continuously in sight and maintain adequate separation from that aircraft. When instructed to "maintain own visual separation from" or to "follow" another aircraft, the pilot is required to promptly advise ATC if there is a possibility of visual contact not being maintained, if visual contact is lost or if responsibility for the separation cannot be accepted for any reason.

3.2 Composite Visual Separation

3.2.1 Composite visual separation is the application of visual separation by an aerodrome controller in circumstances where only one aircraft is visible to the controller but both the position and the track of a conflicting aircraft are known and the application of geographical separation is not practicable.

3.2.2 Aerodrome control may use composite visual separation to separate an aircraft which is within the aerodrome traffic circuit, from another which is joining or leaving the aerodrome traffic circuit or transiting a control zone, clear of the aerodrome traffic circuit, but not in sight provided:

- (a) the route and intentions of the aircraft which is not in sight are known and its position can be confirmed by radar or other means;
- (b) instructions, when required, are issued to the aircraft in sight which will ensure that adequate separation is maintained.

3.2.3 The term adequate separation in this instance means the spacing required to maintain the safe operation of aircraft or to achieve runway separation without the need for sudden and violent manoeuvres.

4 PRIORITIES

4.1 General

4.1.1 Provided that safety is not jeopardised, traffic priorities shall be applied in the following order:

- (a) An aircraft known or believed to be in an emergency situation, including unlawful interference.
- (b) A multi-engined aircraft which has had an engine failure, whether or not an emergency has been declared.
- (c) An aircraft with radio communication failure.
- (d) An aircraft on an urgent mercy or ambulance flight, or any aircraft carrying sick or injured persons requiring urgent medical attention.
- (e) An aircraft involved in Search and Rescue or a national disaster emergency shall be given priority as necessary.
- (f) An aircraft transporting visiting Heads of State, Heads of Government, or other dignitaries visiting Tonga, or when requested by the pilot, aircraft engaged in the transport of the President or Prime Minister.
- (g) A landing aircraft shall generally have priority over a departing aircraft.
- (h) Aircraft landing or taking off shall have priority over aircraft taxiing.
- (i) An aircraft which is first able to use the manoeuvring area or desired airspace in the normal course of its operation shall be given priority, except:
 - (i) where a more orderly traffic flow or a significant economic benefit for a number of other aircraft would result by deferring this priority;
 - (ii) where a significantly greater economic penalty to another aircraft would result, e.g. by permitting a light aircraft to operate ahead of a large jet aircraft;
 - (iii) as a general principle, aircraft in the climb phase should be given preference for routing against arriving aircraft of similar type which are operating at lower power settings with a lesser fuel penalty relating to additional track mileage;

- (iv) flights requiring to operate in other than the normal pattern for operational rather than training reasons should be given the same priority as other flights, unless this introduces a complex traffic situation when approval to operate will be deferred;
- (v) aircraft operating in the traffic pattern in general use, shall be given priority over training aircraft desiring to operate in conflicting patterns;
- (vi) where a training instrument approach has been approved, normal priority shall be given to the aircraft from the time it commences final approach;
- (vii) where prior arrangement has been made for flight inspection checks and a priority has been predetermined.

Notes

Application of priorities includes priority for landing or take-off, use of airspace and required cruising levels.

Information concerning subparagraphs (d), (e), and (f) should,

where possible, be included in Item 18 of the International Flight Plan form.

5 MINIMUM FLIGHT ALTITUDES

5.1 VFR

5.1.1 Except when necessary for take-off or landing, or except by permission from the appropriate authority, a VFR flight shall not be flown:

- (a) over the congested areas of cities, towns or settlements or over an open air assembly of persons at a height less than 1,500ft above the highest obstacle within a radius of 600m from the aircraft;
- (b) above active or normally active volcanoes at a height less than 2,000ft;
- (c) elsewhere other than as specified above, at a height less than 500ft above the ground or water.

5.2 IFR

5.2.1 Except when necessary for take-off or landing, or except when specifically authorised by the appropriate authority, an IFR flight shall be flown:

- (a) over high terrain, in mountainous or volcanic areas, at an altitude which is at least 2,000ft above the highest obstacle within 8km of the estimated position of the aircraft;
- (b) elsewhere at an altitude which is at least 1,000ft above the highest obstacle located within 8km of the estimated position of the aircraft.

Note

The estimated position of aircraft will take account of the navigational accuracy which can be achieved on the relevant route segment, taking into consideration the navigational information available to the pilot.

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ENR 1.2 VISUAL FLIGHT RULES

1 GENERAL

1.1 Pilot Responsibilities

1.1.1 It is the responsibility of the pilot to take all possible measures to ensure the avoidance of collision with other aircraft, even when conducting the flight in accordance with an ATC clearance.

1.2 Limitations

1.2.1 Unless authorised by the appropriate ATS authority, VFR flights shall not be operated:

- (a) in IMC
- (b) at night
- (c) to points more than 50NM from land
- (d) by flights for which an IFR flight plan has been communicated
- (e) above FL200
- (f) at a true airspeed in excess of 200kt
- (g) in controlled airspace (Instrument Restricted)
- (h) in such other conditions as may be notified by ATS.

1.3 Air Traffic Control Service

1.3.1 VFR flights shall comply with the requirements of section 3.6 of ICAO Annex 2:

- (a) when operated within Class C airspace
- (b) when forming part of the aerodrome traffic circuit at controlled aerodromes, or
- (c) when operated as Special VFR flights.

1.4 Change of Flight Rules

1.4.1 An aircraft operated in accordance with the visual flight rules which wishes to change to comply with the instrument flight rules shall:

- (a) if a flight plan was submitted, communicate the necessary changes to be effected to its current flight plan, or
- (b) when so required by section 3.3 of ICAO Annex 2, submit a flight plan to the appropriate air traffic services unit and obtain a clearance prior to proceeding IFR when in controlled airspace.

1.5 Parachute Operations

1.5.1 Parachute operations within Tonga must be approved by:

Chief Executive Officer
Tonga Airports Limited
Fua'amotu INTL

TEL (676) 21 864
FAX (676) 27 942

2 POSITION AND ALTITUDE REPORTING REQUIREMENTS

2.1 VFR Flights Entering Class C Airspace, With ATC in Attendance

2.1.1 Prior to entry, all VFR flights must establish RTF communication with the appropriate ATC unit, reporting position, intended route, height and destination. The flight must not enter until an ATC clearance is obtained and must be conducted in accordance with such clearance.

2.2 VFR Flights Entering an Aerodrome Traffic Circuit

2.2.1 Nil.

2.3 Frequency Changes

2.3.1 When establishing contact and no position report is required, pilots must pass level details, giving the altitude or FL (state climbing or descending if not in level flight).

3 CLEARANCE FROM CLOUD AND VISIBILITY REQUIREMENTS

3.1 General

3.1.1 Except when operating as a Special VFR flight, VFR flights shall be conducted so that the aircraft is flown in conditions of visibility and distance from clouds equal to or greater than those specified in [Table ENR 1.2 - 1](#).

**Table ENR 1.2 - 1
VFR Meteorological Minima**

	AIRSPACE CLASS		
	C	G	
		Above 3,000ft AMSL or 1,000ft above terrain, whichever is higher	at or below
FLIGHT VISIBILITY	8km		1,500m
DISTANCE FROM CLOUD			Clear of clouds and in sight of ground or water
A) HORIZONTAL	1NM (1,850m)	1NM (1,850m)	
B) VERTICAL	1,000ft	1,000ft	

3.1.2 Except that helicopters may operate with a flight visibility below 1,500m, clear of clouds and in sight of the ground or water, if manoeuvred at a speed that will give adequate opportunity to observe other traffic or any obstructions in time to avoid collision.

3.1.3 Except that in a controlled aerodrome traffic circuit, aircraft may fly closer vertically to cloud than 1,000ft to conform to normal circuit height.

3.1.4 Except where otherwise indicated in air traffic control clearances or specified by the appropriate ATS authority, VFR flights in level cruising flight when operated above 3,000ft from the ground or water, or a higher datum as specified by the appropriate ATS authority, shall be conducted at an altitude or flight level appropriate to the track as specified in the tables of cruising levels.

3.1.5 Except when a clearance is obtained from an air traffic control unit to operate as a Special VFR flight, VFR flights shall not take-off or land at an aerodrome within a control zone, or enter the aerodrome traffic zone or traffic circuit:

- (a) when the ceiling is less than 1,500ft, or
- (b) when the ground visibility is less than 8km.

3.1.6 VFR flights between ECT and MCT shall be conducted so that the aircraft is flown in conditions of ground visibility and distance from cloud equal to or greater than 16km and 3,000ft respectively; except that an ATC unit may authorise night training operations by radio equipped aircraft within the aerodrome traffic circuit to approved minima which shall not be less than ground visibility 8km and ceiling 1,500ft.

4 POSITION AND ALTITUDE REPORTING REQUIREMENTS

4.1 General

4.1.1 Position reports are used by ATS to permit the passing of flight or traffic information when necessary, to assist in the sequencing of traffic at controlled aerodromes and for SAR alerting purposes.

4.2 Enroute VFR Flights

4.2.1 VFR flights must maintain a listening watch on the appropriate frequency and must report position at intervals not exceeding 30 minutes. In the event of an aircraft being unable to establish contact within the stipulated period a position report is to be passed as soon as practicable.

4.2.2 Enroute position reports from aircraft operating VFR are to contain the following elements (as appropriate):

- (a) Identification
 - (i) radiotelephony callsign.
- (b) Position
 - (i) in relation to a significant geographical feature.
- (c) Time
 - (i) in minutes past the hour.
- (d) Level
 - (i) altitude or FL (state climbing or descending if not level flight).
- (e) ETA
 - (i) at destination or next landing point as appropriate.
- (f) Route
 - (i) to next significant position.
- (g) Request clearance
 - (i) to enter or transit class C airspace, if applicable.

5 AERODROME MET MINIMA FOR OPERATIONS IN CTR

5.1 General

5.1.1 Except when an ATC clearance is obtained to operate as a Special VFR flight, VFR flights must not take off from or land at an aerodrome within a CTR/C:

- (a) when the ceiling is less than 1,500ft; or
- (b) when the ground visibility is less than 8km.

5.2 MET Minima for Operation as VFR Flight by Night

5.2.1 Cloud ceiling 3,000ft and ground visibility 16km, except that an ATC unit may authorise night training operations by radio equipped aircraft within the aerodrome traffic circuit down to an approved minima which shall not be less than cloud ceiling 1,500ft and ground visibility 8km.

6 SPECIAL VFR FLIGHTS (SVFR)

6.1 Aerodrome Meteorological Minima

6.1.1 Meteorological minima for SVFR flights are shown in [Table ENR 1.2 - 2](#).

Table ENR 1.2 - 2
VFR Aerodrome Meteorological Minima

DAY	
Visibility	1,500m
Distance from cloud	Clear of cloud and in sight of ground or water

6.2 General

6.2.1 When traffic permits, an ATC unit may authorise an aircraft to operate in a CTR Class C as a SVFR flight provided that the flight is conducted clear of cloud, beneath the ceiling, with a flight visibility of not less than 1,500m by day and in accordance with the ATC clearance.

6.2.2 The pilot-in-command of an aircraft authorised to operate as a SVFR flight shall comply with instructions issued by the ATC unit.

6.2.3 Authorisation to operate as a SVFR flight does not absolve the pilot from compliance with the Civil Aviation Rules regarding minimum safe heights.

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ENR 1.3 INSTRUMENT FLIGHT RULES

1 RULES APPLICABLE TO ALL IFR FLIGHTS

1.1 Classification of IFR Flights

1.1.1 Tonga Civil Aviation Regulations 1992:

- (a) flights in instrument MET conditions
- (b) flights by night
- (c) flights to points more than 100NM from land
- (d) flights for which an IFR flight plan has been submitted, and
- (e) such other flights as may be prescribed by the Secretary for Civil Aviation.

1.2 Responsibility of Pilot-in-Command

1.2.1 Tonga Civil Aviation Reg 1992 holds the pilot-in-command directly responsible for the avoidance of collision with other aircraft when flying in visual MET conditions while under IFR even though the flight is being conducted in accordance with ATC clearance.

1.2.2 The pilot-in-command of an aircraft shall, before beginning a flight, familiarise himself with all available information appropriate to the intended operation. Pre-flight action for flights shall include a careful study of available current weather reports and forecasts, taking into consideration fuel requirements and an alternative course of action if the flight cannot be completed as planned.

1.3 Routing to Avoid Hazardous MET Conditions

1.3.1 When ATC is aware that hazardous MET conditions exist along the route or flight path of the aircraft, the pilot will be warned of such conditions and, where possible in controlled airspace, ATC will offer the pilot alternative routing to avoid such conditions.

1.3.2 When alternative routing is not available, or the pilot elects to proceed through the conditions, increased separation may be provided by ATC.

1.3.3 In Class C airspace the pilot of an aircraft wishing to detour around adverse weather must obtain clearance from ATC. This is necessary to ensure that horizontal separation is not infringed.

1.4 Aircraft Equipment

1.4.1 Aircraft shall be equipped with suitable instruments and with navigation equipment appropriate to the route to be flown.

1.5 Change from IFR Flight to VFR Flight

1.5.1 An aircraft electing to change the conduct of its flight from compliance with the instrument flight rules to compliance with the visual flight rules shall, if a flight plan was submitted, notify the appropriate air traffic services unit specifically that the IFR flight is cancelled by using the phrase "CANCELLING IFR FLIGHT", and communicate the changes to be made to its current flight plan.

1.5.2 When an aircraft operating under the instrument flight rules is flown in or encounters visual meteorological conditions, it shall not cancel its IFR flight unless it is anticipated, that the flight will be continued for a reasonable period of time in uninterrupted visual meteorological conditions.

1.5.3 Within the Tonga Sector of the Auckland Oceanic FIR, flights must be conducted in accordance with the instrument flight rules (even if not operating in instrument meteorological conditions), when operating more than 100NM seawards from the shoreline in controlled airspace.

2 RULES APPLICABLE TO IFR FLIGHTS WITHIN CONTROLLED AIRSPACE

2.1 IFR flights shall comply with the provisions of 3.6 of ICAO Annex 2 to the Convention on International Civil Aviation when operated in controlled airspace.

2.1.1 An IFR flight operating in level cruising flight in controlled airspace shall be flown at a cruising level, or if authorised to employ cruise climb techniques, between two levels or above a level, selected from:

- (a) the tables of cruising levels in [Table ENR 1.7 - 3](#) or
- (b) a modified table of cruising levels, when so prescribed in accordance with Appendix 3 of ICAO Annex 2 for flight above FL410,

except that the correlation of levels to track prescribed therein shall not apply whenever otherwise indicated in air traffic control clearances or specified by the appropriate ATS authority in the Aeronautical Information Publication (AIP).

3 RULES APPLICABLE TO IFR FLIGHTS OUTSIDE CONTROLLED AIRSPACE

3.1 Cruising Levels

3.1.1 An IFR flight operating in level cruising flight outside of controlled airspace shall be flown at a cruising level appropriate to its track as specified in:

- (a) the tables of cruising levels in [Table ENR 1.7 - 3](#), except when otherwise specified by the appropriate ATS authority for flight at or below 3,000ft above mean sea level; or
- (b) a modified table of cruising levels, when so prescribed in accordance with Appendix 3 of ICAO Annex 2 for flight above FL410.

Note

This provision does not preclude the use of cruise climb techniques by aircraft in supersonic flight.

4 COMMUNICATIONS, POSITION REPORTS AND TRAFFIC INFORMATION OUTSIDE CONTROLLED AIRSPACE

4.1 General

4.1.1 An IFR flight operating outside controlled airspace but within or into areas or along routes designated by the appropriate ATS authority shall maintain a listening watch on the appropriate radio frequency and establish two-way communications, as necessary, with the air traffic services unit providing flight information service.

4.2 Position Reports

4.2.1 The pilot of an IFR flight operating outside controlled airspace is required to:

- (a) maintain a listening watch on the appropriate radio frequency; and
- (b) establish two-way communication as necessary with the ATS unit providing flight information; and
- (c) report:
 - (i) taxiing at unattended aerodromes
 - (ii) departure time as soon as practicable after departure from an unattended aerodrome
 - (iii) position enroute at intervals not exceeding 30 minutes
 - (iv) when changing level
 - (v) prior to entering controlled airspace
 - (vi) prior to commencing an instrument approach at an unattended aerodrome
 - (vii) joining the aerodrome traffic circuit at an unattended aerodrome
 - (viii) commencing missed approach procedures with intentions
 - (ix) after landing at unattended aerodromes.

4.3 Position Reporting at AFIS Aerodromes

4.3.1 Pilots of all aircraft operating outside controlled airspace are required to maintain a continuous listening watch on the frequency listed in the COM box on the aerodrome chart and make the inbound, in circuit, taking off, and in transit calls listed below. The first aircraft call is to be preceded by the name of the aerodrome followed by the words "FLIGHT SERVICE".

- (a) Inbound
 - (i) When overhead the navigation aid prior to commencing reversal turn.
 - (ii) When overhead the navigation aid outbound commencing initial approach.
 - (iii) When established on DME arc.
 - (iv) When commencing procedure or base turn leading to intermediate/final approach.
 - (v) When established on intermediate/final approach.
 - (vi) When the ground or water becomes continually visible and flight by instruments is no longer required (i.e. "Visual") and/or immediately before joining the aerodrome traffic circuit.
 - (vii) When commencing missed approach.
- (b) In the circuit
 - (i) Downwind when abeam the upwind end of the RWY or base leg as appropriate.
- (c) Taking off
 - (i) When about to taxi to the take-off position; and
 - (ii) Immediately before take-off. If leaving the aerodrome traffic circuit, the direction of flight should be indicated.

4.4 Position and Altitude Reporting — IFR Flights Entering an Aerodrome Traffic Circuit at Unattended Aerodromes

General

4.4.1 Pilots shall maintain a continuous listening watch on the frequency assigned and broadcast their position, altitude and intentions for the benefit of other traffic as listed below.

- (a) Inbound
 - (i) Immediately before joining the aerodrome traffic circuit.
- (b) In the circuit
 - (i) Downwind when abeam the upwind end of the RWY or base leg/final as appropriate if joining non-standard.
- (c) Taking off
 - (i) When about to taxi to the take-off position; and
 - (ii) Immediately before take-off. If leaving the aerodrome traffic circuit, the direction of flight should be indicated.
- (d) In transit
 - (i) At approximately 5NM from the aerodrome.
 - (ii) Each transmission is to be preceded by the name of the aerodrome, followed by the word "TRAFFIC".

Example

4.4.2 *"Niuafu'ou traffic, Twinotter, Royal Tongan 901, downwind, one thousand feet, landing, RWY 08".*

4.5 Separation of IFR Flights Outside Controlled Airspace

4.5.1 When a flight is being conducted under IFR outside controlled airspace, the pilot-in-command is responsible for maintaining separation from other traffic.

4.5.2 To assist pilots in providing their own separation from other traffic, the appropriate ATS unit will, in addition to passing collision hazard information as part of a FIS, on request from the pilot pass information on the movement of other IFR flights in the area:

- (a) prior to departure
- (b) prior to level change
- (c) prior to vacating controlled airspace
- (d) enroute as required
- (e) prior to commencing an instrument approach.

4.5.3 The phrase "NO REPORTED IFR TRAFFIC" will be used when no IFR flights are known to be in the area.

4.5.4 Pilots departing from unattended aerodromes may obtain traffic information from Fua'amotu Area Flight Information Service. Pilots should call Fua'amotu radio either directly or through another ATS Unit.

4.5.5 Information on the movement of other IFR flights will include information on IFR flights operating in the vicinity of the track of the aircraft concerned at the same level or at level through which the aircraft will pass.

4.6 Position and Altitude Reporting Enroute

Domestic IFR Flights.

4.6.1 Pilots must report position:

- (a) when over each designated compulsory reporting point, or if the route is not defined by reporting points, at intervals not exceeding 30 minutes;
- (b) prior to entry into controlled airspace;
- (c) at other times when so requested by ATS.

4.6.2 In addition, pilots must report reaching and leaving assigned levels (selected levels if outside controlled airspace).

4.6.3 Position reports must contain the following information in the order listed:

- (a) Identification
 - (i) Report radio callsign shown in the flight plan.
- (b) Position
 - (i) Use the identification of the navigation aid or name of reporting point over which the report is being made; or
 - (ii) Report DME distance from the ATC nominated navigation aid; or
 - (iii) Prefix the name of the reporting point by the word "abeam" when not immediately overhead the reporting point; or
 - (iv) Report bearing and distance from a significant geographical feature or navigation aid; or
 - (v) If the position cannot be defined as above, report position in latitude and longitude.

- (c) Time
 - (i) Reporting time in minutes past the hour. The time reported must be the actual time of the aircraft at the position and not the time of transmission.
- (d) Flight Level or Altitude
 - (i) Report FL or altitude to the nearest 100ft. In addition, if climbing or descending report "CLIMBING TO" or "DESCENDING TO" as appropriate and the level the aircraft is climbing or descending to.
- (e) Next Position and Time Over
 - (i) State the position at which the next report will be made and estimated time over the position in minutes past the hour.
- (f) ETA
 - (i) When the route is outside controlled airspace and not defined by designated reporting points, include ETA at the aerodrome of first intended landing, expressed in hours and minutes.

ENR 1.4 ATS AIRSPACE CLASSIFICATION

1 CLASSIFICATION OF AIRSPACES

1.1 General

1.1.1 ATS airspaces in Tonga Sector of the Auckland Oceanic FIR are classified and designated in accordance with the following:

1.2 Class A — TMA and CTA

1.2.1 IFR flights are permitted and all flights are subject to air traffic control services. IFR flights are separated from other IFR flights.

1.3 Class C — CTR, TMA and CTA

1.3.1 IFR and VFR are permitted and flights that are subject to air traffic control services are as follows:

1.3.2 Separation is required between:

- (a) IFR flights;
- (b) IFR and VFR flights;
- (c) IFR and special VFR flights; and
- (d) Special VFR flights when the flight visibility is reported to be less than 5km.

Traffic information must be provided to VFR flights about other VFR flights; and

Traffic avoidance advice must be provided to VFR flights when requested.


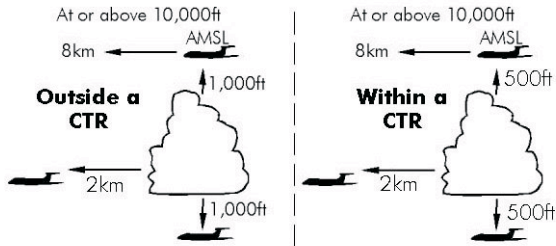
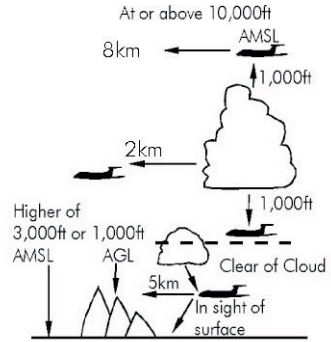
1.4 Class G — Elsewhere

1.4.1 IFR and VFR flights are permitted and receive flight information service if requested.

1.4.2 The requirements for the flights within each class of airspace are as shown in [Table ENR 1.4 - 1](#).

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Table TNR 1.4 - 1
Airspace Classification Table

		CONTROLLED AIRSPACE		UNCONTROLLED AIRSPACE
AIRSPACE CLASSIFICATION		A	C	G
I F R	SERVICES	Air Traffic Control Service	Air Traffic Control Service	Flight information service
	SPEED LIMITATIONS	Not applicable	Not applicable	Max 250kt below 10,000ft AMSL
	RADIO	Yes	Yes	Yes
	CLEARANCE	ATC Yes	ATC Yes	Not required
SEPARATION		IFR from IFR VFR NOT PERMITTED	IFR from IFR, SVFR, VFR VFR from IFR SVFR from SVFR when flight visibility is less than 5km	Not provided Not provided
V F R	SERVICES		(1) Air Traffic Control Service for separation from IFR. (2) VFR/VFR traffic information (and traffic avoidance advice on request)	Flight information service
	VMC MINIMA			
	SPEED LIMITATIONS		Max 250kt IAS below 10,000ft AMSL	Max 250kt IAS below 10,000ft AMSL
	RADIO		Yes	Yes
	CLEARANCE		ATC Yes	Not required

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ENR 1.5 HOLDING, APPROACH AND DEPARTURE PROCEDURES

1 HOLDING

1.1 General

1.1.1 The holding, approach and departure procedures in use are based on those contained in the latest edition of ICAO Doc 8168 — *Procedures for Air Navigation Services — Aircraft Operations* (PANS-OPS).

1.1.2 The holding and approach procedures in use have been based on the values and factors contained in Parts III and IV of Vol. I of the PANS-OPS. Holding speeds are shown in [Table ENR 1.5 - 1](#).

Table ENR 1.5 - 1
Maximum IAS for Holding Patterns

FLIGHT LEVEL (FL)	CATEGORY A AND B AIRCRAFT	JET AIRCRAFT	
		NORMAL CONDITIONS	TURBULENCE CONDITIONS
Up to FL140 inclusive	170kt	230kt	280kt or 0.80M, whichever is less
Above FL140 to FL200 inclusive	240kt		
Above FL200 to FL340 inclusive	265kt		
Above FL340	0.83M		

1.1.3 The speed of 280kt (0.80M) reserved for turbulent conditions should be used for holding only after prior clearance with ATC. The ATC clearance may include a requirement for an increase in the minimum holding altitude.

1.1.4 Aircraft unable to comply with the above speed restrictions are to advise ATC and request clearance for holding at an acceptable speed. This may result in an ATC requirement for an increase in the minimum holding altitude.

1.1.5 All turns are to be made at a bank angle of 25 degrees, or a rate of 3 degrees per second, whichever requires the lesser bank.

2 STANDARD HOLDING PATTERN

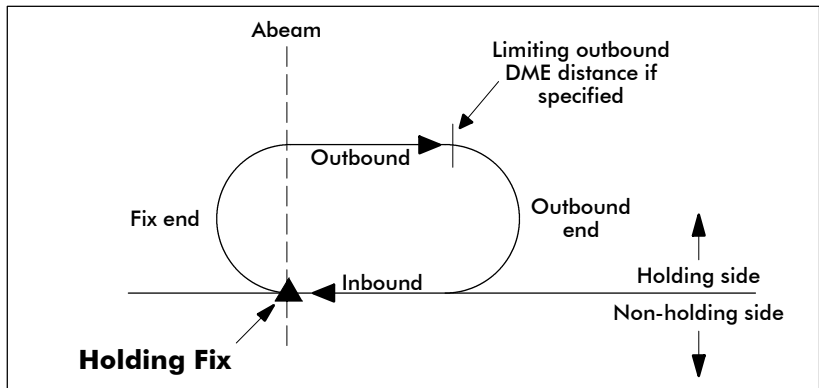
2.1 General

2.1.1 Outbound timing begins at the end of turn or abeam the fix, whichever occurs later.

2.1.2 All procedures depict tracks and pilots should attempt to maintain the track by making allowance for known wind by applying corrections both to heading and timing during entry and while flying in the holding pattern.

2.1.3 If the outbound leg length is based on a DME distance the outbound leg terminates as soon as the limiting DME distance is attained. The standard holding pattern is shown in [Figure ENR 1.5 - 1](#).

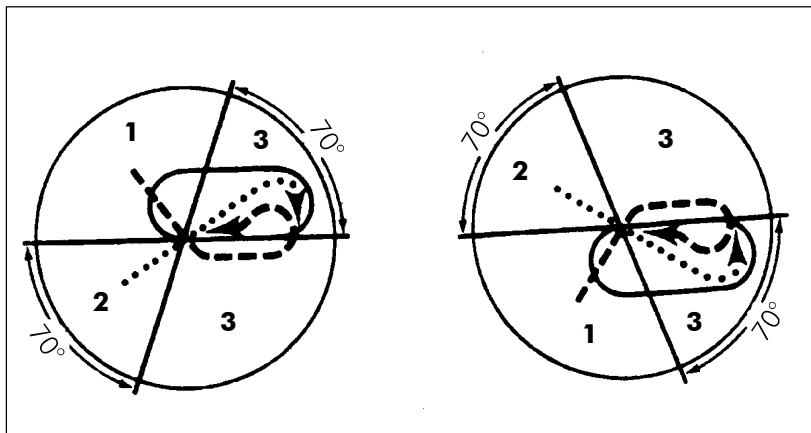
**Figure ENR 1.5 - 1
Standard Holding Pattern**



2.2 Entry Procedures

2.2.1 The entry into the holding pattern must be according to heading in relation to the three entry sectors shown in **Figure ENR 1.5 - 2**, recognising a zone of flexibility of 5° on either side of sector boundaries. In the case of holding on a VOR/DME fix the entry track is limited to either the VOR radial or DME arc.

Figure ENR 1.5 - 2
Holding Pattern Entry Sectors



ENR - 1

Sector 1 Procedure (Parallel Entry)

2.2.2 Having reached the fix, the aircraft is turned onto an outbound heading for the appropriate period of time or until reaching the DME limiting outbound distance, if published, then:

- the aircraft is turned onto the holding side to intercept the inbound track or to return to the fix; and then
- on second arrival over the holding fix, the aircraft is turned to follow the holding pattern.

Sector 2 Procedure (Offset Entry)

2.2.3 Having reached the fix, the aircraft is turned onto a heading to make good a track making an angle of 30° from the reciprocal of the inbound track on the holding side, then:

- (a) the aircraft will fly outbound:
 - (i) for the appropriate period of time, or
 - (ii) until the appropriate limiting DME distance is attained, where distance is specified; then
- (b) the aircraft is turned to intercept the inbound holding track; then
- (c) on second arrival over the holding fix, the aircraft is turned to follow the holding pattern.

Sector 3 Procedure (Direct Entry)

2.2.4 Having reached the fix the aircraft is turned to follow the holding pattern.

DME Arc Entry

2.2.5 Having reached the fix the aircraft is required to enter the holding pattern in accordance with either the Sector 1 or Sector 3 entry procedure.

Time/Distance Outbound (Sector 1 and 2 Procedures)

2.2.6 The still time for flying the outbound entry heading should not exceed one minute if at FL140 or below, or one and a half minutes if above FL140. Where DME is available, the length of the outbound leg may be specified and flown in terms of distance instead of time.

2.3 Holding Procedures and Time — Still Air Conditions

2.3.1 Having entered the holding pattern, on the second and subsequent arrivals over the fix the aircraft is turned to fly the outbound track.

(a) Continue outbound:

- (i) For one minute if at FL140 or below or for one and a half minutes if above FL140, or
- (ii) until the appropriate limiting DME distance is attained, where distance is specified; then

(b) turn so as to realign the aircraft on the inbound track.

2.4 Holding Procedures and Timing — Wind Effect

2.4.1 Due allowance must be made by the pilot in heading and timing to compensate for the effects of wind to ensure the inbound track is regained before passing the holding fix inbound. In making these corrections full use should be made of the indications available from the aid and estimated or known wind. The limiting DME distance always terminates the outbound leg.

2.5 Holding Procedures and Timing — Departing the Pattern

2.5.1 When clearance is received specifying the time of departure from the holding point, the pilot should adjust the pattern within the limits of the established holding procedure in order to leave the holding point at the time specified.

2.6 Obstacle Clearance — Holding Area

2.6.1 The holding area includes the basic holding area and the entry area:

- (a) The basic holding area at any particular altitude is the airspace required at the altitude to encompass a standard holding pattern based on the allowances for the aircraft speed, wind effect, timing errors, holding fix characteristics, etc.
- (b) The entry area includes the airspace required to accommodate the specified entry procedures.

2.7 Obstacle Clearance — Buffer Area

2.7.1 The buffer area is the area extending 5NM beyond the boundary of the holding area within which the height and nature of obstacles are taken into consideration when determining the minimum holding altitude usable in the holding pattern associated with the holding area.

2.8 Obstacle Clearance — Minimum Holding Altitude

2.8.1 The minimum permissible holding altitude will be based initially on a clearance of at least 1,000ft above obstacles in the holding area. The minimum value is increased over areas designated as mountainous terrain.

2.9 Precautionary Holding

Phraseology and Procedures

2.9.1 To facilitate the provision of procedurally conflict-free flight paths, precautionary holding instructions may be issued to enroute and arriving flights.

2.9.2 The following phraseology and procedures will be used for domestic operations (standard holding instructions will be issued to international flights).

Phraseology

2.9.3 Examples:

- (a) "Descend to FL130 precautionary hold Sea Horse"
- (b) "Maintain 7,000ft precautionary hold 25 DME"

Procedure

2.9.4 The precautionary hold:

- (a) May be cancelled prior to the aircraft reaching the designated holding point: "Cancel hold 25 DME".
- (b) If not cancelled, will mean the aircraft must join the designated pattern with an expected onward clearance time/expected approach time of ATA over the REP plus five minutes.

2.9.5 Onward clearance will be given within the five minutes or a new clearance will be issued.

Note

Although the hold may often be cancelled prior to reaching the aid, cancellation must not be anticipated and normal preparatory action to join the holding pattern must be taken.

I The procedure shall be used for local aircraft only.

3 ARRIVING FLIGHTS

3.1 General

3.1.1 Traffic above FL245 entering the Tonga Sector of the Auckland Oceanic FIR arriving at Fua'amotu can expect descent clearance when traffic permits to FL250 from Auckland Oceanic on HF/VHF. Contact instructions will be passed on HF prior to FL250.

3.1.2 Traffic below FL245 entering the Tonga Sector of the Auckland Oceanic FIR from adjacent airspace, will be advised by ATS on HF contact instructions prior to the boundary. Fua'amotu will provide air traffic services below FL245 outside controlled airspace within the Tonga Sector of the Auckland Oceanic FIR during hours of watch. Auckland Oceanic will be responsible for the provision of air traffic services at any time when Fua'amotu Tower is off watch.

3.1.3 To facilitate the provision of procedurally conflict-free flight paths, precautionary holding instructions may be issued to enroute and arriving flights.

3.1.4 The precautionary hold instruction may be cancelled prior to the aircraft reaching the designated holding point; however, cancellation must not be anticipated and normal preparatory action to join the holding pattern must be taken. If not cancelled, the aircraft must join the designated holding pattern with an expected onward clearance time of ATA over the REP plus 5 minutes.

3.1.5 Onward clearance will be given within 5 minutes of ATA over the REP or a new onward clearance time will be issued.

3.1.6 ATC will advise the pilot of an IFR flight the ATC preferred type of approach.

3.1.7 Pilots should advise ATC as soon as possible if the nominated approach is not acceptable and advise their intentions.

3.2 Aircraft Speed Restrictions

3.2.1 In order to facilitate the control of aircraft, general speed restrictions are applied in the vicinity of aerodromes and during procedural manoeuvres. Such restrictions are applied to conserve airspace, improve separation and facilitate procedural arrivals and departures.

3.2.2 Aircraft speed shall not exceed 250kt IAS below 10,000ft AMSL.

4 APPROACH PROCEDURES

4.1 The Instrument Approach Procedure

4.1.1 This term is used to describe a series of predetermined manoeuvres for the orderly transfer of an aircraft under instrument flight conditions from the arrival segment of the approach to a landing, or to a point from which a landing can be made.

4.2 Instrument Approach Fixes

4.2.1 Where positive fixes are available on an instrument approach procedure, either by DME, NDB, VOR or Marker, they may be designated to identify the segment to be commenced. These are:

- (a) initial approach fix (IAF)
- (b) intermediate approach fix (IF)
- (c) final approach fix (FAF) or final approach point
- (d) missed approach point (MAPt)

4.3 Instrument Approach Segments

4.3.1 An instrument approach procedure may be divided into five separate segments as detailed below. Depending on the type of procedure, all of the first three segments need not necessarily be established.

Arrival Segment

4.3.2 That segment of an instrument approach procedure that connects the enroute phase to an initial approach fix. An arrival segment may consist of published arrival routes.

Initial Approach Segment

4.3.3 That segment of an instrument approach procedure between the initial approach fix and the intermediate approach fix or where applicable, the final approach fix or point. (The final approach point is the intersection of the normal glide path and the minimum altitude specified for the previous segment.) The initial approach segment includes any DME arc or reversal procedure.

Intermediate Approach Segment

4.3.4 That segment of an instrument approach procedure between either:

- (a) the intermediate approach fix and the final approach fix or point; or
- (b) the end of a reversal or dead reckoning track procedure and the final approach fix or point as appropriate.

Final Approach Segment

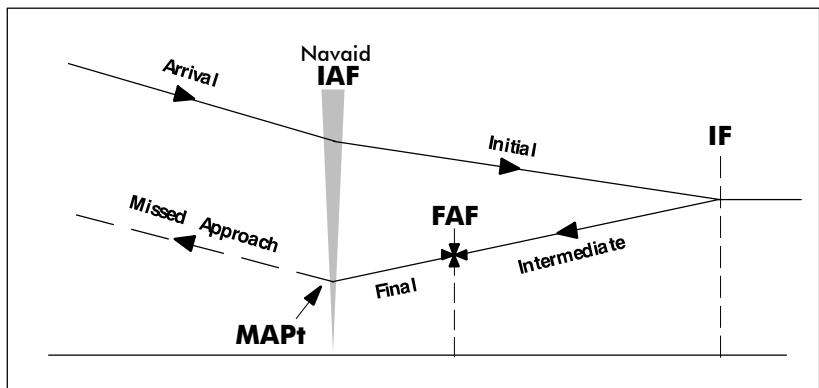
4.3.5 That segment of an instrument approach procedure in which alignment and descent for landing are accomplished. It begins at the final approach fix or point and ends at the missed approach point.

Missed Approach Segment

4.3.6 That segment of an instrument approach between the missed approach point and a specified altitude or point. (The missed approach point is that point at or before which the prescribed missed approach procedure must be initiated in order to ensure that the minimum obstacle clearance is not infringed.)

4.3.7 Figure ENR 1.5 - 3 shows the typical segments and fixes that may be specified on a tear-drop instrument approach procedure.

**Figure ENR 1.5 - 3
Tear-drop Approach Segments**



4.4 Procedure Speeds

4.4.1 As shown in [Table ENR 1.5 - 2](#), a specified range of landing speeds for each category of aircraft has been assumed for use in calculating airspace and obstacle clearance requirements for each procedure. An aircraft may use a higher category provided that:

- (a) the minima and restrictions for the higher category are authorised and complied with; and
- (b) ATC has been advised.

4.4.2 For further information on aircraft approach categories see [paragraph 4.7](#).

Table ENR 1.5 - 2
Speeds for Procedure Calculations

CAT	V _{at}	RANGE OF SPEEDS FOR INITIAL APPROACH	RANGE OF SPEEDS FOR FINAL APPROACH	MAXIMUM SPEED FOR CIRCLING APPROACH	MAXIMUM SPEED FOR MISSED APPROACH #
A	Less than 91kt	90 – 150kt (110kt*)	70 – 100kt	100kt	110kt
B	91kt or more but less than 121kt	120 – 180kt (140kt*)	85 – 130kt	135kt	150kt
C	121kt or more but less than 141kt	160 – 240kt	115 – 160kt	180kt	240kt
D	141kt or more but less than 166kt	185 – 250kt	130 – 185kt	205kt	265kt

Notes

V_{at} — speed at threshold based on 1.3 x V_s in the landing configuration at maximum certified landing weight

* — maximum speed for reversal procedures

— unless otherwise specified on instrument approach chart

4.5 Minima

Non-Precision Approach

4.5.1 Straight-in and circling minimum descent altitude (MDA) is a specified altitude below which descent may not be made without visual reference. When visual reference has been established on a circling approach, descent below MDA is at the discretion of the pilot provided that:

- (a) visual reference can be maintained throughout the circling approach; and
- (b) the landing threshold or approach lights or other marking identifiable with the approach end of the runway are visible; and
- (c) the required obstacle clearance can be maintained to a position from where the remaining flight path distance to the intended touch-down point will allow a constant rate of descent.

4.5.2 MDA ensures compliance with the required obstacle clearance criteria and where applicable it includes a margin based on operational considerations of ground and airborne equipment characteristics, aircraft performance, meteorological conditions, aerodrome characteristics, location of guidance aids relative to the runway and mountainous terrain. Operators may wish to increase the MDA to account for pilot qualifications and experience.

Note

For a straight-in approach, the angle formed by the final approach track on the runway centreline may be as much as 30 degrees.

Precision Approach

4.5.3 Decision Altitude (DA) is a specified altitude in the precision approach at which a missed approach must be initiated if the required visual reference to continue the approach has not been established.

4.5.4 The required visual reference means that section of the visual aids, or of the approach area, which should have been in view for sufficient time for the pilot to have made an assessment of the aircraft position and rate of change of position in relation to the desired flight path.

4.5.5 Decision altitude ensures compliance with the appropriate obstacle clearance criteria and where applicable, includes a margin based on operational considerations of ground and airborne equipment characteristics, aircraft performance, meteorological conditions, aerodrome characteristics and altimetry. Operators may wish to increase the DA to account for pilot qualifications and experience.

4.6 Application of Minima

Minimum Descent Altitude (MDA)

4.6.1 If at MDA any element of the aerodrome meteorological minima is below that prescribed, the pilot is to maintain MDA until not later than the designated missed approach point is reached and then initiate the missed approach procedure.

Decision Altitude (DA)

4.6.2 If at DA the required visual reference to continue the approach has not been established, the pilot must initiate the missed approach procedure immediately.

4.7 Aircraft Approach Categories

4.7.1 IFR straight-in and circling to land minima are depicted on Instrument Approach Charts in accordance with "Aircraft Approach Categories".

4.7.2 There are four aircraft approach categories published in Tonga under ICAO PANS OPS II Criteria which caters for ranges of speeds in terms of $1.3V_s$, where V_s is stall speed in the landing configuration at maximum certificated landing weight. A list of common aircraft types in accordance with their category is shown in [Table ENR 1.5 - 3](#).

Table ENR 1.5 - 3
Aircraft Category

CATEGORY $1.3V_s$ (KNOTS IAS)		AIRCRAFT TYPES
A	Less than 91kt	Cessna 402, Piper Seneca, Britten Norman Islander, DHC6, PA31, Navajo
B	91kt or more but less than 121kt	Fokker F27, BA HS748, Cessna 421, ATR 72, Metro III, Saab 340, Bandeirante, DH8A
C	121kt or more but less than 141kt	B737 Series, B727 Series, BAe 146, B767-200, Airbus 318, 319, 320, 321
D	141kt or more but less than 166kt	B747-200 Series, MD11, B767-300
ATC must be notified whenever an aircraft is to be operated at different category to that contained in the above table.		

4.8 Landing Minima Format

	Height above THR ELEV		Height above AD ELEV, or THR ELEV if THR ELEV more than 7ft below AD ELEV	
DA				
CATEGORY	A	B	C	D
ILS	360 (330) – 1200			
LLZ	440 (410) – 1500			
CIRCLING	600 (550) – 1900	700 (650) – 2800	800 (750) – 3700	900 (850) – 4600
MDA	Height above aerodrome elevation		Visibility	

4.9 Instrument Approach Procedure Timing

Tear-drop procedures

4.9.1 To ensure that the obstacle clearance margins are not infringed, no increase in the instrument approach procedure outbound time or outbound DME distance is authorised, except that where aircraft are operated on the outbound leg of the tear-drop instrument approach procedure at indicated air speeds significantly lower than the maximum authorised for the procedure, the outbound timing may be adjusted in accordance with [Table ENR 1.5 - 4](#).

Table ENR 1.5 - 4
Instrument Approach Procedure — Timing Adjustment

PROCEDURE TIMING SHOWN ON CHART	MODIFIED PROCEDURE TIMING RELATED TO AIRCRAFT APPROACH SPEED (IAS)	
	91 – 110kt	70 – 90kt
2 minutes	2.5 minutes	3 minutes
3 minutes	4 minutes	4.5 minutes

4.9.2 Outbound time or DME distance may be shortened, provided that the wind velocity at the relevant altitudes has been confirmed by an immediately preceding instrument approach to the effect that minimum altitude may be reached at an acceptable descent rate during final approach.

4.10 Position Reporting During Instrument Approach at a Controlled Aerodrome

4.10.1 Unless otherwise instructed by ATC, aircraft cleared to make an instrument approach must report:

- (a) When overhead the navigation aid prior to commencing reversal turn.
- (b) When overhead the navigation aid outbound commencing initial approach.
- (c) When established on DME arc.
- (d) When commencing procedure or base turn leading to intermediate/final approach.
- (e) When established on intermediate/final approach.
- (f) When the ground or water becomes continually visible and flight by instruments is no longer required (i.e. "Visual").
- (g) When commencing missed approach.

4.11 Visual Approach — Controlled Airspace

4.11.1 IFR flights in controlled airspace may be cleared for visual approaches provided the pilot:

- (a) specifically states "REQUEST VISUAL APPROACH", and
- (b) can maintain visual reference to the terrain, and
- (c) the reported ceiling is not below the approved initial approach level for the aircraft so cleared, or
- (d) the pilot reports, at the initial approach level or at any time during the instrument approach procedure, that the meteorological conditions will permit a visual approach and that there is a reasonable assurance that the landing can be accomplished.

4.11.2 An aircraft operating under IFR and making a visual approach remains an IFR flight and is subject to ATC clearances for the purpose of providing separation.

4.11.3 When cleared by ATC for a visual approach, further descent is unrestricted except when a specific restriction or requirement is included with the clearance for a visual approach or is included in a subsequent clearance. Any ATC altitude restriction remains in force until specifically cancelled. As well, ATC may require a pilot to position by reference to geographic features.

4.11.4 ATC may nominate a visual approach by day only, when the visibility is at least 16km and the ceiling is at least 1,000ft above the applicable instrument approach procedure commencement altitude.

4.11.5 If visual reference to terrain is established before completion of an instrument approach procedure, the entire procedure must nevertheless be executed, unless the pilot requests and is cleared for a visual approach.

4.11.6 For a visual approach at night, it is essential that the pilot has the runway lights in sight. Sighting only of the aerodrome beacon, REILs, circling guidance lights or approach lights is insufficient.

4.12 Visual Approach — Uncontrolled Airspace

4.12.1 Pilots in uncontrolled airspace may carry out a visual approach provided the pilot has the aerodrome in sight, can maintain visual reference and:

- (a) the ceiling is not below the initial approach level; or
- (b) the pilot has reasonable assurance at the initial approach level or at any time during the instrument approach procedure that the meteorological conditions will permit a visual approach and landing to be accomplished.

4.13 Visual Reference — Descent Below Minimum Altitude or Minimum Descent Altitude

4.13.1 Pilots carrying out an instrument approach may continue descent below minimum altitude, minimum descent altitude or decision altitude, provided:

- (a) by day, continuous visual reference with the ground along the flight path has been established and can be maintained; and
- (b) by night, the circling guidance lighting and/or approach lighting and aerodrome lighting is in sight and can be maintained;
- (c) the visibility is equal to or greater than that prescribed for the procedure; and
- (d) the aircraft is in a position from which a descent to a landing on the intended runway can be made using normal manoeuvres and descent rates to the touchdown zone.

4.14 IFR Alternate Aerodrome Minima

4.14.1 Civil Aviation Rule 91.405 prescribes IFR alternate aerodrome requirements.

4.14.1 An aerodrome shall not be listed as an alternate aerodrome unless the weather forecast at the time of submitting the flight plan indicates that, at the estimated time of arrival, the ceiling and visibility at that aerodrome will be at or above the following weather minima:

- (a) If an instrument approach procedure with alternate minima has been prescribed for the aerodrome, the specified alternate aerodrome minima for that instrument approach procedure.
Alternate aerodrome minima prescribed under CAR 19.151(a) are listed in Table ENR 1.5-5.
- (b) If an instrument approach procedure without alternate minima has been prescribed, the following minima:
 - (i) for a precision approach procedure, ceiling of 600ft, or 200ft above DA/DH, whichever is the higher, and visibility of 3000m, or 1000m more than the prescribed minimum, whichever is the greater; and
 - (ii) for a non-precision approach procedure, ceiling of 800ft or 200ft above MDA, whichever is the higher, and visibility of 4000m or 1500m more than the prescribed minimum, whichever is the greater.
- (c) If no instrument approach procedure has been prescribed for the alternate aerodrome, the ceiling and visibility minima prescribed in CAR Part 91 Subpart D for VFR operation for descent below the minimum altitude for IFR flight prescribed under CAR 91.423.

Table ENR 1.5-5
IFR Alternate Aerodrome Minima

AERODROME	APPROACH	AIRCRAFT CATEGORY			
		A	B	C	D
Fua'amotu	Non Precision	800–4000		900–6	
Ha'apai	Non Precision	(Day only) 800–4000	(Day only) 800–5	NA	
Vava'u	Non Precision	(Day only) 1000–4000	(Day only) 1000–5	(Day only) 1100–6	NA

5 DEPARTING FLIGHTS

5.1 General

5.1.1 Aircraft departing from Fua'amotu for levels above FL245 can expect their ATC clearance via Fua'amotu Tower prior to start. HF contact instructions will be passed on by Fua'amotu Tower after departure. During hours of watch Fua'amotu will provide air traffic services below FL245 outside controlled airspace within the Tonga Sector of the Auckland Oceanic FIR.

5.1.2 Detailed instructions with regard to routes, turns etc. may be issued prior to or after take-off.

5.1.2.1 Departing flights that require ATC clearance prior to taxi shall notify Tower 10 minutes prior to start-up.

5.1.2.2 All domestic operations shall request start-up clearance preferably 5 minutes prior to engine start.

5.1.3 Published departure procedures provide routing to avoid most high terrain which may be relatively close to the aerodrome. Where this is not possible, minimum set heading altitudes or visual segments will be prescribed. In emergency circumstances, however, terrain clearance cannot be guaranteed under all conditions of operation, due to aircraft performance.

5.1.4 The pilot-in-command must consider the one engine inoperative climb performance of the aircraft in relation to the height of terrain over which the climb is planned. Where adequate terrain clearance in IMC under the ambient conditions cannot be ensured it must be determined before departure that, in the event of engine failure prior to reaching MSA, or the level acceleration altitude, adequate action can be taken to protect the aircraft. It is expected that this action will normally involve a turn to climb out over the sea until either MSA is reached or approval is granted for a re-join for approach and landing.

5.1.5 Departure procedures may consist of:

- (a) A standard instrument departure procedure (SID).
- (b) By day only, having due regard to prevailing MET conditions, a visual departure maintaining own terrain clearance to route MSA or set heading point and altitude.
- (c) A specified track.

5.1.6 Aircraft are to intercept the specified departure track by the shortest practical means after take-off, unless otherwise promulgated in the appropriate departure procedure.

5.1.7 Where no departure procedures are promulgated for a route, the pilot-in-command is to ensure that the climb performance of the aircraft is adequate for providing terrain clearance prior to reaching minimum safe altitude.

5.2 Standard Instrument Departure (SID)

5.2.1 Standard Instrument Departures (SID) are used to standardise departure instructions, reduce the possibility of RTF congestion, reduce the chance of error in aircraft routing and provide a positive routing for aircraft suffering communications failure.

5.2.2 The SID provides in both diagrammatic and narrative form the direction of turn, headings, track and in some cases altitude requirements. Where tracking to or from a navigation aid is not possible, desired tracks are shown and due allowance for wind is to be made. Aircraft are to continue climbing throughout the SID unless otherwise instructed.

5.2.3 SIDs are identified by departure runway, and direction of destination.

5.2.4 All departure procedures including SIDs, designed to ICAO PANS-OPS II criteria, portray the minimum net climb gradient to achieve the designed obstacle clearance margins for the desired tracks to be flown.

5.2.5 Operators or pilots should establish procedures to ensure compliance with the SID. The application of a performance margin on the published climb requirements is at the operator's/pilot's discretion taking into account the achievable climb performance of the aircraft and the means of monitoring the gradient achieved.

5.2.6 When it is not possible to nominate a specified SID, ATC will issue any required departure instructions in plain language.

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ENR 1.6 RADAR SERVICES AND PROCEDURES

1 SERVICES

1.1 General

1.1.1 Nil.

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ENR 1.7 ALTIMETER SETTING PROCEDURES

1 INTRODUCTION

1.1 General

1.1.1 The altimeter setting procedures in use in Tonga generally conform to those contained in ICAO Doc 8168, Vol. I, Part 6 and are given in full below.

1.1.2 QNH reports and temperature information for use in determining adequate terrain clearance are provided by the ATS unit (aerodrome control tower or flight service station) serving the aerodrome during its hours of watch. QNH values are given in hectoPascals, rounded down to the nearest whole hectoPascal.

1.1.3 For altimeter setting procedures within the Auckland Oceanic FIR, refer to AIP — New Zealand.

2 BASIC ALTIMETER SETTING PROCEDURES

2.1 General

2.1.1 The transition altitude in Tonga is 13,000ft, and the transition level is FL150.

2.1.2 Vertical positioning of aircraft when at or below the transition altitude is expressed in terms of altitude, whereas such positioning at or above the transition level is expressed in terms of flight levels. While passing through the transition layer, vertical positioning is expressed in terms of altitude when descending and in terms of flight levels when ascending. Within the Tonga Sector of the Auckland Oceanic FIR, the transition layer is not available for cruising where QNH zones are established, and is to be used only when ascending or descending.

2.1.3 The transition layer between the transition altitude of 13,000ft and the transition level of FL150 provides adequate separation between aircraft using a zone QNH setting and aircraft operating on the standard pressure value (1013.2hPa) when the QNH is above 980hPa. However, when a zone QNH is 980hPa or lower, the lowest usable flight level above the QNH zone shall be FL160.

2.1.4 Flight level zero is located at the atmospheric pressure level of 1013.2 hPa. Consecutive flight levels are separated by a pressure interval corresponding to 500ft in the standard atmosphere.

2.1.5 Examples of the relationship between flight levels and altimeter indications are given in [Table ENR 1.7 - 1](#).

Table ENR 1.7 - 1
Flight Level and Altimeter Indications

FLIGHT LEVEL (NUMBER)	ALTIMETER INDICATION (FT)
10	1,000
15	1,500
20	2,000
50	5,000
100	10,000
150	15,000
200	20,000

2.1.6 A QNH altimeter setting is made available to aircraft in departure information prior to start-up.

2.1.7 Aircraft required to maintain vertical position by reference to a QNH altimeter setting must use the appropriate area QNH for flight at or below the transition altitude except that the appropriate aerodrome QNH must be used for:

- (a) take-off, landing and flight within an aerodrome traffic circuit;
- (b) the intermediate and final approach of an instrument approach procedure;
- (c) flight in a CTR.

2.1.8 Vertical positioning of aircraft during climb is expressed in terms of altitudes until reaching the transition altitude above which vertical positioning is expressed in terms of flight levels.

2.1.9 Within the Tonga Sector of the Auckland Oceanic FIR, aircraft operating at or below the transition altitude must maintain vertical position by reference to the appropriate zone QNH, except that aircraft taking off or operating within a CTR must use the appropriate aerodrome QNH.

2.2 Take-off and Climb

2.2.1 Aircraft departing from an aerodrome where no QNH value is available are required to set the aerodrome elevation on the altimeter prior to departure and obtain the appropriate altimeter setting as soon as possible, and in any case, before entering instrument meteorological conditions.

2.3 Vertical Separation — Enroute

2.3.1 Vertical separation during enroute flight shall be expressed in terms of flight levels, or in terms of altitudes for aircraft at or below the transition altitude in a QNH zone.

2.3.2 IFR flights, and VFR flights above 3,000ft, when in level cruising flight shall be flown at such altitudes or flight levels, corresponding to the magnetic tracks shown in [Table ENR 1.7 - 3](#), so as to provide the required terrain clearance.

Note

Some of the lower levels in [Table ENR 1.7 - 3](#) may not be usable due to terrain clearance requirements.

2.4 Approach and Landing

2.4.1 A QNH altimeter setting is made available to inbound flights in arrival information by the unit providing approach control service, or the unit providing AFIS, at the destination aerodrome. A QNH altimeter setting is also made available in clearance to enter the traffic circuit by the unit providing aerodrome control service.

2.5 QFE Altimeter Settings

2.5.1 QFE altimeter settings are not available.

2.6 Missed Approach

2.6.1 The relevant portions of 2.1, 2.2 and 2.4 shall be applied in the event of a missed approach.

3 DESCRIPTION OF QNH ZONES

3.1 General

3.1.1 There is one QNH zone in Tonga as shown in [Table ENR 1.7 - 2](#).

Table ENR 1.7 - 2
QNH Zones

NAME	DESCRIPTION
TONGA	Coincident with Fua’amotu CTA/C Surface to 13,000ft AMSL

4 PROCEDURES APPLICABLE TO OPERATORS (INCLUDING PILOTS)

4.1 Flight Planning

4.1.1 The levels at which a flight is to be conducted shall be specified in a flight plan:

- (a) in terms of flight levels if the flight is to be conducted at or above the transition level, or at any level over the high seas;
- (b) in terms of altitudes if the flight is to be conducted within the Tonga QNH zones; or
- (c) as “VFR” if the flight is to be conducted in accordance with the visual flight rules.

5 TABLES OF CRUISING LEVELS

5.1 General

5.1.1 Unless authorised by ATC during flight within controlled airspace, cruising levels within Tonga must be in accordance with Table ENR 1.7 - 3.

Table ENR 1.7 - 3
Table of Cruising Levels

	000° – 179°		180° – 359°	
	IFR	VFR	IFR	VFR
ALTITUDE	1,000		2,000	
	3,000	3,500	4,000	4,500
	5,000	5,500	6,000	6,500
	7,000	7,500	8,000	8,500
	9,000	9,500	10,000	10,500
	11,000	11,500	12,000	12,500
	13,000	up to FL195		up to FL185
FLIGHT LEVEL NUMBER	150		160	
	170		180	
	etc.		etc.	
	up to 230		up to FL240	

Notes

The levels between 13,000ft and FL150 are not available for level flight.

FL150 must not be used as a cruising level when the area QNH is 980hPa or less.

For operations above FL245, refer to the AIP — New Zealand.

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ENR 1.8 REGIONAL SUPPLEMENTARY PROCEDURES

1 INTRODUCTION

1.1 General

1.1.1 Nil.

Intentionally Blank

ENR 1.9 AIR TRAFFIC FLOW MANAGEMENT (ATFM)

1 INTRODUCTION

1.1 General

1.1.1 Nil.

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ENR 1.10 FLIGHT PLANNING (RESTRICTION, LIMITATION OR ADVISORY INFORMATION)

1 PROCEDURES FOR THE SUBMISSION OF A FLIGHT PLAN

1.1 General

1.1.1 A flight plan shall be submitted in accordance with ICAO Annex 2, 3.3.1 prior to operating:

- (a) any IFR flight;
- (b) any VFR flight (including special VFR and controlled VFR flights) in the Tonga Sector;
- (c) any flight within an aerodrome traffic circuit when an ATC service is being provided.

1.2 Time of Submission

1.2.1 Except for repetitive and standard flight plans, a flight plan shall be submitted at least 30 minutes prior to departure, taking into account the requirements of ATS units in the airspace along the route to be flown for timely information.

1.3 Place of Submission

1.3.1 All flight plans shall be submitted at the AIS Briefing Office, Fua'amotu International Airport and all other aerodromes to submit to ATS Unit at AD of departure.

1.3.2 During hours of watch and subject to workload, a flight plan may be submitted by RTF.

1.4 Contents and Form of a Flight Plan

1.4.1 ICAO Flight Plan forms are available at AIS Briefing Office, Fua'amotu International Airport and ATS Units at aerodrome of departure. The instructions for completing those forms shall be followed. For the completion of the ICAO Flight Plan form see [section 1.6](#).

1.4.2 Flight plans concerning international IFR flights along ATS routes need to include FIR boundary estimates.

1.4.3 When a flight plan is submitted by telephone or facsimile, the sequence of items in the flight plan shall be strictly followed.

1.5 Adherence to ATS Route Structure

1.5.1 All flight plans shall be submitted for published ATS routes. Where this is not possible for the entire flight or any portion thereof, the relevant parts of the instructions for completing a flight plan shall be followed.

1.6 Completing the ICAO Flight Plan Form

1.6.1 Adhere to the prescribed formats and manner of specifying data as follows:

- (a) commence inserting data in the first place provided;
- (b) where excess space is available leave unused spaces blank;
- (c) insert all clock times in 4 figures UTC;
- (d) insert all estimated elapsed times in 4 figures (hours and minutes);
- (e) areas preceding Item 3 are for ATS use.

Instructions for Insertion of Data

1.6.2 Complete Items 7 to 19 as indicated in the following sections.

Note

Item numbers on the form are not consecutive, as they correspond to Field Type numbers in ATS messages.

ITEM 7: AIRCRAFT IDENTIFICATION (MAXIMUM 7 CHARACTERS)

1.6.3 **INSERT** one of the following aircraft identifications, not exceeding 7 characters:

- (a) the registration marking of the aircraft (e.g. A3 ABC5, N1234D), when in radiotelephony the callsign to be used by the aircraft will consist of this identification alone (e.g. A3 ABC5), or preceded by the ICAO telephony designator for the aircraft operating agency (e.g. AIRFLIGHT A3 ABC5);

OR

- (b) the ICAO designator for the aircraft operating agency followed by the flight identification (AFT12, TON710), when in radiotelephony the callsign to be used by the aircraft will consist of the ICAO telephony designator for the operating agency followed by the flight identification (AIRFLIGHT12, TONGA 710).

ITEM 8: FLIGHT RULES AND TYPE OF FLIGHT (ONE OR TWO CHARACTERS)**FLIGHT RULES**

1.6.4 **INSERT** one of the following letters to denote the category of flight rules with which the pilot intends to comply:

I	if IFR	
V	if VFR	
Y	if IFR first	and specify in Item 15 the point or points where a change of flight rules is planned
Z	if VFR first	

TYPE OF FLIGHT

1.6.5 **INSERT** one of the following letters to denote the type of flight:

S	if scheduled Air Service
N	if non-scheduled Air Transport Operation
G	if General Aviation
M	if Military
X	if other than any of the defined categories above

ITEM 9: NUMBER AND TYPE OF AIRCRAFT AND WAKE TURBULENCE CATEGORY**NUMBER OF AIRCRAFT (1 OR 2 CHARACTER)**

1.6.6 **INSERT** the number of aircraft, if more than one.

TYPE OF AIRCRAFT (2 TO 4 CHARACTERS)

- (a) **INSERT** the appropriate designator as specified in ICAO Doc 8643, Aircraft Type Designators,

OR

- (b) if no such designator has been assigned, or in case of formation flights comprising more than one type, **INSERT ZZZZ**, and **SPECIFY** in Item 18 the (numbers and) type(s) of aircraft preceded by **TYP/**.

WAKE TURBULENCE CATEGORY (1 CHARACTER)

- 1.6.7 **INSERT** an oblique stroke followed by one of the following letters to indicate the wake turbulence category of the aircraft:

H	HEAVY to indicate an aircraft type with a maximum certificated take-off mass of 136,000kg or more
M	MEDIUM to indicate an aircraft type with a maximum certificated take-off mass of less than 136,000kg but more than 7,000kg
L	LIGHT to indicate an aircraft type with a maximum certificated take-off mass of 7,000kg or less

*ITEM 10: EQUIPMENT**RADIO EQUIPMENT, NAVIGATION AND APPROACH AID EQUIPMENT*

- 1.6.8 **INSERT** one letter as follows:

N	if no COM/NAV/ approach aid equipment for the route to be flown is carried, or the equipment is unserviceable, or
S	if standard COM/NAV/ approach aid equipment for the route to be flown is carried and serviceable

1.6.9 **AND/OR INSERT** one or more of the following letters to indicate the **COM/NAV/** approach aid equipment available and serviceable:

A	LORAN A	M	Omega
B	(Not allocated)	O	VOR
C	LORAN C	P	Doppler
D	DME	Q	(Not allocated)
E	Decca	R	RNP type certification or RNAV route equipment
F	ADF	T	TACAN
G	GNSS (see note)	U	UHF RTF
H	HF RTF	V	VHF RTF
I	Inertial Navigation	W	When prescribed by ATS
J	Data link	X	
K	(Not allocated)	Y	
L	ILS	Z	Other equipment carried

Notes

For flight planning purposes, standard COM/NAV equipment is considered to be VHF RTF, ADF, Transponder Mode A or C, VOR, DME and ILS.

If the **Z** is used, specify in Item 18 the other equipment carried, preceded by **COM/** and/or **NAV/**, as appropriate.

If the letter **J** is used, specify in Item 18 the equipment carried, preceded by **DAT/** followed by one or more letters as appropriate. Refer to Item 18.

Information on navigation capability is provided to ATC for clearance and routing purposes.

Inclusion of the letter **R** indicates that an aircraft meets the RNP type prescribed for the route segment(s), route(s) or area concerned.

Inclusion of the letter **G** indicates that an aircraft meets the conditions and requirements for the use of GNSS (GPS or GLONASS) equipment.

SSR EQUIPMENT

1.6.10 **INSERT** one of the following to describe the serviceable SSR equipment carried:

N	Nil
A	Transponder — Mode A (4 digits — 4 096 codes)
C	Transponder — Mode A (4 digits — 4 096 codes) and Mode C
X	Transponder — Mode S without both aircraft identification and pressure-altitude transmission
P	Transponder — Mode S, including pressure-altitude transmission, but no aircraft identification transmission
I	Transponder — Mode S, including aircraft identification transmission, but no pressure-altitude transmission
S	Transponder — Mode S, including both pressure-altitude and aircraft identification transmission

ITEM 13: DEPARTURE AERODROME AND TIME (8 CHARACTERS)

- (a) **INSERT** the ICAO four-letter location indicator of the departure aerodrome,

OR

- (b) if no location indication has been assigned, **INSERT ZZZZ** and **SPECIFY** in Item 18 the name of the aerodrome preceded by **DEP/**.

OR

- (c) if the flight plan is received from an aircraft in flight, **INSERT AFIL**, and **SPECIFY** in Item 18 the ICAO four-letter location indicator of the location of the ATS unit from which supplementary flight plan data can be obtained, preceded by **DEP/**.

THEN WITHOUT A SPACE

- (d) **INSERT** for a flight plan submitted before departure, the estimated off-block time,

OR

- (e) for a flight plan received from an aircraft in flight, the actual or estimated time over the first point of the route to which the flight plan applies.

ITEM 15: ROUTE

1.6.11 **INSERT** the first cruising speed as in (a)(i) and the flight cruising level as in (d)(i), without a space between them.

THEN,

- (a) following the arrow, **INSERT** the route description as in (i).

(i) **CRUISING SPEED (MAXIMUM 5 CHARACTERS)**

- (b) **INSERT** the True Air Speed for the first or the whole cruising portion of the flight, in terms of:

- (c) Knots, expressed as **N** followed by 4 figures (e.g. N0485),

OR (for oceanic flights)

- (d) Mach number to the nearest hundredth of unit Mach, expressed as **M** followed by 3 figures (e.g. M082).

(i) **CRUISING LEVEL (MAXIMUM 5 CHARACTERS)**

- (e) **INSERT** the planned cruising level for the first or the whole portion of the route to be flown, in terms of:

- (f) Flight level, expressed as **F** followed by 3 figures (e.g. F085; F330),

OR

- (g) Altitude in hundreds of feet, expressed as **A** followed by 3 figures (e.g. A045; A100),

OR

- (h) For uncontrolled VFR flights, the letters VFR.

(i) **ROUTE (INCLUDING CHANGES OF SPEED, LEVEL AND/OR FLIGHT RULES)**

Flights Along Designated ATS Routes

- (a) **INSERT**, if the departure aerodrome is located on or connected to the ATS route, the designator of the first ATS route,

OR

- (b) if the departure aerodrome is not on or connected to the ATS route, the letters **DCT** followed by the point of joining the first ATS route, followed by the designator of the ATS route.

OR

- (c) all reporting points on the ATS route if there is no ATS route designator.
- (d) **THEN INSERT** each point at which either a change of speed or level, a change of ATS route, and/or a change of flight rules is planned.

Note

When a transition is planned between a lower and upper ATS route and the routes are oriented in the same direction, the point of transition need not be inserted.

- (e) **FOLLOWED IN EACH CASE** by the designator of the next ATS route segment, even if the same as the previous one,

OR

- (f) by **DCT**, if the flight to the next point will be outside a designated route, unless both points are defined by geographical co-ordinates.

Flight Outside Designated ATS Routes

- (g) **INSERT** points normally not more than 30 minutes' flying time or 370km (200NM) apart, including each point at which a change of speed or level, a change of track, or a change of flight rules is planned.

OR

- (h) **DEFINE** the track of flights operating predominantly in an east-west direction between 70°N and 70°S by reference to significant points formed by the intersections of half or whole degrees of latitude with meridians spaced at intervals of 10 degrees of longitude. For flights operating in areas outside those latitudes the tracks must be defined by significant points formed by the intersection of parallels of latitude with meridians normally spaced at 20 degrees of longitude. The distance between significant points must, as far as possible, not exceed one hour's flight time. Additional significant points will be established as deemed necessary.

- (i) For flights operating predominantly in a north-south direction, define tracks by reference to significant points formed by the intersection of whole degrees of longitude with specified parallels of latitude which are spaced at 5 degrees.
- (j) **INSERT DCT** between successive points unless both points are defined by geographical co-ordinates or by bearing and distance.
- (k) **USE ONLY** the conventions in (i) to (i) below and **SEPARATE** each sub-item by a space.
 - (i) **ATS ROUTE (2 TO 7 CHARACTERS)**
- (l) The coded designator assigned to the route segment including, where appropriate, the coded designator assigned to the standard departure or arrival route (e.g. BCNI, BI, R14, UB10, KODAP2A).
 - (i) **SIGNIFICANT POINT (2 TO 11 CHARACTERS)**
- (m) The coded designator (2 to 5 characters) assigned to the point (e.g. WG, MAY, HADDY), or if no coded designator has been assigned, one of the following ways:

Degrees only (7 characters)

1.6.12 Two figures describing altitude in degrees, followed by "N" (North) or "S" (South), followed by 3 figures describing longitude in degrees, followed by "E" (East) or "W" (West). Make up the correct number of figures, where necessary, by insertion of zeros, e.g. 46S078W.

Degrees and minutes (11 characters)

1.6.13 Four figures describing latitude in degrees and tens and units of minutes followed by "N" (North) or "S" (South), followed by 5 figures describing longitude in degrees and tens and units of minutes, followed by "E" (East) or "W" (West). Make up the correct number of figures, where necessary, by insertion of zeros, e.g. 4620S07805W.

Bearing and distance from a navigation aid

1.6.14 The identification of the navigation aid (normally a VOR) in the form of 2 or 3 characters, **THEN** the bearing from the aid in the form of 3 figures giving degrees magnetic, **THEN** the distance from the aid in the form of 3 figures expressing nautical miles. Make up the correct number of figures, where necessary, by insertion of zeros — e.g. a point 18° magnetic at a distance of 40NM from VOR VLI should be expressed as VLI180040.

(i) **CHANGE OF SPEED OR LEVEL (MAXIMUM 21 CHARACTERS)**

1.6.15 The point at which a change of speed (5% TAS or 0.01 Mach or more) or a change of level is planned, expressed exactly as in (i) above, followed by an oblique stroke and both the cruising speed and the cruising level, expressed exactly as in (i) and (i) above, without a space between them, even when only one of these quantities will be changed.

EXAMPLES
LN/N0284A045
MAY/N0305F180
HADDY/N0420F330
4602S07805W/N0500F350
46S078W/M082F330
DUB180040/N0350M0840

(ii) **CHANGE OF FLIGHT RULES (MAXIMUM 3 CHARACTERS)**

1.6.16 The point at which the change of flight rules is planned, expressed exactly as in (i) or (i) above as appropriate, followed by a space and one of the following:

- (a) VFR if from IFR to VFR
- (b) IFR if from VFR to IFR

EXAMPLES
LN VFR
LN/N0284A050 IFR

(i) **CRUISE CLIMB (MAXIMUM 28 CHARACTERS)**

1.6.17 The letter **C** followed by an oblique stroke; **THEN** the point at which cruise climb is planned to start, expressed exactly as in (i) above, or the level above which cruise climb is planned followed by the letters **PLUS**, without a space between them.

EXAMPLES
C/48N050W/M082F290F350
C/48N050W/M082F290PLUS
C/52N050W/M220F580F620

ITEM 16: DESTINATION AERODROME AND TOTAL ESTIMATED ELAPSED TIME, ALTERNATE AERODROME(S)

DESTINATION AERODROME AND TOTAL ESTIMATED ELAPSED TIME (8 CHARACTERS)

- (a) **INSERT** the ICAO four-letter location indicator of the destination aerodrome followed, without a space, by the total estimated elapsed time,

OR if no location indicator has been assigned,

- (b) **INSERT ZZZZ** followed, without a space, by the total estimated elapsed time, and **SPECIFY** in Item 18 the name of the aerodrome, preceded by **DEST/**.

Note

For a flight plan received from an aircraft in flight, the total estimated elapsed time is the estimated time from the point of the route to which the flight plan applies.

ALTERNATE AERODROME(S) (4 CHARACTERS)

- (a) **INSERT** the ICAO four-letter location indicator(s) of not more than two alternate aerodromes, separated by a space,

OR if no location indicator has been assigned to the alternate aerodrome,

- (b) **INSERT ZZZZ** and **SPECIFY** in Item 18 the name of the aerodrome, preceded by **ALTN/**.

Note

Provision must be made for an alternate aerodrome(s) for IFR flight when the MET forecasts relating to the intermediate and terminal aerodromes specified in the flight plan indicate that, at the expected time of arrival at these aerodromes, the MET conditions will be:

- (a) CLOUD ceiling less than 1,000ft above the minima specified for landing.
- (b) VISIBILITY less than 5km.

1.6.18 If the MET conditions at an intermediate or destination aerodrome are such that nomination of an alternate is required, then the MET forecast for the alternate at the ETA must not be below the published alternate minima.

ITEM 18: OTHER INFORMATION

(a) **INSERT 0** (zero) if no other information,

OR

(b) any other necessary information in the preferred sequence shown below, in the form of the appropriate indicator followed by an oblique stroke and the information to be recorded:

EET/	Significant points or FIR boundary designators and accumulated estimated elapsed times to such points or FIR boundaries. e.g. EET/GULAN0204
REG/	The registration markings of the aircraft, if different from the aircraft identification in Item 7.
SEL/	SELCAL code for oceanic flights.
OPR/	Name of the operator, if not obvious from the aircraft identification in Item 7.
STS/	Reason for special handling by ATS, e.g. STS/HOSP (hospital aircraft), STS/ONE ENG INOP (one engine inoperative) For domestic use, STS/PHOT (photography), and STS/T (IFR training), and STS/T4A (IFR training — four approaches) may also be used.
TYP/	Type(s) of aircraft, preceded if necessary by number(s) of aircraft, if ZZZZ is inserted in Item 9.
COM/	Any deviation from minimum COM requirements.
NAV/	"AUSEP" if ausep equipped and flight planning into Nadi or Sydney OCA.
DEP/	Name of departure aerodrome, if ZZZZ is inserted in Item 13. ICAO four-letter location indicator of the location of the ATS unit from which supplementary flight plan data can be obtained, if AFIL is inserted in Item 13.
DEST/	Name of destination aerodrome, if ZZZZ is inserted in Item 16.
ALTN/	Name of alternate aerodrome(s), if ZZZZ is inserted in Item 16.
RMK/	Any other plain language remarks.

*ITEM 19: SUPPLEMENTARY INFORMATION**ENDURANCE*

AFTER E/	INSERT a 4-figure group giving the fuel endurance in hours and minutes.
-----------------	--

PERSONS ON BOARD

AFTER P/	INSERT the total number of persons (passengers and crew) on board if known.
-----------------	--

EMERGENCY AND SURVIVAL EQUIPMENT

R/	(RADIO) CROSS OUT U if UHF on frequency 243.0 MHZ is not available. CROSS OUT V if VHF on frequency 121.5 MHz is not available. CROSS OUT E if emergency locator beacon – aircraft (ELBA) is not available.
S/	(SURVIVAL EQUIPMENT) CROSS OUT all indicators if survival equipment is not carried. CROSS OUT P if polar survival equipment is not carried. CROSS OUT D if desert survival equipment is not carried. CROSS OUT M if maritime survival equipment is not carried. CROSS OUT J if jungle survival equipment is not carried.
J/	(JACKETS) CROSS OUT all indicators if life jackets are not carried. CROSS OUT L if life jackets are not equipped with lights. CROSS OUT F if life jackets are not equipped with fluorescence. CROSS OUT U or V or both as in R/ above to indicate radio capability of jackets, if any.
D/	(DINGHIES) (NUMBER) CROSS OUT indicators D and C if no dinghies are carried, or INSERT number of dinghies carried; and (CAPACITY) INSERT total capacity, in persons, of all dinghies carried; and (COVER) CROSS OUT indicator C if dinghies are not covered; and (COLOUR) INSERT colour of dinghies if carried.
A/	(AIRCRAFT COLOUR AND MARKINGS) INSERT colour of aircraft and significant markings.
N/	(REMARKS) CROSS OUT indicator N if no remarks, or INDICATE any other survival equipment carried and any other remarks regarding survival equipment.
C/	(PILOT) INSERT name of pilot-in-command.

FILED BY

1.6.19 **INSERT** name of the unit, agency or person filing the flight plan.

2 REPETITIVE FLIGHT PLAN SYSTEM

2.1 General

2.1.1 The procedures concerning the use of Repetitive Flight Plans (RPL) conform to ICAO Doc 7030 and the PANS-ATM, Doc 4444, Appendix 2.

2.1.2 Repetitive flight plan lists relating to flights within Tonga shall be submitted to the ATS Unit — AIS Briefing Office, Terminal 1, Fua'amotu INTL, Tonga at least 14 days in advance, in duplicate, to the following address:

AIS Briefing Office
Fua'amotu INTL
TONGA

TEL (676) 35 222
FAX (676) 35 210
AFTN NTFYNYX
OPS Hours HS

2.1.3 Repetitive flight plans shall not be used until the operator has been advised by the AIS Unit in writing that the plans are “approved for use”.

3 CHANGES TO THE SUBMITTED FLIGHT PLAN

3.1 General

3.1.1 No deviation may be made from a submitted flight plan without ATS being informed. In the case of a controlled flight, the prior approval of ATS must be obtained for any deviation unless an emergency situation arises which necessitates immediate action by the pilot-in-command. ATS is to be notified of such action as soon as circumstances permit.

3.1.2 In the event of a delay in departure of more than 30 minutes, and ATS has received the flight plan, ATS must be advised of the new ETD. This applies to all flights for which flight plan data has been submitted and includes flights operating on repetitive flight plans. If an amended ETD is not received for a delayed flight, there is a possibility the flight plan may be automatically cancelled by another ATS unit utilising a flight planning computer system, e.g. a flight planned from Tonga to New Zealand.

3.1.3 Where no ETD is filed for the second or subsequent stage of the flight, pilots are to report arrival to ATS as soon as possible after landing. The next stage of the flight plan will not become active until an ETD or taxiing report is received. When an ETD has been notified to ATS the pilot shall advise ATS of any delay in departure of more than 30 minutes in order to avoid initiating SAR action unnecessarily. Where communications are known or expected to be difficult and/or ETD is uncertain, a SARTIME may be used.

Notes

SARTIME is the time nominated by the pilot for the initiation of alerting action if a report has not been received by that time.

When a VFR flight plan with intermediate landings has been submitted and cumulative delays are such that the ETA at final destination given in the flight plan will be exceeded by more than 30 minutes, the pilot-in-command is required to advise ATS and must amend the flight plan accordingly. In addition the pilot-in-command must, if practicable, advise ATS whenever the ETA shown on the flight plan for any specific route sector is likely to be exceeded by more than 30 minutes.

Whenever a flight, for which a flight plan has been submitted, is cancelled, Fua'amotu INTL ATS shall be informed immediately.

When a controlled flight inadvertently deviates from its current flight plan the pilot-in-command must take the following action:

- (a) Deviation from track — immediately advise ATS and take action to regain track as soon as practicable and at least by the next compulsory reporting point.
- (b) Change in ETA at next reporting point, level or radio navigation aid by 3 minutes or more from that previously notified — advise ATS of revised ETA as soon as possible.

4 ARRIVAL REPORT (TERMINATING A FLIGHT PLAN)

4.1 General

4.1.1 A report of arrival shall be made at the earliest possible moment after landing to Fua'amotu Tower ATS by any flight for which a flight plan has been submitted except when the arrival has been acknowledged by the local ATS unit. After landing at an aerodrome which is not the destination aerodrome (diversionary landing), the local ATS unit shall be specifically informed accordingly.

4.1.2 In the absence of a local ATS unit at the aerodrome of a diversionary landing, the pilot is responsible for passing the arrival report to Fua'amotu Tower ATS.

4.1.3 Arrival reports shall contain the following elements of information:

- (a) aircraft identification
- (b) departure aerodrome
- (c) destination aerodrome
- (d) time of arrival

4.1.4 In the case of diversion, insert the "arrival aerodrome" between "destination aerodrome" and "time of arrival".

ENR 1.11 ADDRESSING OF FLIGHT PLAN MESSAGES

1 GENERAL

1.1 Flight Movement Messages

1.1.1 Flight movement messages relating to traffic into or via the Tonga Sector of the Auckland FIR shall be addressed as shown in [Table ENR 1.11 - 1](#) in order to warrant correct relay and delivery.

Note

Flight movement messages in this context comprise flight plan messages, amendment messages relating thereto and flight plan cancellation messages (refer to ICAO PANS-ATM, Doc 4444, Part VIII, 2.1.1.3).

Table ENR 1.11 - 1
Flight Movement Messages

CATEGORY OF FLIGHT (IFR, VFR or both)	ROUTE (into or via FIR and/or TMA)	MESSAGE ADDRESS
All flights	into Tonga Sector of the Auckland FIR	NFTFZTZX

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ENR 1.12 INTERCEPTION OF CIVIL AIRCRAFT

1 VISUAL SIGNALS FOR USE BY INTERCEPTING AND INTERCEPTED AIRCRAFT

1.1 General

1.1.1 The code of visual signals for use by intercepting and intercepted aircraft is in the form of five standard series and a sixth "distress" series. When an intercepting aircraft wishes to lead an intercepted aircraft away from a particular area (such as a prohibited area) and then release it, the FIRST (follow me) and SECOND (you may proceed) series of signals will be used. When an aircraft has been intercepted purely for identification purposes, the intercepting aircraft will indicate that the intercepted aircraft is free to proceed by using the SECOND series of signals.

1.1.2 Should an intercepting aircraft require a landing at a designated aerodrome, or if an intercepting aircraft has come to lead a lost aircraft to an aerodrome it would first signal the FIRST series (follow me). Upon arriving in the vicinity of the aerodrome the intercepting aircraft would signal the THIRD series (land at this aerodrome). Should the intercepted aircraft find, after following the intercepting aircraft to an aerodrome, that it is of insufficient size or that, to the knowledge of the pilot-in-command, it has insufficient runway strength to support the load which a landing would impose, the intercepted aircraft will signal the FOURTH (aerodrome is inadequate) or FIFTH (cannot comply) series.

1.1.3 The signals used are shown in [Table ENR 1.12 - 1](#) and [Table ENR 1.12 - 2](#).

2 SIGNALS INITIATED BY INTERCEPTING AIRCRAFT AND RESPONSES BY INTERCEPTED AIRCRAFT

2.1 General

2.1.1 Table ENR 1.12 - 1 lists the signals initiated by intercepting aircraft and responses by intercepted aircraft.

Table ENR 1.12 - 1
Signals Initiated by Intercepting Aircraft
and Responses by Intercepted Aircraft

SERIES	INTERCEPTING AIRCRAFT SIGNALS	MEANING	INTERCEPTED AIRCRAFT RESPONDS	MEANING
1	DAY or NIGHT Rocking aircraft and flashing navigational lights at irregular intervals from a position slightly above and ahead of, and normally to the left of, the intercepted aeroplane (or to the right of an intercepted helicopter) and, after acknowledgement, a slow level turn, normally to the left, in the case of an aeroplane (or to the right in the case of a helicopter) onto the desired heading.	You have been intercepted. Follow me.	DAY or NIGHT Rocking aircraft, flashing navigational lights at irregular intervals and following. Note Additional action required to be taken by intercepted aircraft is prescribed in Series 4, 5, and 6.	Understood, will comply.
<p>Notes Meteorological conditions or terrain may require the intercepting aircraft to reverse the positions and direction of turn given above in Series 1.</p> <p>If the intercepted aircraft is not able to keep pace with the intercepting aircraft, the latter is expected to fly a series of race-track patterns and to rock the aircraft each time it passes the intercepted aircraft.</p>				

SERIES	INTERCEPTING AIRCRAFT SIGNALS	MEANING	INTERCEPTED AIRCRAFT RESPONDS	MEANING
2	DAY or NIGHT An abrupt break-away manoeuvre from the intercepted aircraft consisting of a climbing turn of 90 degrees or more without crossing the line of flight of the intercepted aircraft.	You may proceed.	DAY or NIGHT Rocking the aircraft.	Understood, will comply.
3	DAY or NIGHT Lowering landing gear (if fitted), showing steady landing lights and overflying runway-in-use or, if the intercepted aircraft is a helicopter, landing area. In the case of helicopters, the intercepting helicopter makes a landing approach, coming to hover near to the landing area.	Land at this aerodrome.	DAY or NIGHT Lowering landing gear, (if fitted), showing steady landing lights and following the intercepting aircraft, and if after overflying the runway-in-use or helicopter landing area, landing is considered safe, proceeding to land.	Understood, will comply.
4	DAY or NIGHT Raising landing gear (if fitted) and flashing landing lights while passing over runway-in-use or helicopter landing area at a height exceeding 1000ft but not exceeding 2000ft above the aerodrome level, and continuing to circle the runway-in-use or helicopter landing area. If unable to flash landing lights, flash any other lights available.	Aerodrome you have designated is inadequate.	DAY or NIGHT If it is desired that the intercepted aircraft follow the intercepting aircraft to an alternate aerodrome, the intercepting aircraft raises its landing gear (if fitted) and uses the Series 1 signals prescribed for intercepting aircraft. If it is decided to release the intercepted aircraft, the intercepting aircraft uses the Series 2 signals prescribed for intercepting aircraft.	Understood, follow me. Understood, you may proceed.
5	DAY or NIGHT Regular switching on and off of all available lights but in such a manner as to be distinct from flashing lights.	Cannot comply.	DAY or NIGHT Use Series 2 signals prescribed for intercepting aircraft.	Understood.
6	DAY or NIGHT Irregular flashing of all available lights.	In distress.	DAY or NIGHT Use Series 2 signals prescribed for intercepting aircraft.	Understood.

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ENR 1.13 UNLAWFUL INTERFERENCE

1 GENERAL

1.1 Introduction

1.1.1 The following procedures are intended for use by aircraft when unlawful interference occurs and the aircraft is unable to notify an ATS unit of this fact.

2 PROCEDURES

2.1 Introduction

2.1.1 Unless considerations aboard the aircraft dictate otherwise, the pilot-in-command should attempt to continue flying on the assigned track and at the assigned cruising level at least until notification to an ATS unit is possible or the aircraft is within radar coverage.

2.1.2 When an aircraft subjected to an act of unlawful interference must depart from its assigned track or its assigned cruising level without being able to make radiotelephony contact with ATS, the pilot-in-command should, whenever possible:

- (a) attempt to broadcast warnings on the VHF emergency frequency and other appropriate frequencies, unless considerations aboard the aircraft dictate otherwise. Other equipment such as onboard transponders, data links etc. should also be used when it is advantageous to do so and circumstances permit; and
- (b) if no applicable regional procedures have been established, proceed at a level which differs from the cruising levels normally used for IFR flight in the area by 1,000ft if above FL290 or 500ft if below FL290.

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ENR 1.14 AIR TRAFFIC INCIDENTS

1 AIR SAFETY INCIDENTS

1.1 General

1.1.1 ATS Units will complete Air Safety Incidents report form and forward to Chief Executive Officer immediately.

Chief Executive Officer
Tonga Airports Limited
Fua'amotu INTL
PO Box 876
Nuku'alofa
TONGA

TEL (676) 21 864
FAX (676) 27 942

AFTN NFTFYDYX
Email dcusack@tongaairports.com.to

2 AVIATION SAFETY REPORT

2.1 General

2.1.1 Whenever possible an initial report of an air safety incident of major significance occurring during flight must be transmitted to the ATS unit or to the air-ground control radio station with which the aircraft is in communication at the time. Such reports are to contain the following information as applicable:

- (a) type of incident, i.e. near collision/procedures;
- (b) radio callsign of aircraft making the report;
- (c) position, heading or route, true airspeed or Mach number;
- (d) flight level, altitude or height and aircraft attitude;
- (e) IMC or VMC;
- (f) time of incident;
- (g) description of other aircraft if applicable;
- (h) brief details of incident including, when appropriate, sighting distance and miss distance.

2.1.2 The pilot-in-command must, if involved in an incident, submit a completed aviation safety report to the nearest ATS unit, as soon as possible but not later than 24 hours after landing to:

- (a) confirm an initial report made by radio; or
- (b) make an initial report on an incident if it had not been possible to report it by radio.

2.1.3 The ATS unit receiving the report is responsible for advising other ATS units and/or pilots involved.

2.1.4 The purpose of the air safety incident report is to provide investigatory authorities with as much information on an air safety incident as is possible and to enable them to report back with the least possible delay to the pilot or operator concerned, the result of the investigation of the incident and, if appropriate, the remedial action taken.

3 FACILITY MALFUNCTION REPORTING

3.1 General

3.1.1 Facility malfunction reporting is an important component of aviation safety and, to be effective, requires both prompt action and whole hearted co-operation of all parties. In order that the report may be investigated thoroughly, it is necessary that relevant details be provided as soon as possible.

3.1.2 Each pilot-in-command of an aircraft operating IFR must, after observing a malfunction of any aeronautical telecommunications facility forward a report to the Chief Executive Officer as soon as possible after landing. The pilot-in-command should:

- (a) pass brief details of the malfunction to the ATS unit or air-ground station with which the aircraft is in communication at the time, and
- (b) include the following information:
 - (i) aircraft type; and
 - (ii) aircraft registration and, if applicable, the flight number; and
 - (iii) name of pilot-in-command; and
 - (iv) name of the operator; and
 - (v) aircraft position and altitude; and
 - (vi) phase of flight; and
 - (vii) facility affected; and
 - (viii) brief details of the malfunction; and
 - (ix) effect on the flight.

ENR 2 AIR TRAFFIC SERVICES AIRSPACE

ENR 2.1 CTR, TMA, CTA

1 AREA OF RESPONSIBILITY

1.1 General

1.1.1 The area of responsibility for providing air traffic services is Tonga Sector of Auckland Oceanic FIR.

Table ENR 2.1 - 1
Air Traffic Services and Airspace

NAME	LATERAL LIMITS	UPPER LIMIT LOWER LIMIT	SERVICE LANGUAGE	ATS HOURS OF SERVICE	CALLSIGN ATS FREQ
AUCKLAND OCEANIC FIR OCA/A	Refer to CAA New Zealand Air Navigation Register www.caa.govt.nz	FL600 FL245	Auckland/ English	H24	Auckland Radio 3467, 5643, 8867, 13261,17904
TONGA SECTOR		FL245 SFC	Fua'amotu/ English	HS	Fua'amotu Radio 8846, 6553, 8867, 11339, 5832, 8995, 3425, 3226, 5643, 13261
FUA'AMOTU CTA/A		FL245 FL195	Fua'amotu/ English	HS	Fua'amotu Tower 118.5 MHz
FUA'AMOTU CTA/C		FL195 9500ft	Fua'amotu/ English	HS	Fua'amotu Tower 118.5 MHz
FUA'AMOTU CTA/C		9500ft 3500ft	Fua'amotu/ English	HS	Fua'amotu Tower 118.5 MHz
FUA'AMOTU CTR/C		3500ft SFC	Fua'amotu/ English	HS	Fua'amotu Tower 118.5 MHz

2 AIR TRAFFIC SERVICES

2.1 General

2.1.1 In general, the air traffic rules and procedures in force and the organisation of Air Traffic Services are in conformity with ICAO standards, recommended practices and procedures. The differences are given in **GEN 1.7**.

3 SERVICE PROVIDED

3.1 General

3.1.1 The ATS provided comprises:

- (a) Air traffic control service to IFR flights in Class A airspace.
- (b) Air traffic control service to IFR flights in Class C airspace.
- (c) Air traffic control service to VFR flights in Class C airspace.
- (d) Air traffic control service to all aerodrome traffic at controlled aerodromes.

Note

Air traffic control service is provided for the purpose of preventing collisions and maintaining an orderly flow of traffic.

- (a) FIS for the purpose of giving advice and information useful for the safe and efficient conduct of flights.
- (b) AFIS to aircraft operating on or in the vicinity of an aerodrome.
- (c) Alerting service to all flights known to ATS for the purpose of initiating and/or assisting in search and rescue action.

3.2 Air Traffic Control (ATC)

3.2.1 Air traffic control service comprises:

- (a) Area control service provided by Auckland Oceanic during the hours of watch of Fua'amotu ATS Unit.
- (b) Approach control service provided by Fua'amotu Control Tower during valid published hours of watch.
- (c) Aerodrome control service provided by Fua'amotu Control Tower during valid published hours of watch.

3.3 Flight Information Service

3.3.1 FIS will be provided whenever practicable to all aircraft known to be affected by the information.

3.3.2 In the case of aircraft in flight, flight information is normally confined to the route being flown.

Notes

FIS does not diminish the responsibilities normally vested in the pilot-in-command of an aircraft, including that for making a final decision regarding any suggested alteration to flight plan.

Where an ATC unit provides both FIS and ATC service, the provision of ATC service will take precedence over the provision of FIS whenever the provision of ATC service so requires.

FIS will include the provision of pertinent:

- (a) SIGMET information;
- (b) information on changes in the serviceability of radio navigation aids;
- (c) information on changes in conditions of aerodromes and associated facilities, and any other information likely to affect safety;
- (d) Traffic information in:
 - (i) Class C airspace, to VFR flights with respect to other VFR flights.
 - (ii) Class G airspace, to IFR flights with respect to other IFR flights, and as far as practicable to VFR flights with respect to IFR and VFR flights

3.3.3 Traffic information may also be provided by ATS, when it is apparent from pilot reports or observations that aircraft may be in proximity to each other.

- (e) weather conditions reported or forecast at departure, destination, and enroute aerodromes.

Note

Traffic information comprises details of known aircraft which might constitute a collision hazard to the aircraft concerned and will sometimes be incomplete. ATS cannot accept responsibility for its issuance at all times or for its accuracy.

3.4 Aerodrome Flight Information Service

3.4.1 AFIS is the provision of information useful to pilots for the safe and efficient conduct of their flights. It differs from ATC service in that pilots being provided with AFIS have the responsibility of assessing a situation based on information passed to them by Flight Service, then advising their intentions. Other pilots in the vicinity hearing this exchange of RTF messages make their own decisions and, in turn, make known their own intentions.

3.4.2 Outside the hours of watch of Air Traffic Control and during the hours of watch of Flight Service (see AIP Supplements), an Aerodrome Flight Information Service, Area Flight Information Service and Alerting Service is provided by Fua'amotu Area Flight Information Services.

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ENR 2.2 OTHER REGULATED AIRSPACE

1 OTHER AIRSPACE

1.1 Mandatory Broadcast Zones

1.1.1 MBZ are established to provide increased protection to aircraft in areas of uncontrolled airspace where high density or special operations may occur.

1.1.2 A pilot is required to transmit position and intention reports on a specified frequency at entry, exit and at least every 10 minutes (unless varied) while operating within the MBZ. As an extra safety measure landing lights or anti-collision lights must be used when fitted.

1.1.3 Non-radio (NORDO) aircraft must not enter a MBZ unless they have another station, such as an ATS unit or an aircraft, broadcasting the required reports on their behalf.

1.2 List of MBZ

1.2.1 MBZ, with geographical co-ordinates, are listed in the Air Navigation Register.

1.2.2 A list of MBZ, not including geographic co-ordinates, but including the zone frequency, is provided in [Table ENR 2.2-1](#).

Table ENR 2.2-1
Mandatory Broadcast Zones

Code	Name, location	Vertical limits	Frequency (MHz), reports
NFB074	Ha'apai	SFC – 3500ft	118.1, 10 min.
NFB075	Niutoputapu	SFC – 3500ft	118.1, 10 min.
NFB076	Vava'u	SFC – 3500ft	118.1, 10 min.

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ENR 3 ATS ROUTES

ENR 3.1 LOWER ATS ROUTES

1 INTRODUCTION

1.1 General

1.1.1 Most commonly used routes are depicted on the AIP charts and include the following information:

- (a) radio facilities defining routes or used to determine reporting points
- (b) magnetic tracks, VOR radials and distances
- (c) minimum safe altitudes (MSA)
- (d) designated reporting points

1.2 Reporting Points

1.2.1 Reporting points are depicted on Enroute Charts.

1.3 Adherence to Track

1.3.1 Adherence to track must be maintained unless otherwise authorised or directed by ATC, and flights must, so far as is practicable:

- (a) when on a promulgated route, operate along the centreline of the route; or
- (b) when on any other route, operate directly between the navigation facilities and/or points defining the route.

1.3.2 If a pilot deviates from the centreline of a route, or if the performance of the radio navigation facilities are such that accurate track keeping may not be possible, the pilot must immediately advise ATS.

1.3.3 Refer to CAA New Zealand Air Navigation Register www.caa.govt.nz for information on ATS routes and reporting points.

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ENR 3.2 UPPER ATS ROUTES

1 INTRODUCTION

1.1 General

1.1.1 Most commonly used routes are depicted on the AIP charts and include the following information:

- (a) radio facilities defining routes or used to determine reporting points
- (b) magnetic tracks, VOR radials and distances
- (c) minimum safe altitudes (MSA)
- (d) designated reporting points

1.2 Reporting Points

1.2.1 Reporting points are depicted on Enroute Charts.

1.3 Adherence to Track

1.3.1 Adherence to track must be maintained unless otherwise authorised or directed by ATC, and flights must, so far as is practicable:

- (a) when on a promulgated route, operate along the centreline of the route; or
- (b) when on any other route, operate directly between the navigation facilities and/or points defining the route.

1.3.2 If a pilot deviates from the centreline of a route, or if the performance of the radio navigation facilities are such that accurate track keeping may not be possible, the pilot must immediately advise ATS.

1.3.3 Refer to CAA New Zealand Air Navigation Register www.caa.govt.nz for information on ATS routes and reporting points.

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ENR 3.3 AREA NAVIGATION ROUTES

1 INTRODUCTION

1.1 General

1.1.1 Nil published.

**Intentionally
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ENR 3.4 HELICOPTER ROUTES

1 INTRODUCTION

1.1 General

1.1.1 Nil published.

**Intentionally
Blank**

ENR 3.5 OTHER ROUTES

1 INTRODUCTION

1.1 General

1.1.1 Nil published.

**Intentionally
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ENR 3.6 ENROUTE HOLDING

1 INTRODUCTION

1.1 General

1.1.1 Nil published.

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ENR 4 RADIO NAVIGATION AIDS/SYSTEMS

ENR 4.1 RADIO NAVIGATION AIDS — ENROUTE

1 RADIO NAVIGATION AIDS

1.1 General

1.1.1 Table ENR 4.1 - 1 lists the radio navigation aids to be used in enroute navigation.

Table ENR 4.1 - 1
Radio Navigation Aids — Enroute

STATION NAME	AID	IDENT	FREQ/ CHANNEL	HOURS	COORDINATES	DME ELEV	REMARKS
FUA'AMOTU	VOR	TBU	114.5	H24	21°14'44.8"S 175°08'50.5"W		Nil
	DME	TBU	92		21°14'44.8"S 175°08'50.5"W		Nil
	NDB	FM	245		21°14'59.4"S 175°08'41.0"W		Rated coverage 40NM
HA'APAI	NDB	HA	380	H24	19°46.68'S 174°20.48'W		Nil
NIUATOPUTAPU	NDB	TP	361	HS	15°58'43"S 173°47'27"W		Nil
VAVA'U	NDB	TV	400	H24	18°35.13'S 173°58.18'W		Nil

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ENR 4.2 SPECIAL NAVIGATION SYSTEMS

1 INTRODUCTION

1.1 General

1.1.1 Nil.

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ENR 4.3 NAME-CODE DESIGNATORS FOR SIGNIFICANT POINTS

1 INTRODUCTION

1.1 General

1.1.1 Refer to CAA New Zealand Air Navigation Register www.caa.govt.nz.

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ENR 4.4 AERONAUTICAL GROUND LIGHTS — ENROUTE

1 INTRODUCTION

1.1 General

1.1.1 Table ENR 4.4 - 1 lists all enroute aeronautical ground lights.

Table ENR 4.4 - 1
Aeronautical Ground Lights — Enroute

AERONAUTICAL GROUND LIGHTS — ENROUTE	
NR	1
NAME	FUA'AMOTU
TYPE	ABN
CHARACTERISTICS/CODE	FLG Alt GW 2.4SEC
HR	HO
CO-ORDINATES	
NR	1
NAME	VAVA'U
TYPE	ABN
CHARACTERISTICS/CODE	FLG Alt GW 2.4SEC
HR	HO
CO-ORDINATES	

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ENR 5 NAVIGATION WARNINGS

ENR 5.1 PROHIBITED, RESTRICTED AND DANGER AREAS

1 DEFINITIONS

1.1 General

1.1.1 All airspace in which a potential hazard to operations may exist and all areas over which the operation of civil aircraft may, for one reason or another be restricted either temporarily or permanently, are classified according to the following three types of area as defined by ICAO.

1.2 Prohibited Area

1.2.1 An airspace of defined dimensions, above the land area or territorial waters of a state, within which the flight of aircraft is prohibited. This term is used only when the flight of civil aircraft within the designated airspace is not permitted at any time under any circumstances.

1.3 Restricted Area

1.3.1 An airspace of defined dimensions, above the land area or territorial waters of a state, within which the flight of aircraft is restricted in accordance with certain specified conditions. This term is used whenever the flight of civil aircraft within the designated airspace is not absolutely prohibited but may be made only if specified conditions are complied with. Thus, prohibition of flight except at certain specified times leads to the designation of the airspace as a "restricted area" as would prohibition except in certain meteorological conditions. Similarly, prohibition of flight unless special permission had been obtained, leads to the designation of a restricted area.

1.3.2 However, conditions of flight imposed as a result of application of rules of the air and air traffic service practices or procedures (e.g. compliance with minimum safe heights or with rules stemming from the establishment of controlled airspace) do not constitute conditions calling for designation as a restricted area.

1.4 Danger Area

1.4.1 An airspace of defined dimensions within which activities dangerous to the flight of aircraft may exist at specified times. This term is used only when the potential danger to aircraft has not led to the designation of the airspace as restricted or prohibited.

1.4.2 The effect of the creation of the danger area is to caution operators or pilots of aircraft that it is necessary for them to assess the dangers in relation to their responsibility for the safety of their aircraft.

1.5 Zone Identification

1.5.1 Each area is numbered and a single series of numbers is used for all areas, regardless of type, to ensure that a number is never duplicated. Each area is as small as practicable, and contained within simple geometrical limits such as circle, square, etc.

1.5.2 The type of area involved is indicated by the letter:

- (a) "P" — for Prohibited
- (b) "R" — for Restricted
- (c) "D" — for Danger

preceded by the Nationality designator.

1.5.3 These areas are also shown on charts using the chart symbols.

1.6 Designated Prohibited, Restricted and Danger Areas

1.6.1 There are no permanent designated Prohibited, Restricted and Danger areas in the Tonga Sector of the Auckland Oceanic FIR. Prohibited, Restricted and Danger areas will be designated by NOTAM if required.

ENR 5.2 MILITARY EXERCISE AND TRAINING AREAS

1 INTRODUCTION

1.1 General

1.1.1 Nil.

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ENR 5.3 OTHER ACTIVITIES OF A DANGEROUS NATURE

1 INTRODUCTION

1.1 General

1.1.1 Nil.

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ENR 5.4 AIR NAVIGATION OBSTACLES — ENROUTE

1 INTRODUCTION

1.1 General

1.1.1 Nil.

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ENR 5.5 AERIAL SPORTING AND RECREATIONAL ACTIVITIES

1 INTRODUCTION

1.1 General

1.1.1 There are no designated areas for aerial sporting and recreational activities within the Tonga Sector of the Auckland Oceanic FIR.

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ENR 5.6 BIRD MIGRATION AND AREAS WITH SENSITIVE FAUNA

1 INTRODUCTION

1.1 General

1.1.1 Nil.

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ENR 6 ENROUTE CHARTS

ENR 6.1 ENROUTE CHARTS

1 INTRODUCTION

1.1 General

1.1.1 Refer to Enroute Chart — Auckland Oceanic FIR/Nadi FIR.

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2 DOMESTIC ENROUTE CHART TONGA

2.1 Communication Frequencies

FUA'AMOTU	
A/G: Fua'amotu Radio	13261 11339 8995 8867 8846 6553 5832 5643 3425 3226
APP: Fua'amotu Tower	118.5
TWR: Fua'amotu Tower	118.5
HA'APAI	
FIS: Lifuka Flight Service	118.1 3226 5832 8995
AFIS: Lifuka Flight Service	118.1
MBZ: Traffic	118.1
NIUATOPUTAPU	
FIS: Niuatoputapu Flight Service	118.1 3226 5832 8995
AFIS: Niuatoputapu Flight Service	118.1
MBZ: Traffic	118.1
VAVA'U	
FIS: Vava'u Flight Service	118.1 3226 5832 8995
AFIS: Vava'u Flight Service	118.1
MBZ: Traffic	118.1
NIUAFO'OU	
FIS: Fua'amotu Radio	3226 5832 8995
UNATTENDED: Traffic	118.1
EUA	
UNATTENDED: Traffic	118.5

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1.1	General	AD 1.7 - 1
2	Single Runway	AD 1.7 - 2
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3	Wake Turbulence	AD 1.7 - 2
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Page No.

Aerodromes

NFTE	EUA	NFTE AD 2 - 1
NFTF	FUA'AMOTU	NFTF AD 2 - 1
NFTL	HA'APAI	NFTL AD 2 - 1
NFTO	NIUAFO'OU	NFTO AD 2 - 1
NFTP	NIUATOPUTAPU	NFTP AD 2 - 1
NFTV	VAVA'U	NFTV AD 2 - 1

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AD 1 AERODROMES/HELIPORTS — INTRODUCTION

AD 1.1 AERODROME/HELIPORT AVAILABILITY

1 OVERALL AERODROME AUTHORITY

1.1 General

1.1.1 The administration of aerodromes “open to public air traffic” is the responsibility of the Government of Tonga — Tonga Airports Limited..

Note

Refer to [GEN 1.1](#) for postal and telegraphic addresses.

1.1.2 An aerodrome shall be said to be “open to public air traffic” when it is open for use by all aircraft having suitable technical characteristics, subject to the provisions in [section 2](#).

2 GENERAL CONDITIONS UNDER WHICH AERODROMES ARE AVAILABLE

2.1 Airports of Entry

2.1.1 Aircraft flying into or departing from Tonga territory shall make their first landing at, or final departure from Fua’amotu International Airport. However, Vava’u and Niuatoputapu airports may be used as ports of entry by prior special arrangement with the Chief Executive Officer, provided notice is given not less than 48 hours in advance of the intended arrival time.

2.2 Use of Aerodromes by Private Pilots

2.2.1 The following aerodromes are available for use for private operations:

- Eua
- Fua'amotu International Airport
- Ha'apai
- Niuafo'ou
- Niuatoputapu
- Vava'u

AD 1.2 RESCUE AND FIRE FIGHTING SERVICES

1 RESCUE AND FIRE FIGHTING SERVICES

1.1 General

1.1.1 ICAO Annex 14 Chapter 9 prescribes the category of Rescue and Fire Fighting standards.

1.1.2 The Rescue and Fire Fighting category for international airports in Tonga are included in AD 2.6 for each airport.

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AD 1.3 INDEX TO AERODROMES AND HELIPORTS

1 INDEX OF AERODROMES AND HELIPORTS

1.1 Aerodromes

1.1.1 Table AD 1.3 - 1 lists the available aerodromes/heliports for use.

**Table AD 1.3 -1
Index to Aerodromes**

Aerodrome name, location, location indicator	Type of traffic permitted to use the aerodrome/heliport			Reference to AD Section and Remarks
	International/ National (INTL/NTL)	IFR/VFR	S = Scheduled NS = Non scheduled P = Private	
AERODROMES				
Eua	NTL	VFR	NS/P	Nil
Fua’amotu	INTL/NTL	IFR/VFR	S/NS/P	Nil
Ha’apai	NTL	IFR/VFR	NS/P	Nil
Niuafo’ou	NTL	VFR	NS/P	Nil
Niutatoputapu	NTL	IFR/VFR	NS/P	Nil
Vava’u	INTL/NTL	IFR/VFR	S/NS/P	Nil
HELIPORTS				
Nil	Nil	Nil	Nil	Nil

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AD 1.4 GROUPING OF AERODROMES/HELIPORTS

1 PUBLIC AND CIVIL AERODROMES

1.1 General

1.1.1 All aerodromes listed in [Table AD 1.3 - 1](#) are public/civil aerodromes.

1.2 International Aerodromes

1.2.1 The international aerodromes in Tonga are:

- (a) Fua'amotu
- (b) Vava'u
- (c) Niuatoputapu

1.3 National Aerodromes

1.3.1 There are six national aerodromes in Tonga. They are:

- (a) Fua'amotu
- (b) Vava'u
- (c) Eua
- (d) Ha'apai
- (e) Niuafu'ou
- (f) Niuatoputapu

1.4 Heliports

1.4.1 There are no heliports in Tonga.

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AD 1.5 USE OF DESIGNATED RUNWAYS, STRIPS AND VECTORS

1 USE OF RUNWAYS, STRIPS AND VECTORS

1.1 General

1.1.1 At aerodromes where runways, strips and/or vectors are defined and promulgated in the aerodrome charts, aircraft take-offs and landings are restricted to those defined runways, strips or vectors. The aerodrome charts depict the location of the runways, strips and vectors.

1.2 Runway Vector Selection

1.2.1 Where aerodrome control or AFIS is being provided, the designated runway or vector is that best favouring the wind direction and the take-off length requirements of the majority of the traffic. All aircraft are informed of the runway in use by the ATS unit.

1.2.2 Where AFIS is being provided, when a pilot is required, for any operational reason such as runway length, wheel loading etc to use a runway other than the designated runway, he/she must sequence his/her landing or take-off and is responsible for the avoidance of collision with aircraft which are operating on the runway-in-use and which therefore have priority.

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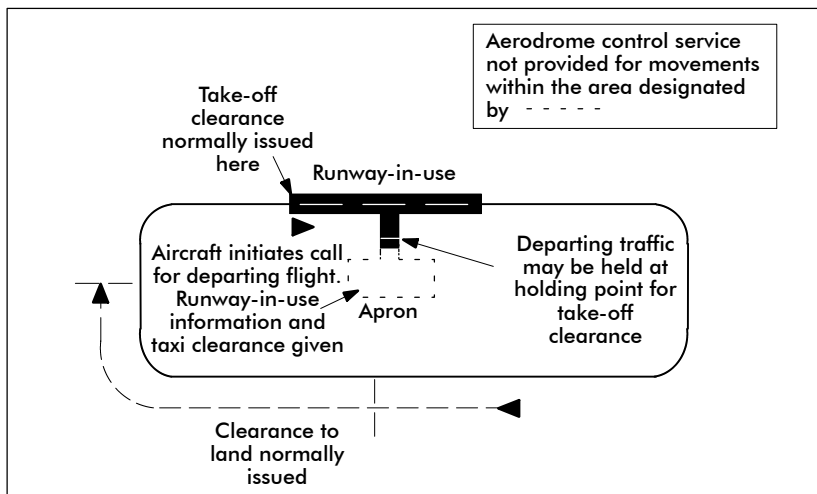
AD 1.6 AERODROME CONTROL CLEARANCES

1 INTRODUCTION

1.1 General

1.1.1 Figure AD 1.6 - 1 shows the positions where aircraft at controlled aerodromes normally receive aerodrome control clearances, either by radio or light signals.

Figure AD 1.6 - 1
Positions for Clearance at Controlled Aerodromes



2 LANDING CLEARANCES

2.1 General

2.1.1 A landing aircraft is not permitted to cross the threshold of the runway on its final approach until:

- a preceding departing aircraft has crossed the end of the runway-in-use or has started a turn; or
- all preceding landing aircraft are clear of the runway-in-use.

Notes

It is the responsibility of pilots operating into AFIS or unattended aerodromes to arrange the flight paths of their aircraft to conform to these standards.

At controlled aerodromes the aerodrome controller may issue a qualified landing clearance by day only, to an aircraft on final approach when it is obvious that a preceding landing or departing aircraft will be clear of the runway before the approaching aircraft crosses the threshold.

Examples of qualified landing clearances are as follows:

- (a) "737 VACATING RUNWAY RIGHT, XYZ CLEARED TO LAND"
- (b) "ISLANDER DEPARTING, XYZ CLEARED TO LAND"

It is the responsibility of the pilot of a landing aircraft to "go around" if he or she considers that the runway separation criteria detailed above cannot be met. Pilots are reminded of the possibility of wake turbulence when following another landing or a departing aircraft, and of the fact that it may persist to a varying degree depending on the direction and strength of the surface wind.

AD 1.7 AERODROME CONTROL — RUNWAY SEPARATION

1 INTRODUCTION

1.1 General

1.1.1 The runway separation standards applied by ATC between aircraft taking off, between aircraft landing and between aircraft landing and taking off is outlined below. These standards may be increased if IFR flights are involved. When wake turbulence in the landing or take-off path could be significant, runway separation will be increased by ATC as indicated in 3.

1.1.2 The runway separation minima outlined below will be applied to aircraft landing or taking off, except that these separation minima will not apply to aircraft in formation in respect of other aircraft in the same formation.

2 SINGLE RUNWAY

2.1 General

2.1.1 An aircraft will not be cleared for take-off until:

- (a) a preceding aircraft has crossed the up-wind end of the runway-in-use or has started a turn, except that if both aircraft are below 2,300kg MCTOW and the following aircraft is not significantly faster than the leading aircraft, separation may be reduced to 610m provided the leading aircraft is airborne; or
- (b) all preceding landing aircraft are clear of the runway-in-use.

2.1.2 A landing aircraft is not permitted to cross the threshold of the runway on final approach until:

- (a) a preceding departing aircraft has crossed the up-wind end of the runway-in-use or has started a turn; or
- (b) all preceding landing aircraft are clear of the runway-in-use.

3 WAKE TURBULENCE

3.1 General

3.1.1 Wake turbulence separation is provided by ATC to all aircraft which may be affected by wake turbulence, except in the case of IFR aircraft making a visual approach or VFR arrivals. In these cases it is the pilot's responsibility to provide adequate spacing from the preceding arriving or departing aircraft, and in these circumstances, ATC will make allowance for such pilot initiated manoeuvres when sequencing additional following aircraft. The required spacings are shown in [Section 3.3](#).

3.1.2 Whenever practicable, ATC will advise aircraft of the expected occurrence of hazards caused by wake turbulence by issuing a caution to the pilot — "CAUTION — WAKE TURBULENCE". It should be noted, however, that the occurrence of wake turbulence hazards cannot be accurately predicted, and ATC cannot assume responsibility for issuing such advice at all times, nor its accuracy.

3.2 Weight Categories

3.2.1 For the purposes of assessing wake turbulence separation, aircraft are divided into the following weight categories:

Heavy (H)

All types of aircraft of 136,000kg maximum weight or more. Includes A330, A340, C141, B 747 series, B767, MD 11 and DC10.

Medium (M)

All types of aircraft of less than 136,000kg maximum weight but more than 7,000kg. Includes A320, B727, B737 series, F27, BA46, C130, P3, SF34 and SW4.

Light (L)

All types of aircraft of 7,000kg maximum weight or less. Includes BN2P, C402, C421, NOMA, PA31, E110 and SW3.

3.2.2 For further information on wake turbulence categories refer to ICAO Doc 8643 — *Aircraft Type Designators*.

3.3 Wake Turbulence Separation

3.3.1 The following minimum time separations apply between aircraft using the same runway or grass strip, or where there is a possibility that the projected flight profiles will cross at the same altitude or less than 1,000ft below.

Between Arriving Flights

Table AD 1.7 - 1
Wake Turbulence Separation Minima — Arriving Flights

LEADING AIRCRAFT	FOLLOWING AIRCRAFT	MINIMUM TIME
Heavy	Medium, Light	2 minutes, 3 minutes
Medium	Light	3 minutes

Between Departing Flights

Table AD 1.7 - 2
Wake Turbulence Separation Minima — Departing Flights

LEADING AIRCRAFT	LEADING AIRCRAFT	DEPARTURE FROM SAME TAKE-OFF POSITION	DEPARTURE FROM INTERMEDIATE TAKE-OFF POSITION
Heavy	Medium, Light	2 minutes	3 minutes
Medium	Light		

Between Arriving and Departing Flights

3.3.2 The minimum time separations shown in [Table AD 1.7 - 1](#) and [Table AD 1.7 - 2](#) apply between arriving and departing aircraft if the flight path of the following aircraft will cross the projected flight path of the leading aircraft, e.g. when an arriving aircraft is operating onto a runway with a displaced landing threshold.

Table AD 1.7 - 3
Wake Turbulence Separation Minima — Arriving and Departing Flights

LEADING AIRCRAFT	FOLLOWING AIRCRAFT	MINIMUM SPACING AT TIME AIRCRAFT ARE AIRBORNE OR HAVE TOUCHED DOWN
Heavy arrival	Medium departure, Light departure	2 minutes
Medium arrival	Light departure	
Heavy departure	Medium arrival, Light arrival	
Medium departure	Light arrival	

Opposite Direction Runway Operations

3.3.3 A minimum of 2 minutes' separation will be provided between a Heavy aircraft take-off and the departure of a Medium or Light aircraft, or between a Medium aircraft take-off and the departure of a Light aircraft, from the opposite direction runway if the projected flight profiles will cross.

3.3.4 A minimum of 2 minutes' separation will be provided between a Heavy aircraft making a low or missed approach and the departure of a Medium or Light aircraft, or between a Medium aircraft making a low or missed approach and the departure of a Light aircraft from the opposite direction runway.

Notes

If a pilot considers the wake turbulence separation standards inadequate, an increased separation may be requested by specifying the spacing required.

If ATC considers the wake turbulence separation provided is inadequate or that it needs to be applied for any situation not covered by a specified minimum, the pilot will be advised and an appropriate separation applied.

Notwithstanding the above separation standards, if pilots consider that the effect of wake turbulence can be nullified by ensuring that flight profiles do not cross, they may request and be granted exemption from these separations. ATC will advise the category or type of the other aircraft where that aircraft is a Heavy aircraft.

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AD 1.8 DEPARTURE FROM THE CIRCUIT

1 INTRODUCTION

1.1 General

1.1.1 The pilot of a VFR aircraft departing the traffic circuit must make all turns in the direction of the traffic circuit, unless:

- (a) otherwise authorised by ATC; or
- (b) if at an uncontrolled aerodrome, the pilot is clear of the circuit area or 1,500ft above the aerodrome.

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AD 1.9 AERODROME CIRCUIT PROCEDURES

1 CIRCUIT HEIGHT

1.1 General

1.1.1 Unless otherwise specified on the aerodrome chart the circuit height will be 1,000ft above the aerodrome elevation.

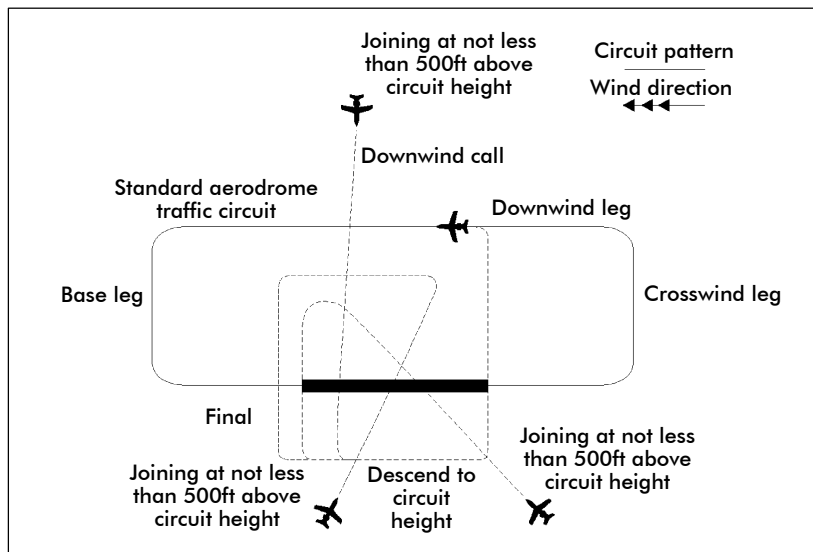
2 STANDARD CIRCUIT JOINING PROCEDURE

2.1 General

2.1.1 The standard joining procedure is shown in [Figure AD 1.9 - 1](#). This procedure should be followed when a pilot is unfamiliar with the aerodrome or is uncertain of other circuit traffic:

- (a) Unless otherwise specified on the appropriate aerodrome chart, approach the aerodrome by descending or climbing to not less than 1,500ft above aerodrome elevation or not less than 500ft above circuit height if a circuit height other than 1,000ft is specified on the landing chart, and observe the wind, circuit direction and any ground signals displayed. If the ceiling will not permit flight above 1,000ft or other specified circuit height, an aircraft may enter at a lower altitude but must avoid passing through the circuit pattern.
- (b) Make all subsequent turns in the direction of the traffic circuit.

Figure AD 1.9 - 1
Standard Overhead Joining Procedure



- (c) Join the non-traffic side of the circuit and descend to circuit height, first observing the position of other aircraft taking off or landing or flying in the circuit in order to ensure adequate spacing when joining on the downwind leg.

Note

If aircraft already in the circuit appear likely to prevent adequate spacing being achieved, maintain altitude and re-circuit the aerodrome.

- (a) Turn ninety degrees across wind and pass sufficiently close to the upwind boundary of the aerodrome to ensure that aircraft taking off can pass safely underneath.
- (b) Turn to join the downwind leg of the traffic circuit at a point which ensures adequate spacing with any aircraft in the circuit ahead or behind.

3 CIRCUIT JOINING PROCEDURE — CONTROLLED AERODROMES

3.1 General

3.1.1 Aircraft intending to land at a controlled aerodrome must join the circuit in accordance with ATC instructions. The following joining procedures may be specified:

- (a) by descending to circuit height prior to joining and making either a straight-in approach to the runway-in-use or joining a downwind leg or base leg; or
- (b) as outlined in the standard circuit joining procedure above.

4 CIRCUIT JOINING PROCEDURES — UNCONTROLLED AERODROMES

4.1 General

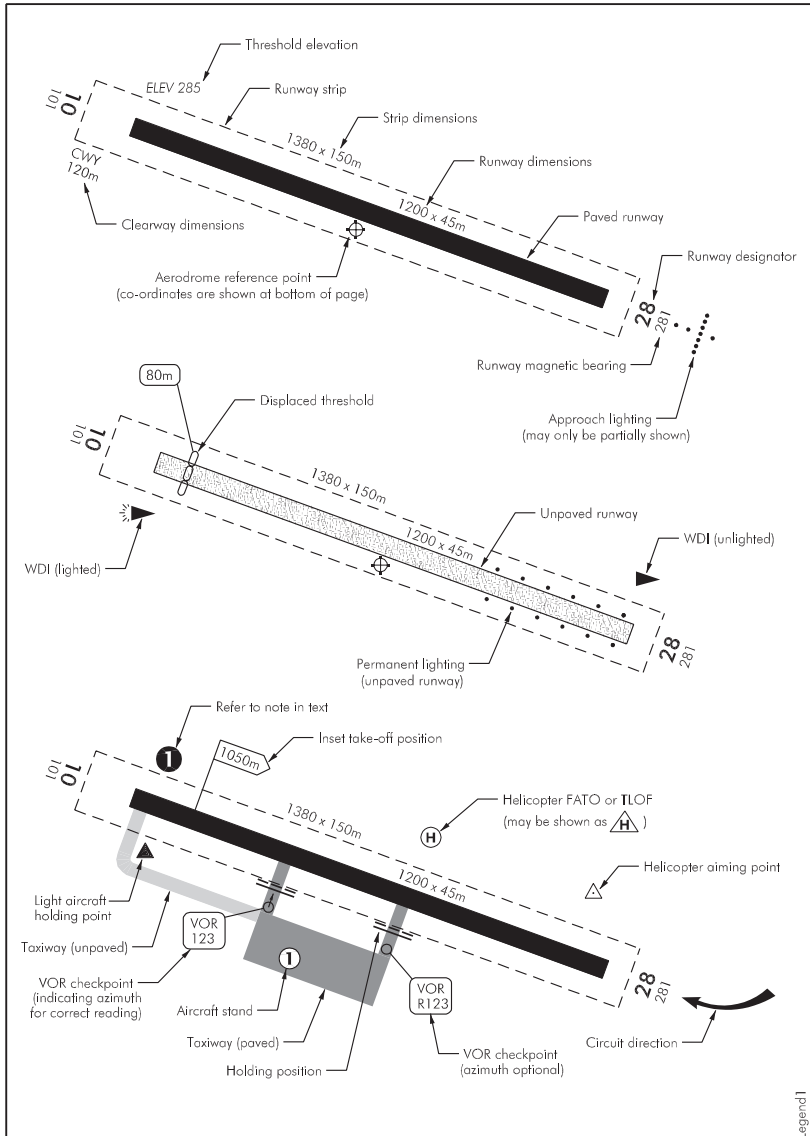
4.1.1 The pilot of an aircraft intending to land at an unattended aerodrome or an aerodrome where FIS is being provided may join the circuit in the way outlined in the circuit joining procedure for controlled aerodromes provided that:

- (a) the runway-in-use and aerodrome traffic are properly ascertained; and
- (b) the FS unit is advised of the intended joining method, or at an unattended aerodrome joining intentions are advised; and
- (c) when making a straight-in approach, or joining a downwind or base leg, the aircraft is sequenced in such a way as to give priority to other aircraft already established in the circuit or joining in accordance with the standard circuit joining procedure described above; and
- (d) when entering or flying within the circuit, all turns are made in the direction appropriate to the runway-in-use.

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AD 1.10 AERODROME LEGEND

1 AERODROME LEGEND






2 AERODROME LEGEND


Movement Areas

aerodrome boundary		permanently unusable area	
caution area (designated)		open drain	










Lighting

aerodrome beacon		aeronautical light (or hazard beacon)	
circling guidance lights		marine light	
obstruction light		flood light	









Obstacles

highest elevation on chart		spot elevation	
lighted		microwave station or tower	
towers and masts	unlighted 	power or telephone line	

Topography

road		river	
railway		water areas	
cliff or terrace		stopbank	
built-up area		buildings	
		tree	

Miscellaneous

control tower		heliporter park	
flight service station		light aircraft park	
telephone		first aid	
arrestor gear (military aerodromes only)	uni-directional  bi-directional 		

Legend 2

AD 1.11 AIRSPACE LEGEND

1 AIRSPACE LEGEND

Airspace


"Transponder Mandatory" Airspace **CTA/E**

"NON-Transponder Mandatory" Airspace CTA/E


Control Zone (CTR) 

Control Area (CTA/E)..... 


VFR Transit Lanes or
VFR Helicopter Lane 

VFR Visual
Arrival/Departure Sector 


Low Flying Area (L...)
Military Low Flying Zone (MLFZ) 

General Aviation Area (G...)..... 

VFR Special Procedure Area..... 

Mandatory Broadcast Zone (C...) 

Danger (D...),
Restricted (R...)
Military Operational Area (M...) 

VFR Route 

Visual Reporting Point 

Parachute Dropping Zone (P...) 

Radio Navigation

Basic radio navigation aid ○

VORTAC 

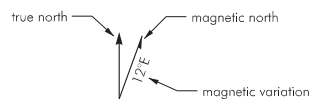
VOR 

NDB 

DME 

NDB/DME 

VOR/DME 



name → ABCD
VOR/DME 111.1
AB
500 00 00
E000 00 00
latitude →
longitude →
VOR and/or DME frequency →
morse code ident →

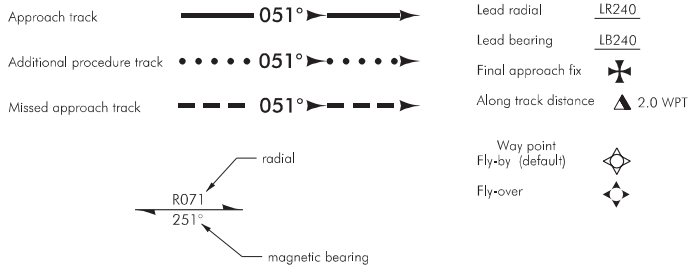
ABCD
DME 111.1
NDB 456
AB
500 00 00
E000 00 00
NDB frequency →
identification →

Legend3

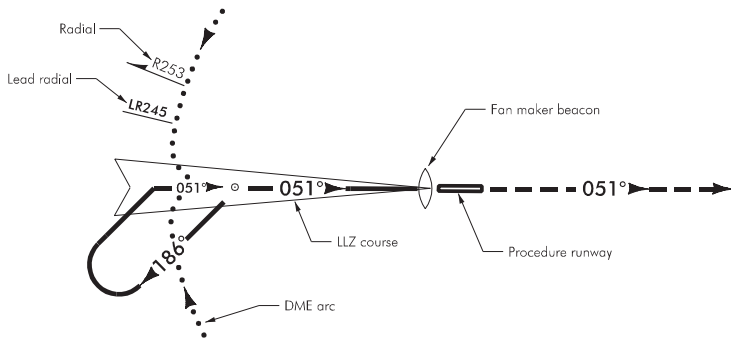
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2 INSTRUMENT PROCEDURES

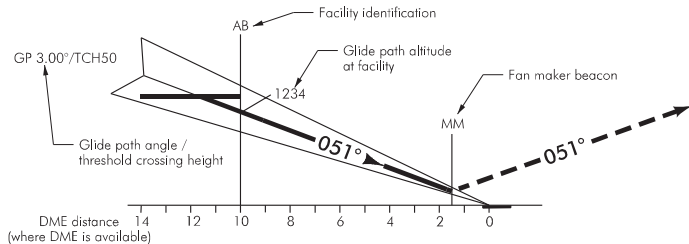
INSTRUMENT APPROACH



Plan (precision approach)



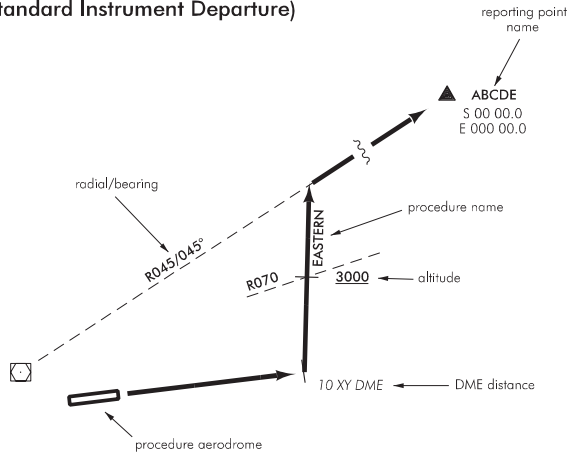
Profile (precision approach)



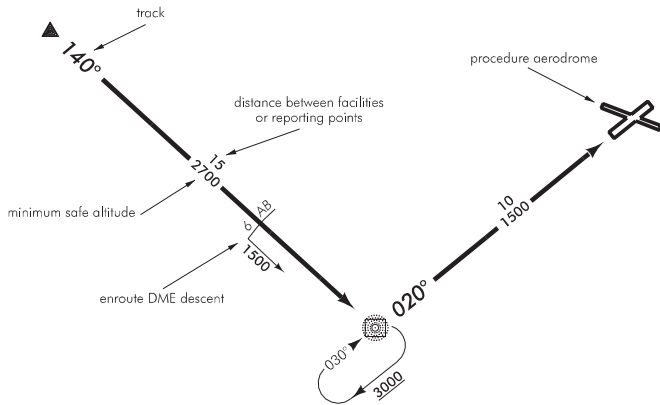
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3 INSTRUMENT PROCEDURES

SID (Standard Instrument Departure)

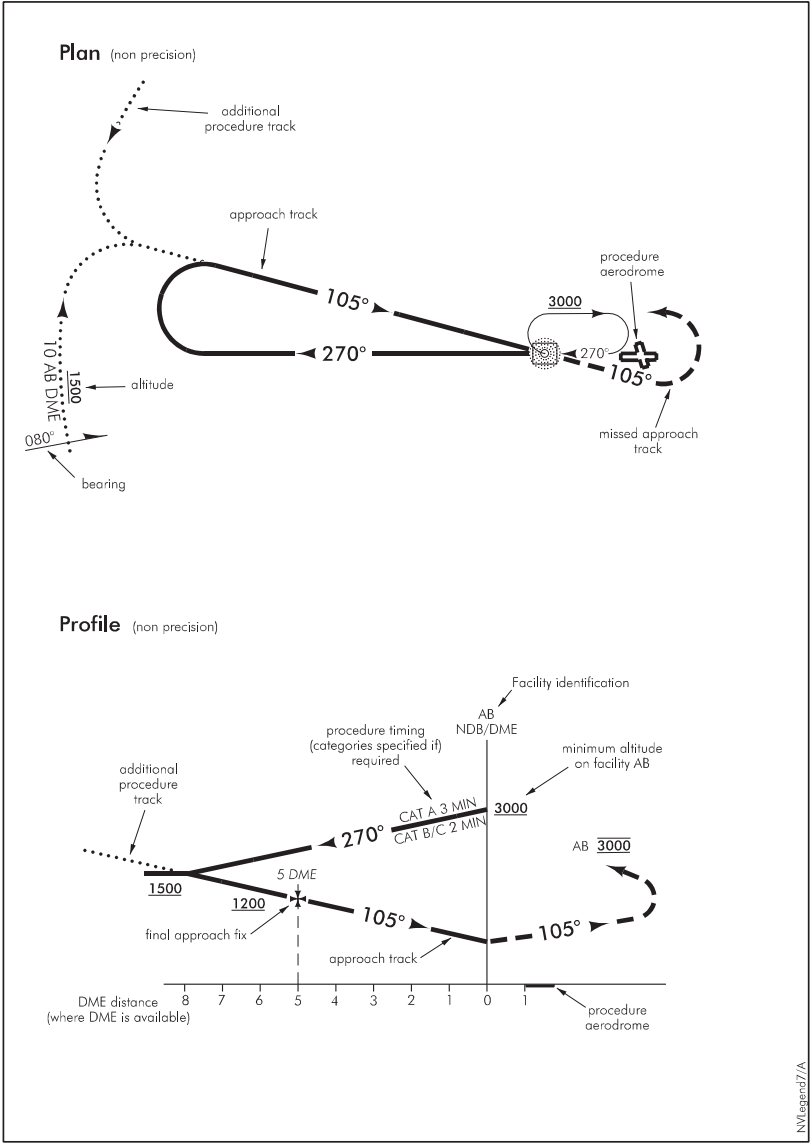


STAR (Standard Arrival)



NMI/engr/6/A

4 INSTRUMENT PROCEDURES



**NFTE AD 2.1 AERODROME LOCATION INDICATOR
AND NAME**

NFTE	EUA
------	-----

**NFTE AD 2.2 AERODROME GEOGRAPHICAL AND
ADMINISTRATIVE DATA**

1	ARP co-ordinates, location	S 21°22.63' W 174°57.45'
2	Direction and distance from city	5NM south of Ohonua township
3	Elevation/Reference temperature	325ft
4	MAG VAR/Annual change	13°E 13"
5	AD Administration, address, telephone, telefax, telex, AFS	Chief Executive Officer, Tonga Airports Limited, Fua'amotu International Airport PO Box 876, Nuku'alofa Tonga Tel (676) 21 864 Fax (676) 27 942 Email dcusack@tongaairports.com AFS NFTFYDYX AIRPORT CONTACT DETAILS Tel (676) 50 126
6	Types of traffic permitted (IFR/VFR)	VFR
7	Remarks	Nil

NFTE AD 2.3 OPERATIONAL HOURS

1	AD Administration	1930 – 0330 (0830 – 1630) Mon – Fri excluding holidays
2	AD	Mon – Sat. Daylight operation and approved flights only
3	Customs and immigration	Nil
4	Health and sanitation	O/R. Available at Niu'eiki Hospital
5	AIS Briefing Service	Available at Fua'amotu Intl AIS Briefing Office
6	MET Briefing Service	Available at Fua'amotu Intl MET Briefing Office
7	ATS Reporting Office	Nil
8	Fuelling	Nil
9	ATS	Nil. Under Fua'amotu AIr Traffic Services watch
10	Handling	Nil
11	Security	Nil
12	De-icing	Nil

NFTE AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	Limited. Prior arrangement with operators.
2	Fuel/oil types	Nil
3	Fuelling facilities/ capabilities	Nil
4	De-icing facilities	Nil
5	Hangar space for visiting aircraft	Nil
6	Repair facilities for visiting aircraft	Nil
7	Remarks	Nil

NFTE AD 2.5 PASSENGER FACILITIES

1	Hotels	Motels and guest houses at 'Ohonua township
2	Restaurants	Limited available at 'Ohonua township
3	Transportation	Limited available at the airport
4	Medical facilities	Limited available at Niu'ui Hospital
5	Bank and Post Office	Available at 'Ohonua township
6	Tourist Office	Available at 'Ohonua township
7	Remarks	Nil

NFTE AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	Nil
2	Rescue equipment	Nil
3	Capability for removal of disabled aircraft	Nil
4	Remarks	Nil

NFTE AD 2.7 SEASONAL AVAILABILITY — CLEARING

1	Types of clearing equipment	Nil
2	Clearance priorities	Nil
3	Remarks	Nil

NFTE AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	Apron surface and strength	Grass
2	Taxiway width, surface and strength	Grass
3	ACL location and elevation	Nil
4	VOR/INS checkpoints	Nil
5	Remarks	Nil

**NFTE AD 2.9 SURFACE MOVEMENT GUIDANCE,
CONTROL SYSTEM AND MARKINGS**

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	Nil
2	RWY and TWY markings and LGT	Nil
3	Stop bars	Nil
4	Remarks	Nil

NFTE AD 2.10 AERODROME OBSTACLES

In approach/take-off areas			Remarks
RWY/Area affected	Obstacle type Elevation Markings/ LGT	Co-ordinates	Remarks

In circling area and at aerodrome			Remarks
RWY/Area affected	Obstacle type Elevation Markings/ LGT	Co-ordinates	Remarks

NFTE AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	Nil
2	Hours of service MET Office	Nil
3	Office responsible for TAF preparation Periods of validity	Nil
4	Type of landing forecast Interval of issuance	Nil
5	Briefing/consultation provided	Nil
6	Flight documentation Language(s) used	Nil
7	Charts and other information available for briefing or consultation	Nil
8	Supplementary equipment available for providing information	Nil
9	ATS units provided with information	Nil
10	Additional information (limitation of service, etc)	Nil

NFTE AD 2.12 RWY PHYSICAL CHARACTERISTICS

RWY	TRUE and MAG BRG	Dimensions of RWY (m)	Strength (PCN) and surface of RWY and SWY	THR co-ordinates	THR elevation and highest elevation of TDZ of precision APP RWY
16		700 x 30	Coral/Grass		
34		700 x 30	Coral/Grass		

NFTE AD 2.13 DECLARED DISTANCES

RWY	TORA (m)	TODA (m)	ASDA (m)	LDA (m)	Remarks
16	700	700	700	700	Nil
34	700	700	700	700	Nil

NFTE AD 2.14 APPROACH AND RWY LIGHTING

Remarks	Nil	Nil
SWY LGT LEN (m) Colour	Nil	Nil
RWY End LGT Colour WBAR	Nil	Nil
RWY Edge LGT LEN Spacing Colour, INTST	Nil	Nil
RWY Centre Line LGT LEN Spacing Colour, INTST	Nil	Nil
TDZ LGT LEN	Nil	Nil
VASIS (MEHT) PAPI	Nil	Nil
THR LGT Colour WBAR	Nil	Nil
APCH LGT Type LEN INTST	Nil	Nil
RWY	16	34

NFTE AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	Nil
2	LDI location and LGT, Anemometer location and LGT	Nil
3	Secondary power supply/switch-over time	Nil
4	Remarks	Nil

NFTE AD 2.16 HELICOPTER LANDING AREA

1	Co-ordinates of TLOF or THR of FATO	Nil
2	TLOF and/or FATO elevation (ft)	Nil
3	TLOF and FATO area dimensions, surface, strength and markings	Nil
4	True and MAG BRG of FATO	Nil
5	Declared distance available	Nil
6	APP and FATO lighting	Nil
7	Remarks	Nil

NFTE AD 2.17 ATS AIRSPACE

1	Designation and lateral limits	Nil
2	Vertical limits	Nil
3	Airspace classification	Nil
4	ATS unit callsign, language	Nil
5	Transition altitude	Nil
6	Remarks	Nil

NFTE AD 2.18 ATS COMMUNICATIONS FACILITIES

Service Designation	Callsign	Frequency	Hours of Operation	Remarks
FIS				
APP				
TWR				
AFIS				

NFTE AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Remarks	Nil
Elevation of DME antenna	Nil
Co-ordinates	Nil
Hours of Operation	Nil
Frequency	Nil
Identification	Nil
Type of Aid, CAT (for ILS), Variation	Nil

NFTE AD 2.20 LOCAL TRAFFIC REGULATIONS

1 AERODROME REGULATIONS

Nil.

2 TAXIING TO AND FROM STANDS

Nil.

3 PARKING AREA FOR GENERAL AVIATION

Nil.

4 PARKING AREA FOR HELICOPTERS

Nil.

5 APRON — TAXIING

Nil.

6 TAXIING — LIMITATIONS

Nil.

7 TRAINING FLIGHTS — USE OF RWYS

Nil.

8 HELICOPTER TRAFFIC — LIMITATIONS

Nil.

9 REMOVAL OF DISABLED AIRCRAFT

Nil.

NFTE AD 2.21 NOISE ABATEMENT PROCEDURES

1 GENERAL

Nil.

NFTE AD 2.22 FLIGHT PROCEDURES

1 POSITION AND ALTITUDE REPORTING — LOCAL VFR FLIGHTS

Nil.

2 POSITION REPORTING ON DEPARTURE

Nil.

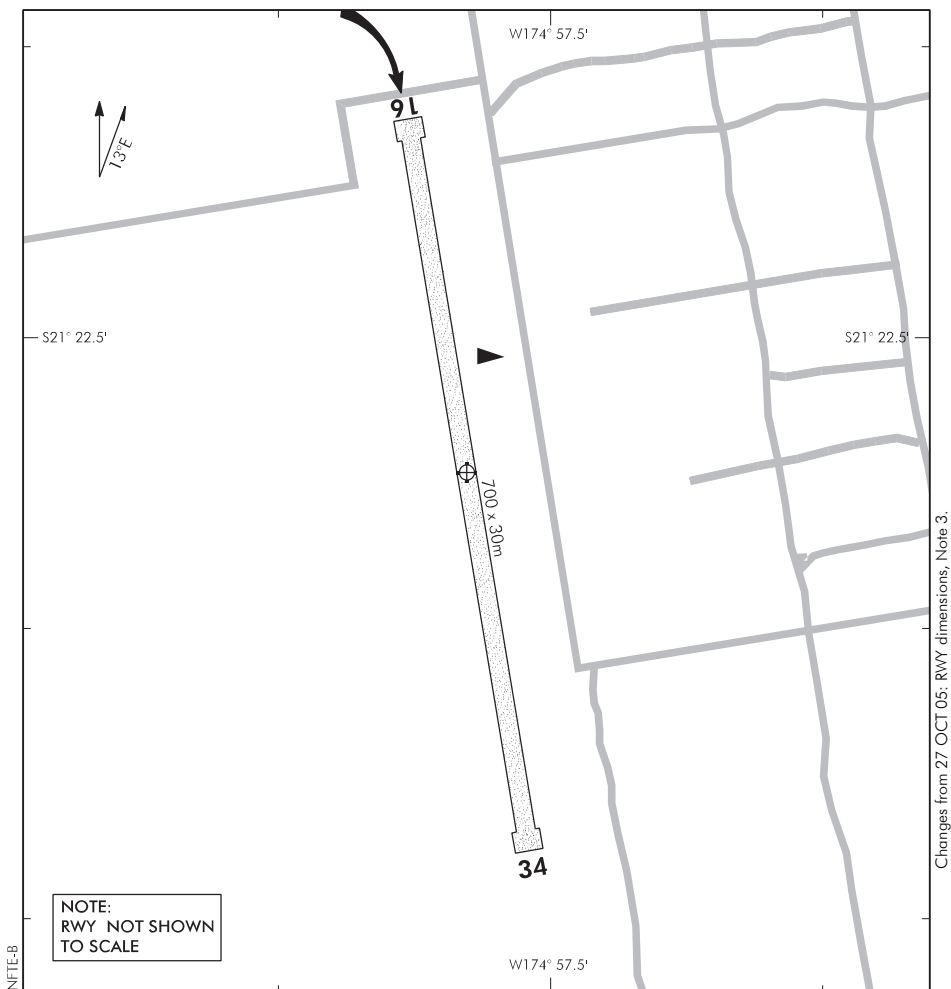
3 AERODROME TRAFFIC CIRCUIT RULES

RWY 16: Right hand

RWY 34: Left hand

ELEV 325

EUA
AERODROME (1)
 UNATTENDED: 118.5



1. Circuit: RWY 16 — Right hand
RWY 34 — Left hand
2. White painted tyres placed into the ground 100m intervals along the length 6 inches from the RWY edge and protruding by 1 inch.

Six white painted tyres, three on each side, splayed outward to mark the RWY threshold.

3. RWY 16/34 thresholds are marked with white/red marker boards.
4. Threshold co-ordinates, strip dimensions and elevation yet to be determined.

S 21 22.63 W 174 57.45

Effective: 31 JUL 08

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EUA
AERODROME (1)

EUA

AERODROME (2)

5. CAUTION:

- ♦ All departing aircraft must receive ATC clearance from Fua’amotu Tower prior to taking off. If unable contact on Mobile (676) 52 295 or Tel (676) 35 393 or (676) 35 395.
- ♦ Loading and unloading during wet conditions shall be confined to the runway.
- ♦ Braking action poor when wet.
- ♦ Movement area fencing inadequate — beware of stray animals.

VFR MINIMA

CEILING (ft) & VISIBILITY (m or km)		
	DAY	NIGHT
Air Transport	600 – 1500	NA

NFTF AD - 2.1 AERODROME LOCATION INDICATOR AND NAME

NFTF	FUA'AMOTU
------	-----------

NFTF AD - 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP co-ordinates, location	S 21°14'27.8" W 175°08'22.7" 025° T 800m from Tower
2	Direction and distance from city	8NM south-southeast of Nuku'alofa
3	Elevation/Reference temperature	126ft 30°
4	MAG VAR/Annual change	13°52'E 13"
5	AD Administration, address, telephone, telefax, telex, AFS	Chief Executive Officer, Tonga Airports Limited, Fua'amotu International Airport PO Box 876, Nuku'alofa Tonga Tel (676) 21 864 Fax (676) 27 942 AFTN NFTFYDYX Email dcusack@tongaairports.com
6	Types of traffic permitted (IFR/VFR)	VFR/IFR
7	Remarks	Nil

NFTF AD - 2.3 OPERATIONAL HOURS

1	AD Administration	Mon – Fri 1930 – 0330UTC (0830 – 1630L) excluding Holidays
2	AD	HS Mon – Sat 1730 – 0630UTC (0630 – 1930L) All flights requesting to operate outside AD operational hours will obtain approval from CEO at least 48 hours prior ETD. All changes will be promulgated by NOTAM with ATS Operational Hours.
3	ATS	HS
4	Customs and immigration	HS
5	AIS Briefing Office	HS
6	ATS Reporting Office (ARO)	HS
7	MET Briefing Office	HS
8	Fuelling	HS
9	Handling	HS
10	Health and sanitation	O/R. Available at Vaiola Hospital
11	Security	24 Hours
12	De-icing	Nil
13	Remarks	Nil

NFTF AD - 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	1 belt loader 1 aircraft tug for light aircraft 4 trolleys
2	Fuel/oil types	Fuel: JET A1 Pacific Energy SWP Limited Office Tel (679) 331 1622 Mobile (679) 705 1200 Email Manager rnabalarua@pacificpetrole.com Oil:
3	Fuelling facilities/capabilities	Hydrant Dispenser 1200 litres/min Fuller capacity 7800 litres – 300 litre/min
4	De-icing facilities	Nil
5	Hangar space for visiting aircraft	Nil
6	Repair facilities for visiting aircraft	Major repairs by arrangement. Limited stock of spare parts.
7	Remarks	Nil

NFTF AD - 2.5 PASSENGER FACILITIES

1	Hotels	Available in Nuku'alofa.
2	Restaurants	Available in Nuku'alofa.
3	Transportation	Taxis, rental cars, tour buses.
4	Medical facilities	Limited first aid facilities at the airport. Medical clinic within the vicinity of the aerodrome.
5	Bank and Post Office	Bank — MBF Bank. Post Office — limited postal outgoing mail service only.
6	Tourist Office	Located at airport terminal
7	Remarks	Nil

NFTF AD - 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	Cat 8
2	Rescue equipment	Rescue equipment for land operations only
3	Capability for removal of disabled aircraft	For a/c up to 150,000kg — salvage kit ex Auckland For a/c up to 150,000kg — IATA kit ex Sydney
4	Remarks	Nil

NFTF AD - 2.7 SEASONAL AVAILABILITY — CLEARING

1	Types of clearing equipment	Nil
2	Clearance priorities	Nil
3	Remarks	Nil

NFTF AD - 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	Apron surface and strength	Bitumen, PCN 45/F/B/1.1Mba/T
2	Taxiway width, surface and strength	Width — 23m Surface — bitumen Strength — PCN 45/F/B/1.1Mpa/T
3	ACL location and elevation	Location — at thresholds Elevations — RWY 11
4	VOR/INS checkpoints	VOR — 6M circle white colour on surface of taxiway and adjacent sign board – E TWY A
5	Remarks	Nil

NFTF AD - 2.9 SURFACE MOVEMENT GUIDANCE, CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	TWY guide lines at intersection of RWY and TWY and at holding position. Guide lines at apron. Nose-in guide lines at A/C stands.
2	RWY and TWY markings and LGT	RWY MARKINGS Designator, Threshold, Centreline, Touchdown Zone, Fixed Distance, Sidestripe. RWY LIGHTING REDL (omni-directional LIL white), Threshold wingbar — RWY 11 — (uni-directional green), RTHL (uni-directional green), RENL (uni-directional red). TWY MARKINGS Centreline, Holding Position. TWY LIGHTING Edge
3	Stop bars	Nil
4	Remarks	Nil

NFTF AD - 2.10 AERODROME OBSTACLES

In approach/take-off areas			Remarks
RWY/Area affected	Obstacle type Elevation Markings/LGT	Co-ordinates	Remarks

In circling area and at aerodrome			Remarks
RWY/Area affected	Obstacle type Elevation Markings/LGT	Co-ordinates	Remarks

NFTF AD - 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	Fua'amotu MET Office
2	Hours of service MET Office	0001 – 2400 Daily
3	Office responsible for TAF preparation Periods of validity	Fiji Meteorological Service
4	Type of landing forecast Interval of issuance	TAF
5	Briefing/consultation provided	Available at Briefing Office and from MET Office Phone/Fax (676) 35 222, 35 123
6	Flight documentation Language(s) used	English
7	Charts and other information available for briefing or consultation	Surface analysis charts, satellite map, Tonga Area Forecast, hourly Metars, TAFs
8	Supplementary equipment available for providing information	Emergency Managers Weather Information Network (available at Briefing Office)
9	ATS units provided with information	Fua'amotu Tower
10	Additional information (limitation of service, etc)	The Aeronautical Meteorological Office is located at the Domestic Terminal adjacent to the Briefing Office

NFTF AD - 2.12 RWY PHYSICAL CHARACTERISTICS

RWY	TRUE and MAG BRG	Dimensions of RWY (m)	Strength (PCN) and surface of RWY and SWY	THR co-ordinates	THR elevation and highest elevation of TDZ of precision APP RWY
11	122°T 108°M	2671 x 45	PCN 45/F/B/X/T Asphalt	S21 14 04.06 W175 09 39.25	91ft
29	302°T 288°M	2671 x 45	PCN 45/F/B/X/T Asphalt	S21 14 49.96 W175 08 20.63	114ft
17	182°T 169°M	1509 x 115	ESWL 13700kg Grass	S21 14 16 W175 08 19	98ft
35	002°T 349°M	1509 x 115	ESWL 13700kg Grass	S21 15 04 W175 08 21	126ft
Remarks	RWY 11 RESA — 90m x 90m RWY 29 RESA — 90m x 90m				

NFTF AD - 2.13 DECLARED DISTANCES

RWY	TORA (m)	TODA (m)	ASDA (m)	LDA (m)	Remarks
11	2671	2731	2671	2671	Nil
29	2671	2731	2731	2671	Nil
17	1164	1164	1509	1269	Nil
35	1269	1269	1509	1164	Nil

NFTF AD - 2.14 APPROACH AND RWY LIGHTING

RWY	APCH LGT Type LEN INTST	THR LGT Colour WBAR	VASIS (MEH) PAPI	TDZ LGT LEN	RWY Centre Line LGT LEN Spacing Colour, INTST	RWY Edge LGT LEN Spacing Colour, INTST	RWY End LGT Colour WBAR	SWY LGT LEN (m) Colour	Remarks
11	SALS 360m LIL	Green	PAPI 3.00° TCH 65ft	Nil	Nil	2671m 60m White LIL	Red Nil	Nil	Nil
29	Nil	Green Nil	PAPI 3.00° TCH 65ft	Nil	Nil	2671m 60m White LIL	Red Red	Nil	Nil
17	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
35	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

NFTF AD - 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN location, characteristics and hours of operation IBN	Control Tower Top, ALT FLG GW 2.4 Sec Night ops and low visibility sight Nil
2	LDI location and LGT ANEMOMETER location and LGT AUTOMATIC WEATHER SYSTEM location and LGT	Nil S 21 14 44.6 W 175 08 41, Unlit S 21 14 44.8 W 175 08 41, Unlit
3	Secondary power supply/switch-over time	AD lighting Switch-over time — 12 sec
4	Remarks	Nil

NFTF AD - 2.16 HELICOPTER LANDING AREA

1	Co-ordinates of TLOF or THR of FATO	Nil
2	TLOF and/or FATO elevation (ft)	Nil
3	TLOF and FATO area dimensions, surface, strength and markings	Nil
4	True and MAG BRG of FATO	Nil
5	Declared distance available	Nil
6	APP and FATO lighting	Nil
7	Remarks	Nil

NFTF AD - 2.17 ATS AIRSPACE

1	Designation and lateral limits	<p>CTR radius of 25NM centred on NFTF ARP</p> <p>CTA radius of 75NM centred on NFTF ARP, radius of 100NM centred on NFTF ARP, radius of 130NM centred on NFTF ARP</p>
2	Vertical limits	<p>CTR — FM SFC to 3500ft</p> <p>CTA — FM 3500ft to 9500ft</p> <p>— FM 9500ft to FL195</p> <p>— FM FL195 to FL245</p>
3	Airspace classification	<p>Class A above FL195</p> <p>Class C at or below FL195</p>
4	ATS unit callsign, language	Fua'amotu Tower, English
5	Transition altitude	13,000ft
6	Remarks	Nil

NFTF AD - 2.18 ATS COMMUNICATIONS FACILITIES

Service Designation	Callsign	Frequency	Hours of Operation	Remarks
FIS	FUA'AMOTU RADIO	13261, 11339, 8995, 8867, 8846, 6553, 5832, 5643, 3425, 3226 KHz	As AD	
APP	FUA'AMOTU TOWER	118.5 MHz	As AD	
TWR	FUA'AMOTU TOWER	118.5 MHz	As AD	
SFC Movement Control	GROUND	121.9	As AD	

NFTF AD - 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of Aid, CAT (for ILS), Variation	Identification	Frequency	Hours of Operation	Coordinates	Elevation of DME antenna	Remarks
VOR/ DME	TBU	114.5	24 Hrs	S21°14'44.8" W175°08'50.5"	22ft	MAG VAR 13°E (1984)
NDB	FM	245	24 Hrs	S21°14'59.4" W175°08'41.0"	22ft	Nil

NFTF AD - 2.20 LOCAL TRAFFIC REGULATIONS

1 AERODROME REGULATIONS

Nil.

2 TAXIING TO AND FROM STANDS

Nil.

3 PARKING AREA FOR GENERAL AVIATION

Nil.

4 PARKING AREA FOR HELICOPTERS

Nil.

5 APRON — TAXIING

Nil.

6 TAXIING — LIMITATIONS

Nil.

| 7 TRAINING AND TECHNICAL TEST FLIGHTS — USE OF RWYS

Nil.

8 HELICOPTER TRAFFIC — LIMITATIONS

Nil.

9 REMOVAL OF DISABLED AIRCRAFT

Nil.

NFTF AD - 2.21 NOISE ABATEMENT PROCEDURES

1 GENERAL

Nil.

NFTF AD - 2.22 FLIGHT PROCEDURES

1 POSITION AND ALTITUDE REPORTING — LOCAL VFR FLIGHTS

Nil.

2 POSITION REPORTING ON DEPARTURE

Nil.

3 AERODROME TRAFFIC CIRCUIT RULES

RWY 11: Left hand

RWY 29: Left hand

RWY 17: Left hand

RWY 35: Left hand

NFTF AD - 2.23 ADDITIONAL INFORMATION

1 BIRD CONCENTRATIONS IN THE VICINITY OF THE AIRPORT

1.1 General

1.1.1 Caution due to concentrations of birds in the vicinity of the aerodrome day and night to approximately 1000ft AMSL.

2 REDUCTION OF BIRD HAZARD

2.1 General

2.1.1 A Wildlife Management Programme, aimed at, inter-alia, minimising bird hazards to aircraft operations at Fua'amotu Airport, is being actively pursued. Mitigating actions include ATC warnings to aircraft of approaching flocks, use of bird scaring devices such as gas cannon at strategic locations at the airport and the use of spotlight lights at night. RFS is responsible for constant harassment of bird activities with a vehicle entering the runway 15 minutes prior to the landing and take-off of all jet engine aircraft.

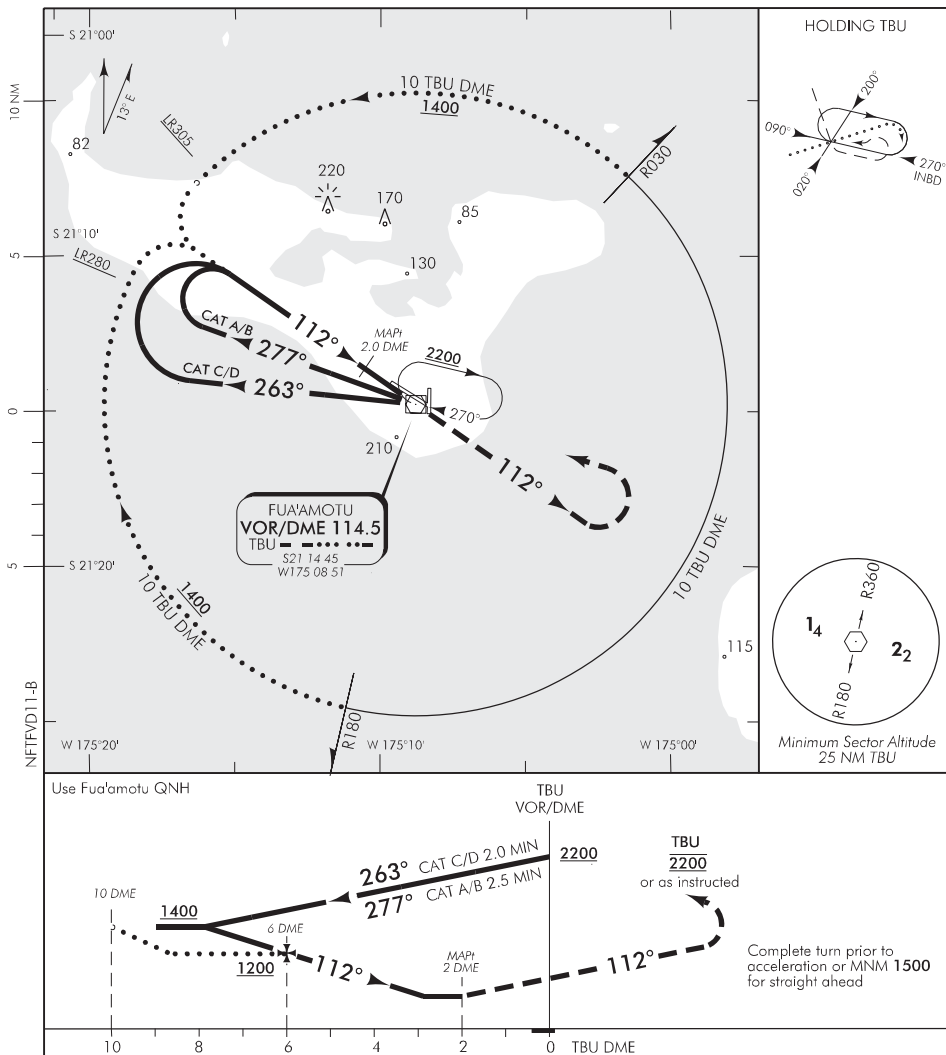
2.1.2 Pilots can assist by advising ATC of any large concentrations of birds and should advise if any flocks are observed when no previous warnings have been issued. The use of landing and/or navigation lights is recommended during all take-offs and landings to help reduce the risk of collision with birds.

ELEV 126

RWY 11 THR ELEV 91

FUA'AMOTU TOWER: 118.5

CAT A,B,C,D

FUA'AMOTU**VOR/DME RWY 11**

MISSED APCH: Climb on R112 to 1500, turn LEFT, enter TBU holding 2200 or as instructed

TBU DME DIST	FAP 6	5	4	3	2.1	2	1	MAPi VOR	
Advisory Altitude 5%	1650	1350	1050	750	MDA	MDA	MDA	MDA	
Category	A		B			C		D	
VOR/DME	480(389) – 1600					480(389) – 2400			
Circling	630(504) – 1900		630(504) – 2800			730(604) – 3700		820(694) – 4600	

Effective: 7 JUN 07**WGS 84 Co-ordinates**

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FUA'AMOTU**VOR/DME RWY 11**

Changes from 27 OCT 05: VOR/DME coordinates.

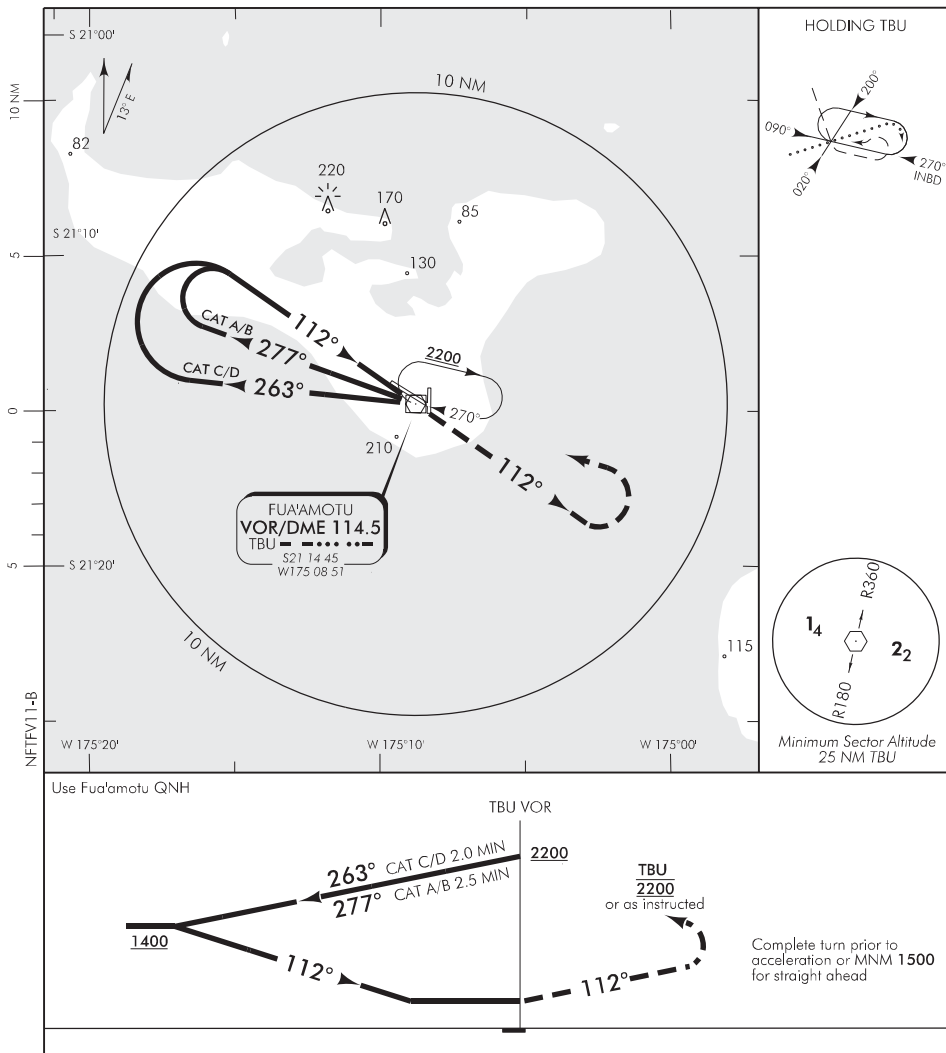
ELEV 126

CAT A,B,C,D

RWY 11 THR ELEV 91

FUA'AMOTU**VOR RWY 11**

FUA'AMOTU TOWER: 118.5



Category	A	B	C	D
VOR	530(439) – 2000		530(439) – 2800	
Circling	630(504) – 1900	630(504) – 2800	730(604) – 3700	820(694) – 4600

Effective: 7 JUN 07**WGS 84 Co-ordinates**

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FUA'AMOTU**VOR RWY 11**

Changes from 27 OCT 05: VOR/DME coordinates.

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ELEV 126

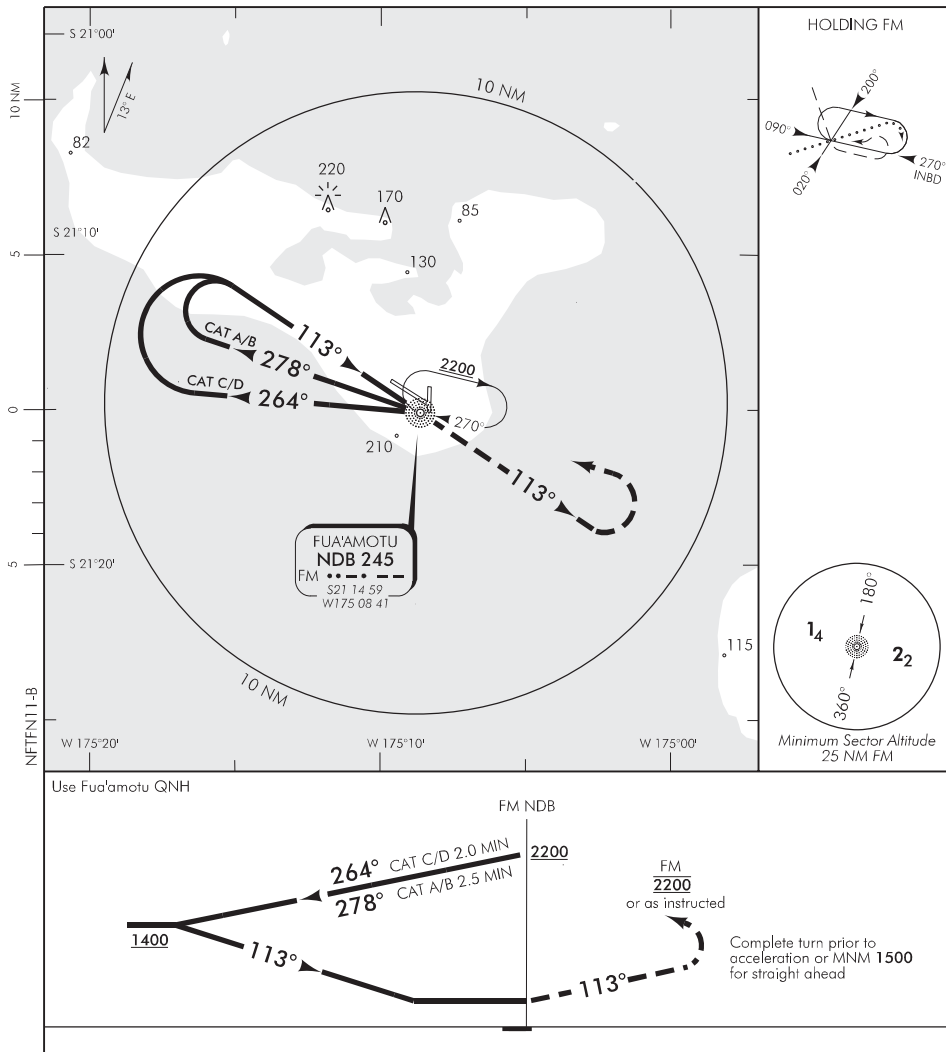
CAT A,B,C,D

FUA'AMOTU

RWY 11 THR ELEV 91

NDB RWY 11

FUA'AMOTU TOWER: 118.5



MISSED APCH: Climb on 113° to 1500, turn LEFT, enter FM holding 2200 or as instructed

Category	A	B	C	D
NDB	530(439) – 2000		530(439) – 2800	
Circling	630(504) – 1900	630(504) – 2800	730(604) – 3700	820(694) – 4600

Effective: 7 JUN 07**WGS 84 Co-ordinates**

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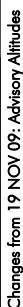
FUA'AMOTU**NDB RWY 11**

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FUA'AMOTU

RNAV (GNSS) RWY 11

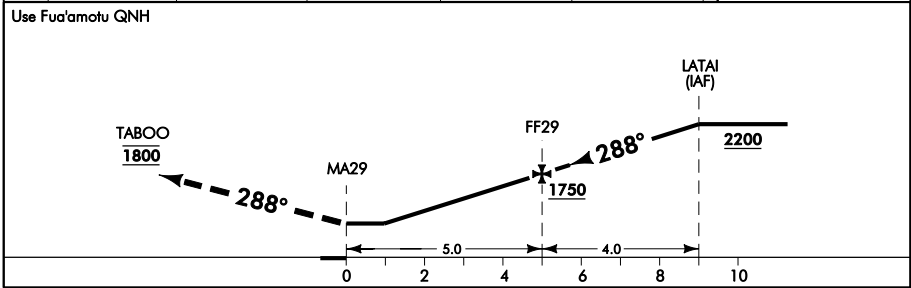
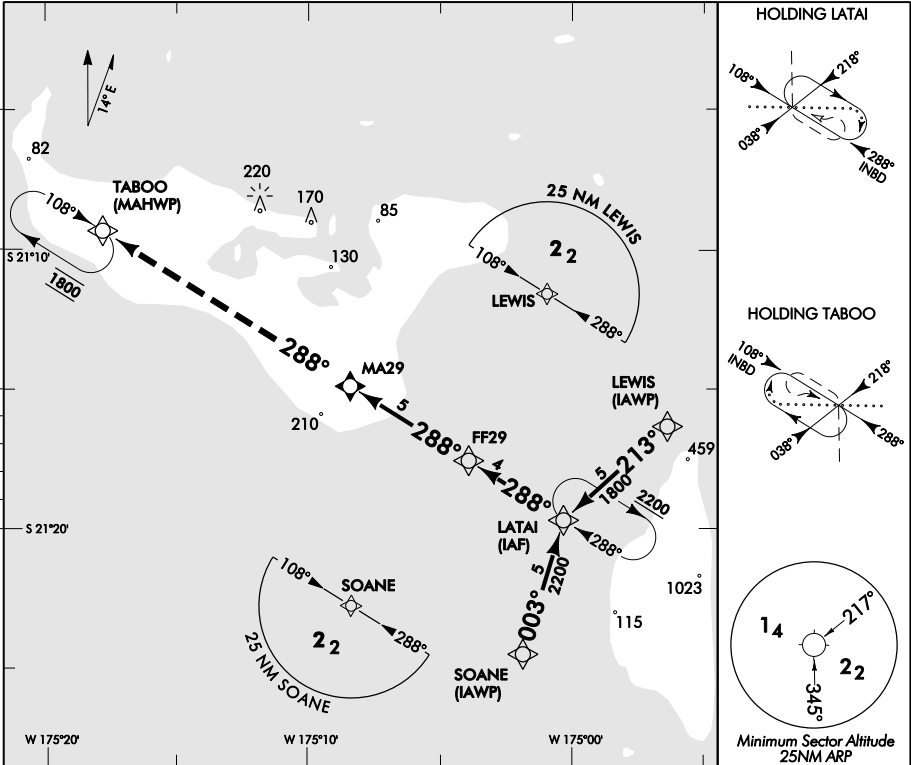
FUA'AMOTU TOWER: 118.5



MISSED APCH: Climb straight ahead to LATAI. Hold 2200 ft

DISTANCE to WPT	TABOO	3	2	1	FF11	4	3	2	1	MA11	
Advisory Altitude 5.2%	2850	2550	2250	1950	1730	1390	1070	750	MDA	MDA	
Category	A			B			C			D	
GNSS (DAY)	480(389) – 1600						480(389) – 2400				
GNSS (NIGHT)	480(389) – 2000						480(389) – 2400				
Circling	590(464) – 1900			630(504) – 2800			730(604) – 3700			820(694) – 4600	

FUA'AMOTU
RNAV (GNSS) RWY 11

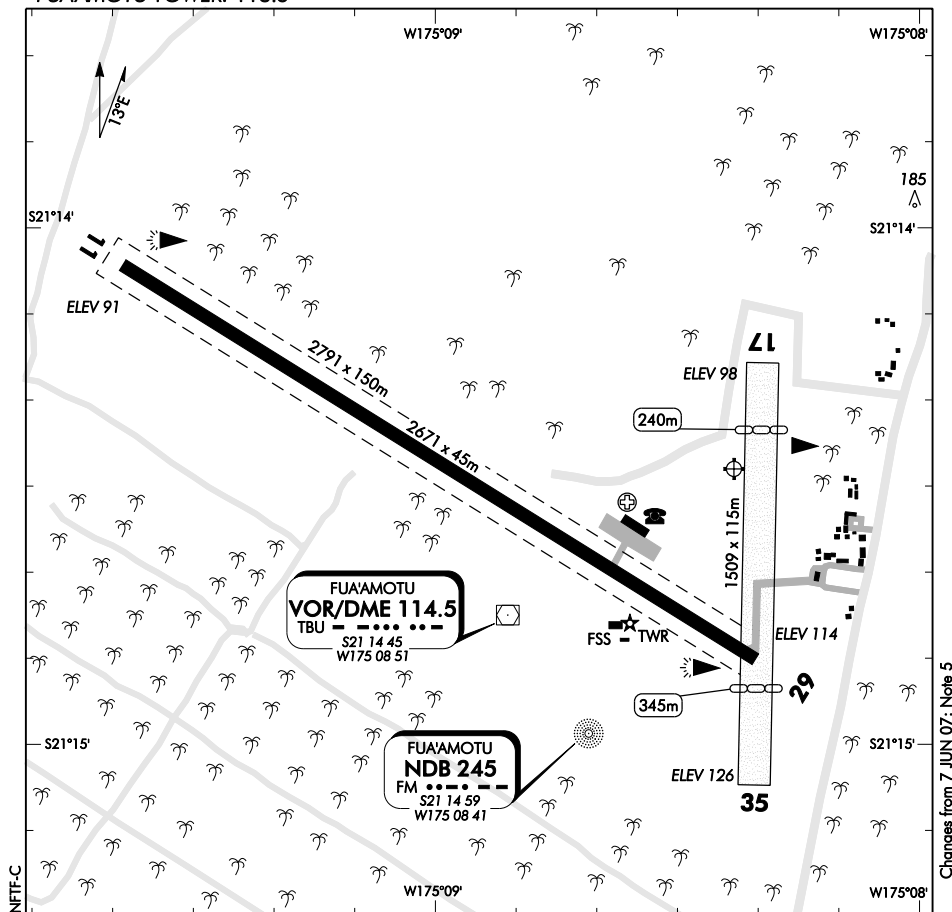


MISSED APCH: Climb straight ahead to TABOO. Hold 1800 ft

DISTANCE to WPT	MA29	1	2	3	4	FF29	1	2	3	LATAI	
Advisory Altitude 5.2%	MDA	MDA	800	1110	1430	1750	2000	2300	2600	2900	
Category	A			B			C			D	
GNSS (DAY)	520(406) – 1600						520(406) – 2400				
GNSS (NIGHT)	520(406) – 2000						520(406) – 2400		520(406) – 2800		
Circling	590(464) – 1900			630(504) – 2800			730(604) – 3700			820(694) – 4600	

FUA'AMOTU AERODROME (1)

FUA'AMOTU TOWER: 118.5



1. Circuit: RWY 11 — Left hand
RWY 29 — Left hand
RWY 17 — Left hand
RWY 35 — Left hand
2. Sunday operations are not permitted except in an emergency, or with prior approval from the aerodrome operator who has received not less than 48 hours' notice.
3. RWY 17/35 available for local traffic only, except in an emergency, or with prior approval from the aerodrome operator who has received not less than 24 hours' notice.
4. Overnight parking limited and available only by prior arrangement.
5. Flight crew are requested to apply minimal power whilst manoeuvring on the apron to avoid jet blast danger to personnel and equipment.

Effective: 18 NOV 10

S 21 14 27.8 W 175 08 22.7
WGS 84 Co-ordinates

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FUA'AMOTU AERODROME (1)

FUA'AMOTU

AERODROME (2)

VFR MINIMA

CEILING (ft) & VISIBILITY (m or km)		
	DAY	NIGHT
Air Transport	1000 – 5000	3000 – 16
All Other	600 – 1500	3000 – 16

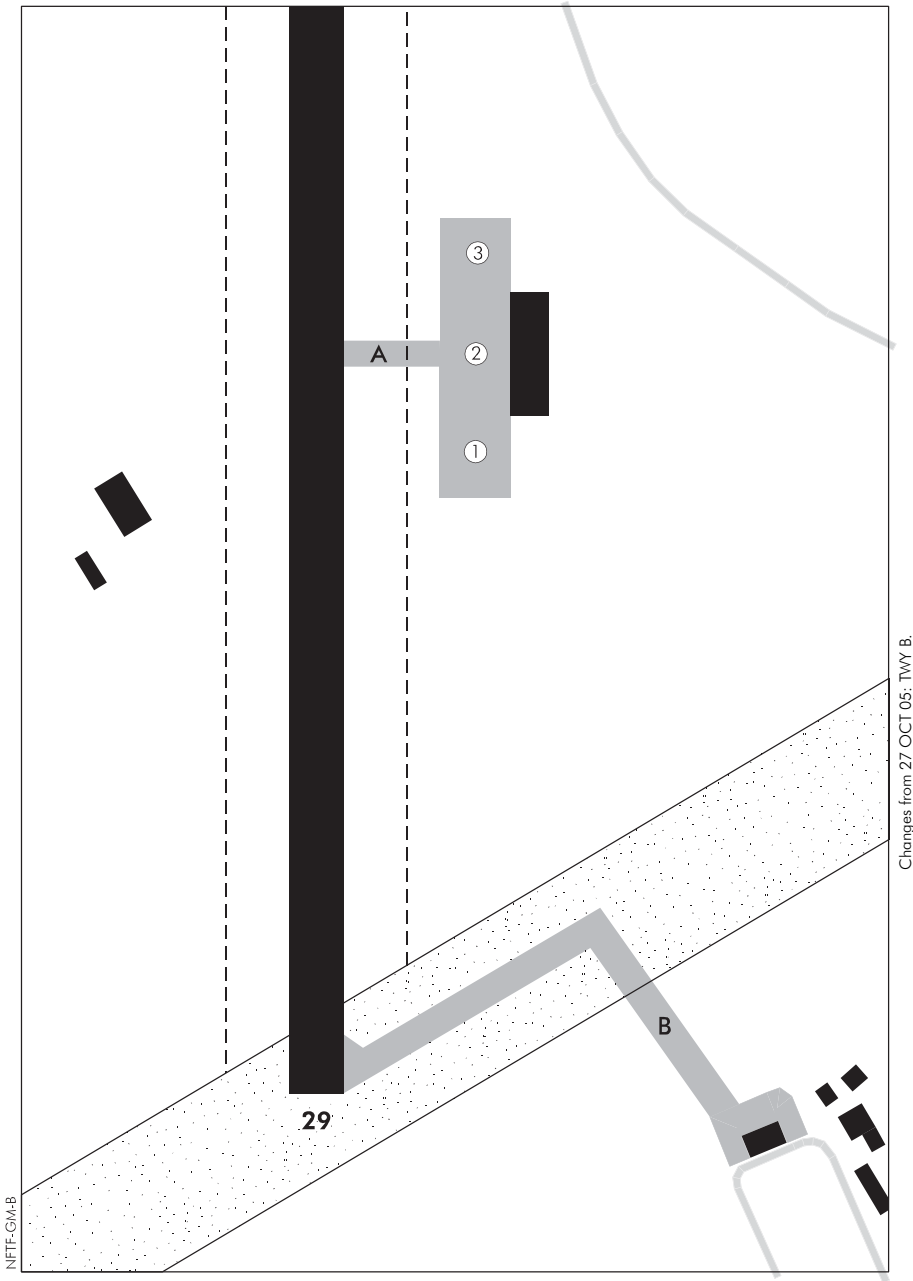
IFR TAKE-OFF MINIMA

CEILING (ft) & VISIBILITY (m or km)		
RWY	DAY	NIGHT
ALL	500 – 2000	700 – 5

ELEV 126

FUA'AMOTU
GROUND MOVEMENTS

GROUND: 121.9



NFTF-GMA-B

Changes from 27 OCT 05: TWY B.

Effective: 9 APR 09

WGS 84 Co-ordinates
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FUA'AMOTU
GROUND MOVEMENTS

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NFTL AD - 2.1 AERODROME LOCATION INDICATOR AND NAME

NFTL	HA'APAI
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NFTL AD - 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP co-ordinates, location	S 19°46'37.4" W 174°20'25.4"
2	Direction and distance from city	3km north of Pangai township
3	Elevation/Reference temperature	25ft 30°
4	MAG VAR/Annual change	14°E 13"
5	AD Administration, address, telephone, telefax, telex, AFS	<p>Chief Executive Officer, Tonga Airports Limited, Fua'amotu International Airport PO Box 876, Nuku'alofa Tonga</p> <p>Tel (676) 21 864 Fax (676) 27 942 Email dcusack@tongaairports.com AFS NFTFYDYX</p> <p>AIRPORT CONTACT DETAILS AFIS/Tower (676) 60 150 MET Office (676) 60 597</p>
6	Types of traffic permitted (IFR/VFR)	VFR/IFR
7	Remarks	Nil

NFTL AD - 2.3 OPERATIONAL HOURS

1	AD Administration	Mon – Sat excluding holidays 1930 – 0330 (0830 – 1630)
2	AD	HS Mon – Sat. Daylight operation and approved flights only
3	AFIS	HS
4	Customs and immigration	Nil
5	Health and sanitation	Nil
6	AIS Briefing Service	HS
7	ATS Reporting Office (ARO)	HS
8	MET Briefing Service	HS
9	Fuelling	Nil
10	Handling	Nil
11	Security	Nil
12	De-icing	Nil
13	Remarks	Nil

NFTL AD - 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	Limited. Prior arrangement with airline operator.
2	Fuel/oil types	Nil
3	Fuelling facilities/capabilities	Nil
4	De-icing facilities	Nil
5	Hangar space for visiting aircraft	Nil
6	Repair facilities for visiting aircraft	Nil
7	Remarks	Nil

NFTL AD - 2.5 PASSENGER FACILITIES

1	Hotels	Motels and guest houses at Pangai township
2	Restaurants	Available in Pangai township
3	Transportation	Taxis
4	Medical facilities	Hospital located at Pangai township
5	Bank and Post Office	Available in Pangai township
6	Tourist Office	Available in Pangai township
7	Remarks	Nil

NFTL AD - 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	Nil
2	Rescue equipment	Nil
3	Capability for removal of disabled aircraft	Nil
4	Remarks	Nil

NFTL AD - 2.7 SEASONAL AVAILABILITY — CLEARING

1	Types of clearing equipment	Nil
2	Clearance priorities	Nil
3	Remarks	Nil

NFTL AD - 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	Apron surface and strength	Bitumen
2	Taxiway width, surface and strength	Width — 45m Surface — bitumen
3	ACL location and elevation	Nil
4	VOR/INS checkpoints	Nil
5	Remarks	Nil

**NFTL AD - 2.9 SURFACE MOVEMENT GUIDANCE,
CONTROL SYSTEM AND MARKINGS**

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	Nil
2	RWY and TWY markings and LGT	RWY MARKINGS Designator, Threshold, Centreline, Fixed Distance TWY MARKINGS Centreline
3	Stop bars	Nil
4	Remarks	Nil

NFTL AD - 2.10 AERODROME OBSTACLES

In approach/take-off areas			Remarks
RWY/Area affected	Obstacle type Elevation Markings/LGT	Co-ordinates	Remarks

In circling area and at aerodrome			Remarks
RWY/Area affected	Obstacle type Elevation Markings/LGT	Co-ordinates	Remarks
AERODROME	NDB mast 62ft LGT	19 46 68S 174 20 48W	

NFTL AD - 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	Fua'amotu MET Office
2	Hours of service MET Office	1700 – 0600 and 1100 – 1200
3	Office responsible for TAF preparation Periods of validity	Fiji Meteorological Service
4	Type of landing forecast Interval of issuance	Nil
5	Briefing/consultation provided	Phone/fax (676) 60 150, (676) 60 597
6	Flight documentation Language(s) used	English
7	Charts and other information available for briefing or consultation	Nil
8	Supplementary equipment available for providing information	Nil
9	ATS units provided with information	Lifuka AFIS
10	Additional information (limitation of service, etc)	Nil

NFTL AD - 2.12 RWY PHYSICAL CHARACTERISTICS

RWY	TRUE and MAG BRG	Dimensions of RWY (m)	Strength (PCN) and surface of RWY and SWY	THR co-ordinates	THR elevation and highest elevation of TDZ of precision APP RWY
11		1200 x 30	PCN 9/F/B/700/T Bitumen (B)	S 19 46 27.576 W 174 20 46.10	10ft
29		1200 x 30	PCN 9/F/B/700/T Bitumen (B)	S 19 46 47.471 W 174 20 10.24	25ft

NFTL AD - 2.13 DECLARED DISTANCES

RWY	TORA (m)	TODA (m)	ASDA (m)	LDA (m)	Remarks
11	1200	1290	1220	1200	
29	1200	1290	1220	1200	

NFTL AD - 2.14 APPROACH AND RWY LIGHTING

Remarks	Nil	Nil
SWY LGT LEN (m) Colour	Nil	Nil
RWY End LGT Colour WBAR	Red	Red
RWY Edge LGT LEN Spacing Colour, INTST	Nil	Nil
RWY Centre Line LGT LEN Spacing Colour, INTST	Nil	Nil
TDZ LGT LEN	Nil	Nil
VASIS (MEHT) PAPI	PAPI Left 3.0°	PAPI Left 3.0°
THR LGT Colour WBAR	Green	Green
APCH LGT Type LEN INTST	Nil	Nil
RWY	11	29

NFTL AD - 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	Nil
2	LDI location and LGT Anemometer location and LGT	Nil Approximately 35m NW of Terminal Building. NOT LIT
3	Secondary power supply/switch-over time	All aerodrome facilities/12sec
4	Remarks	Nil

NFTL AD - 2.16 HELICOPTER LANDING AREA

1	Co-ordinates of TLOF or THR of FATO	Nil
2	TLOF and/or FATO elevation (ft)	Nil
3	TLOF and FATO area dimensions, surface, strength and markings	Nil
4	True and MAG BRG of FATO	Nil
5	Declared distance available	Nil
6	APP and FATO lighting	Nil
7	Remarks	Nil

NFTL AD - 2.17 ATS AIRSPACE

1	Designation and lateral limits	MBZ radius of 25NM centred on NFTL ARP
2	Vertical limits	MBZ — FM SFC to 3500ft
3	Airspace classification	Class G
4	AFIS unit callsign, language	English Lifuka Flight Service
5	Transition altitude	13,000ft
6	Remarks	

NFTL AD - 2.18 ATS COMMUNICATIONS FACILITIES

Service Designation	Callsign	Frequency	Hours of Operation	Remarks
AFIS	Lifuka Flight Service	VHF: 118.1, HF: 3226, 5832, 8895	As AD	

NFTL AD - 2.19 RADIO NAVIGATION AND LANDING AIDS

Remarks	
Elevation of DME antenna	
Co-ordinates	S 19° 46.68' W 174° 20.48'
Hours of Operation	
Frequency	380
Identification	HA
Type of Aid, CAT (for ILS), Variation	NDB

NFTL AD - 2.20 LOCAL TRAFFIC REGULATIONS

1 AERODROME REGULATIONS

Nil.

2 TAXIING TO AND FROM STANDS

Nil.

3 PARKING AREA FOR GENERAL AVIATION

Nil.

4 PARKING AREA FOR HELICOPTERS

Nil.

5 APRON — TAXIING

Nil.

6 TAXIING — LIMITATIONS

Nil.

7 TRAINING FLIGHTS — USE OF RWYS

Nil.

8 HELICOPTER TRAFFIC — LIMITATIONS

Nil.

9 REMOVAL OF DISABLED AIRCRAFT

Nil.

NFTL AD - 2.21 NOISE ABATEMENT PROCEDURES

1 GENERAL

Nil.

NFTL AD - 2.22 FLIGHT PROCEDURES

1 POSITION AND ALTITUDE REPORTING — LOCAL VFR FLIGHTS

Nil.

2 POSITION REPORTING ON DEPARTURE

Nil.

3 AERODROME TRAFFIC CIRCUIT RULES

RWY 11: Left hand

RWY 29: Left hand

ELEV 25

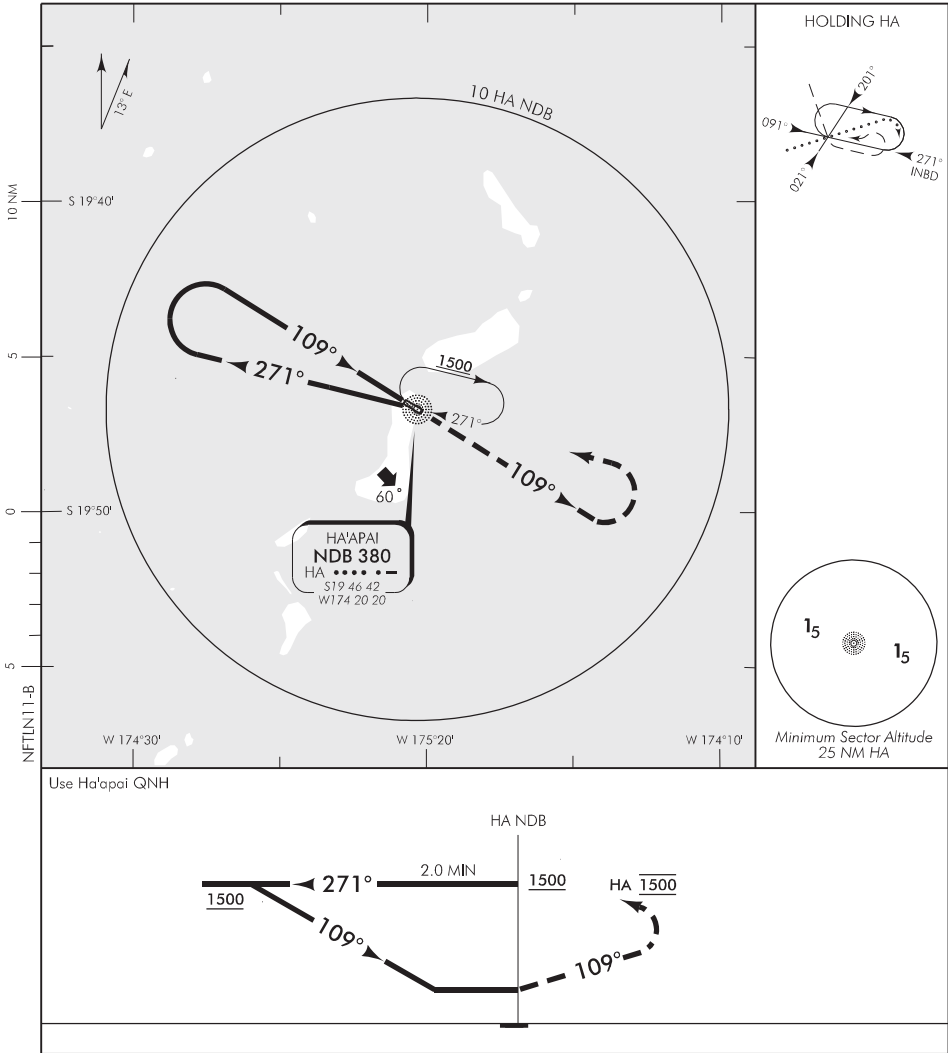
RWY 11 THR ELEV 10

FLIGHT SERVICE: 118.1

CAT A,B

HA'APAI

NDB RWY 11



MISSED APCH: Climb on 109°, turn LEFT, enter HA holding 1500

Category	A	B	C	D
NDB (D)	600(590) – 1900		NA	
Circling (D)	600(575) – 1900	600(575) – 2800		

Changes from 27 OCT 05: AD ELEV, RWY 11 THR ELEV, minima.

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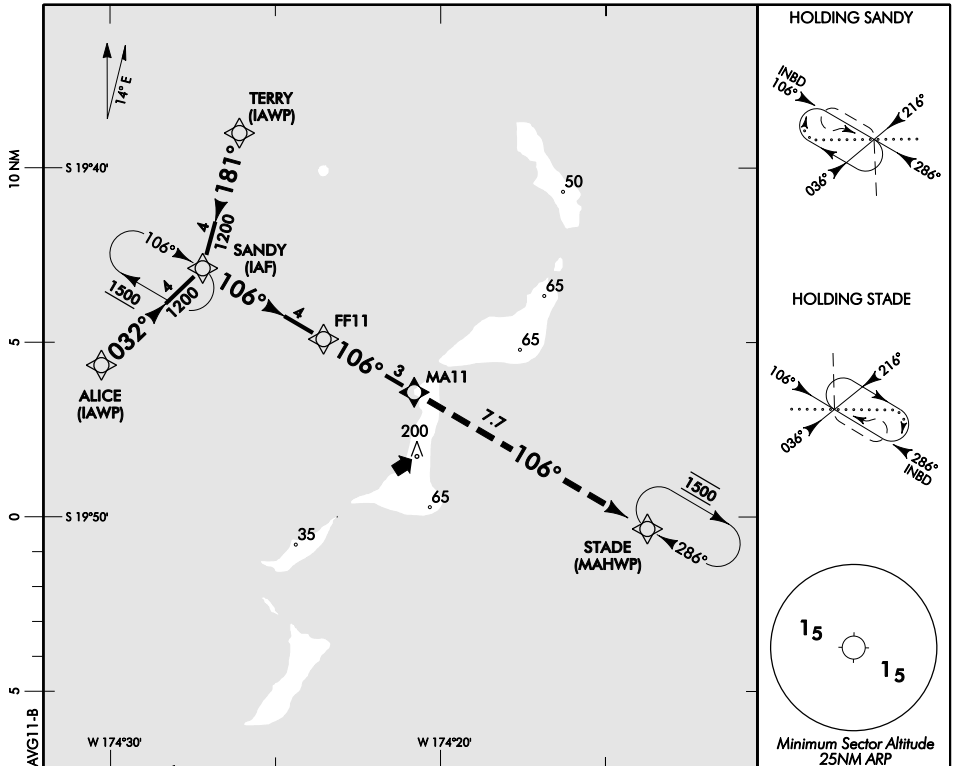
ELEV 25

CAT A,B

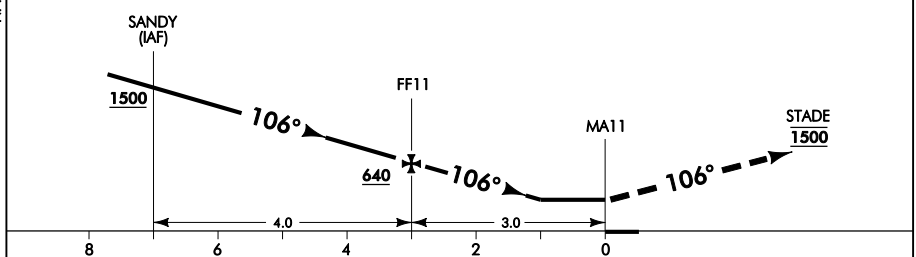
RWY 11 THR ELEV 10

HA'APAI
RNAV (GNSS) RWY 11

FLIGHT SERVICE: 118.1



Use HA'APAI QNH

**MISSED APCH:** Climb straight ahead to STADE. Hold 1500 ft.

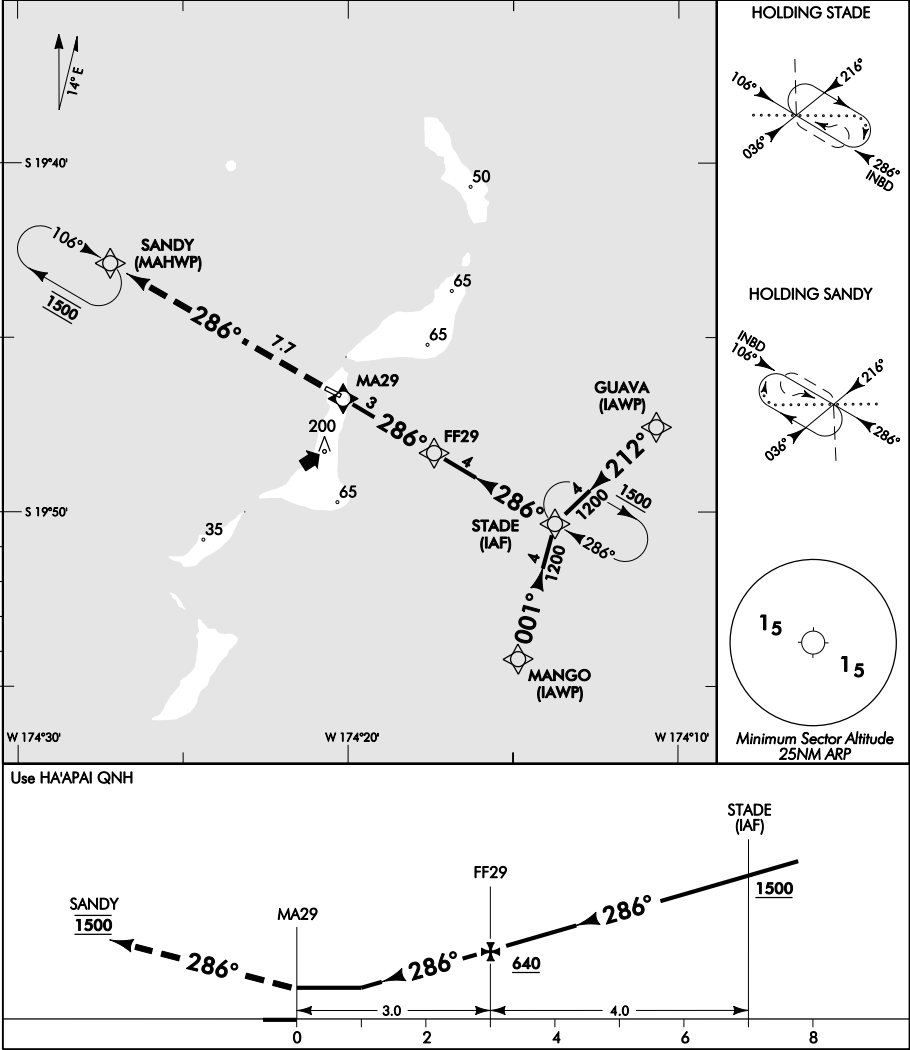
DISTANCE to WPT	SANDY	3	2	1	FF11	2	1	MA11	
Advisory Altitude 5%	2170	1870	1570	1270	970	670	MDA	MDA	
Category	A			B		C		D	
GNSS (DAY)	400(390) – 1600					NA			
Circling (DAY)	500(475) – 1900			520(495) – 2800					

Effective: 18 NOV 10**WGS 84 Co-ordinates**

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HA'APAI
RNAV (GNSS) RWY 11

Changes from 17 DEC 09 (SUP): Nil.



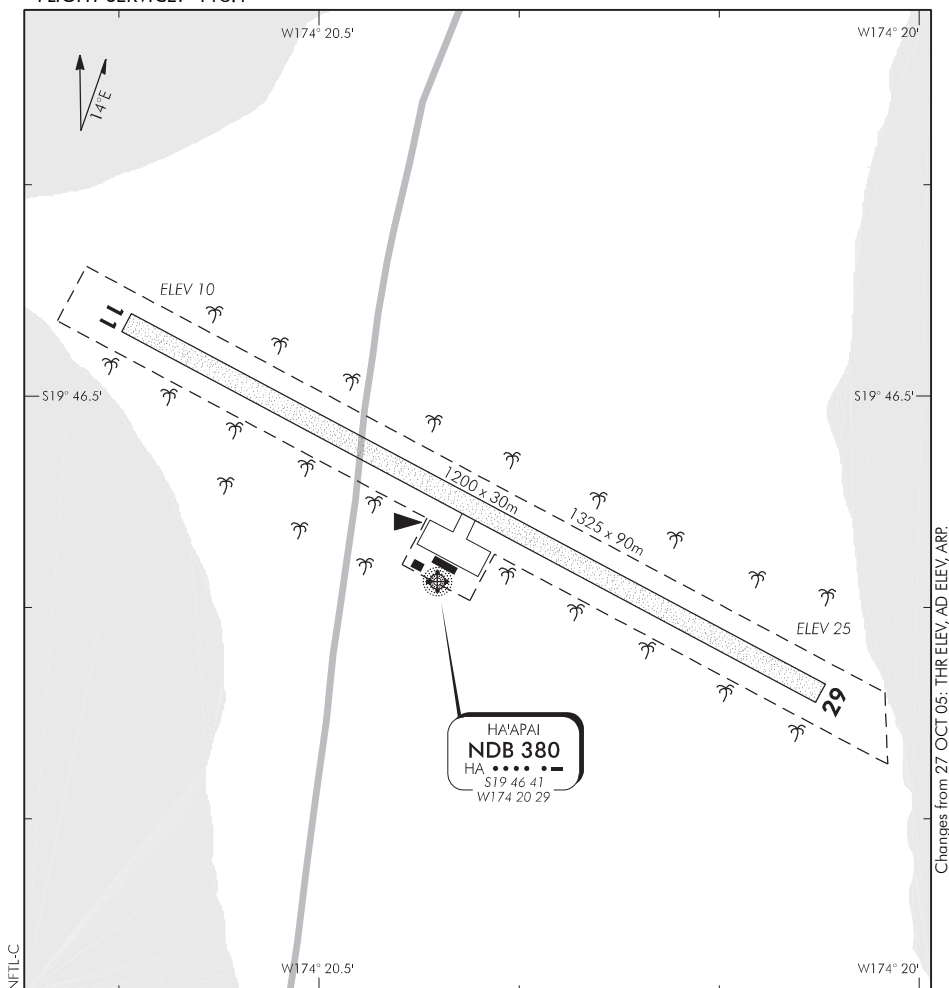
MISSED APCH: Climb straight ahead to SANDY. Hold 1500 ft.

DISTANCE to WPT	MA29	1	2	FF29	1	2	3	STADE	
Advisory Altitude 5%	MDA	MDA	690	990	1290	1590	1890	2190	
Category	A		B		C		D		
GNSS (DAY)	400(375) – 1600					NA			
Circling (DAY)	500(475) – 1900		520(495) – 2800						

ELEV 25

HA'APAI AERODROME (1)

FLIGHT SERVICE: 118.1



1. Circuit: RWY 11 — Left hand
RWY 29 — Left hand
2. Road crossing 450m from THR RWY 11 controlled by gates.
3. Daylight operations Mon – Sat inclusive only.
4. FSS operational subject to flight schedules and prior request only.
5. **CAUTION:** Transitional side surfaces are infringed by the NDB antenna and palm trees.
6. Slope 0.4 percent down to west.

S 19 46 37.4 W 174 20 25.4

Effective: 19 NOV 09
WGS 84 Co-ordinates
 © Government of Tonga

HA'APAI AERODROME (1)

HA'APAI

AERODROME (2)

7. All aircraft operating into and out of Ha'apai shall make every turn on the runway as wide as possible to avoid runway damage.
8. Caution: Stray animals during non-scheduled operations as gates are not controlled.

VFR MINIMA

CEILING (ft) & VISIBILITY (m or km)		
	DAY	NIGHT
Air Transport	1000 – 5	NA
All Other	600 – 1500	NA

IFR TAKE-OFF MINIMA

CEILING (ft) & VISIBILITY (m or km)		
RWY	DAY	NIGHT
11/29	500 – 2000	NA

NFTO AD - 2.1 AERODROME LOCATION INDICATOR AND NAME

NFTO	NIUAFO'OU
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NFTO AD - 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP co-ordinates, location	S 15°34'18.4" W 175°37'46.0" Located at intersection of TWY and RWY
2	Direction and distance from city	1km northeast of Esia township
3	Elevation/Reference temperature	149ft 30°
4	MAG VAR/Annual change	13°52'E 13"
5	AD Administration, address, telephone, telefax, telex, AFS	Chief Executive Officer, Tonga Airports Limited, Fua'amotu International Airport PO Box 876, Nuku'alofa Tonga Tel (676) 21 864 Fax (676) 27 942 AFS NTFYDYX Email dcusack@tongaairports.com AIRPORT CONTACT DETAILS Office (676) 80 066 or (676) 80 067
6	Types of traffic permitted (IFR/VFR)	VFR
7	Remarks	Nil

NFTO AD - 2.3 OPERATIONAL HOURS

1	AD Administration	MON – FRI excluding holidays 1930 – 0330 (0830 – 1630)
2	AD	HS: MON – SAT. Daylight operation and approved flights only
3	ATS Reporting Office (ARO)	HS
4	Customs and immigration	Nil
5	Health and sanitation	Nil
6	AIS Briefing Service	HS
7	MET Briefing Service	HS
8	Fuelling	Nil
9	Handling	Nil
10	De-icing	Nil
11	Security	Nil
12	Remarks	Nil

NFTO AD - 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	Limited. Prior arrangement with operator.
2	Fuel/oil types	Nil
3	Fuelling facilities/capabilities	Nil
4	De-icing facilities	Nil
5	Hangar space for visiting aircraft	Nil
6	Repair facilities for visiting aircraft	Nil
7	Remarks	Nil

NFTO AD - 2.5 PASSENGER FACILITIES

1	Hotels	Nil
2	Restaurants	Nil
3	Transportation	Nil
4	Medical facilities	Limited. Public hospital approximately 1km to the aerodrome.
5	Bank and Post Office	Limited.
6	Tourist Office	Nil
7	Remarks	Nil

NFTO AD - 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	Nil
2	Rescue equipment	Nil
3	Capability for removal of disabled aircraft	Nil
4	Remarks	Nil

NFTO AD - 2.7 SEASONAL AVAILABILITY — CLEARING

1	Types of clearing equipment	Nil
2	Clearance priorities	Nil
3	Remarks	Nil

NFTO AD - 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	Apron surface and strength	Grass — ESWL 2560kg
2	Taxiway width, surface and strength	Grass Strength — ESWL 2560kg
3	ACL location and elevation	Nil
4	VOR/INS checkpoints	Nil
5	Remarks	Nil

NFTO AD - 2.9 SURFACE MOVEMENT GUIDANCE, CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	Nil
2	RWY and TWY markings and LGT	Nil
3	Stop bars	Nil
4	Remarks	Nil

NFTO AD - 2.10 AERODROME OBSTACLES

In approach/take-off areas			Remarks
RWY/Area affected	Obstacle type Elevation Markings/ LGT	Co-ordinates	Remarks
RWY 08/26			Transitional side surfaces are infringed by trees
RWY 26	Seismograph Satellite Dish HGT 7ft AGL Painted White/Unlit		Located south-eastern corner of RWY Strip

In circling area and at aerodrome			Remarks
RWY/Area affected	Obstacle type Elevation Markings/ LGT	Co-ordinates	Remarks
AERODROME			Movement area unfenced — beware of wandering animals
AERODROME	Aerial Mast HGT 112ft AGL Painted Orange and White/Unlit		Located south of RWY 08/26 ADJ Terminal Building

NFTO AD - 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	Fua'amotu MET Office
2	Hours of service MET Office	(0001 – 0600 and 1100 – 2400 Daily)
3	Office responsible for TAF preparation Periods of validity	Fiji Meteorological Service
4	Type of landing forecast Interval of issuance	Nil
5	Briefing/consultation provided	Nil
6	Flight documentation Language(s) used	English
7	Charts and other information available for briefing or consultation	Nil
8	Supplementary equipment available for providing information	Nil
9	ATS units provided with information	Niuafu'ou ARO
10	Additional information (limitation of service, etc)	Nil

NFTO AD - 2.12 RWY PHYSICAL CHARACTERISTICS

RWY	TRUE and MAG BRG	Dimensions of RWY (m)	Strength (PCN) and surface of RWY and SWY	THR co-ordinates	THR elevation and highest elevation of TDZ of non instrument precision APP RWY
08		1060 x 30	Grass	S 15 34 14.16 W 175 38 05.75	149ft
26		1060 x 30	Grass	Yet to be determined	110ft

NFTO AD - 2.13 DECLARED DISTANCES

RWY	TORA (m)	TODA (m)	ASDA (m)	LDA (m)	Remarks
08	1060	1060	1060	1060	Nil
26	1060	1060	1060	1060	Nil

NFTO AD - 2.14 APPROACH AND RWY LIGHTING

Remarks	Nil	Nil
SWY LGT LEN (m) Colour	Nil	Nil
RWY End LGT Colour WBAR	Nil	Nil
RWY Edge LGT LEN Spacing Colour, INTST	Nil	Nil
RWY Centre Line LGT LEN Spacing Colour, INTST	Nil	Nil
TDZ LGT LEN	Nil	Nil
VASIS (MEHT) PAPI	Nil	Nil
THR LGT Colour WBAR	Nil	Nil
APCH LGT Type LEN INTST	Nil	Nil
RWY	08	26

NFTO AD - 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	Nil
2	LDI location and LGT, Anemometer location and LGT	Anemometer located S of RWY 08/26 adjacent to terminal. Not lit.
3	Secondary power supply/switch-over time	Nil
4	Remarks	Nil

NFTO AD - 2.16 HELICOPTER LANDING AREA

1	Co-ordinates of TLOF or THR of FATO	Nil
2	TLOF and/or FATO elevation (ft)	Nil
3	TLOF and FATO area dimensions, surface, strength and markings	Nil
4	True and MAG BRG of FATO	Nil
5	Declared distance available	Nil
6	APP and FATO lighting	Nil
7	Remarks	Nil

NFTO AD - 2.17 ATS AIRSPACE

1	Designation and lateral limits	
2	Vertical limits	ATZ FM SFC to 3500ft
3	Airspace classification	Class G
4	ARO unit callsign, language	Niuafo’ou Radio English
5	Transition altitude	13,000ft
6	Remarks	

NFTO AD - 2.18 ATS COMMUNICATIONS FACILITIES

Service Designation	Callsign	Frequency	Hours of Operation	Remarks
ARO	Fua’amotu Radio	3226, 5832, 8995		
APP				Unattended
TWR				Unattended
AFIS				Unattended

NFTO AD - 2.19 RADIO NAVIGATION AND LANDING AIDS

Remarks	Nil
Elevation of DME antenna	Nil
Co-ordinates	Nil
Hours of Operation	Nil
Frequency	Nil
Identification	Nil
Type of Aid, CAT (for ILS), Variation	Nil

NFTO AD - 2.20 LOCAL TRAFFIC REGULATIONS

1 AERODROME REGULATIONS

Nil.

2 TAXIING TO AND FROM STANDS

Nil.

3 PARKING AREA FOR GENERAL AVIATION

Nil.

4 PARKING AREA FOR HELICOPTERS

Nil.

5 APRON — TAXIING

Nil.

6 TAXIING — LIMITATIONS

Nil.

7 TRAINING FLIGHTS — USE OF RWYS

Nil.

8 HELICOPTER TRAFFIC — LIMITATIONS

Nil.

9 REMOVAL OF DISABLED AIRCRAFT

Nil.

NFTO AD - 2.21 NOISE ABATEMENT PROCEDURES

1 GENERAL

Nil.

NFTO AD - 2.22 FLIGHT PROCEDURES

1 POSITION AND ALTITUDE REPORTING — LOCAL VFR FLIGHTS

Nil.

2 POSITION REPORTING ON DEPARTURE

Nil.

3 AERODROME TRAFFIC CIRCUIT RULES

RWY 08: Left hand

RWY 26: Right hand

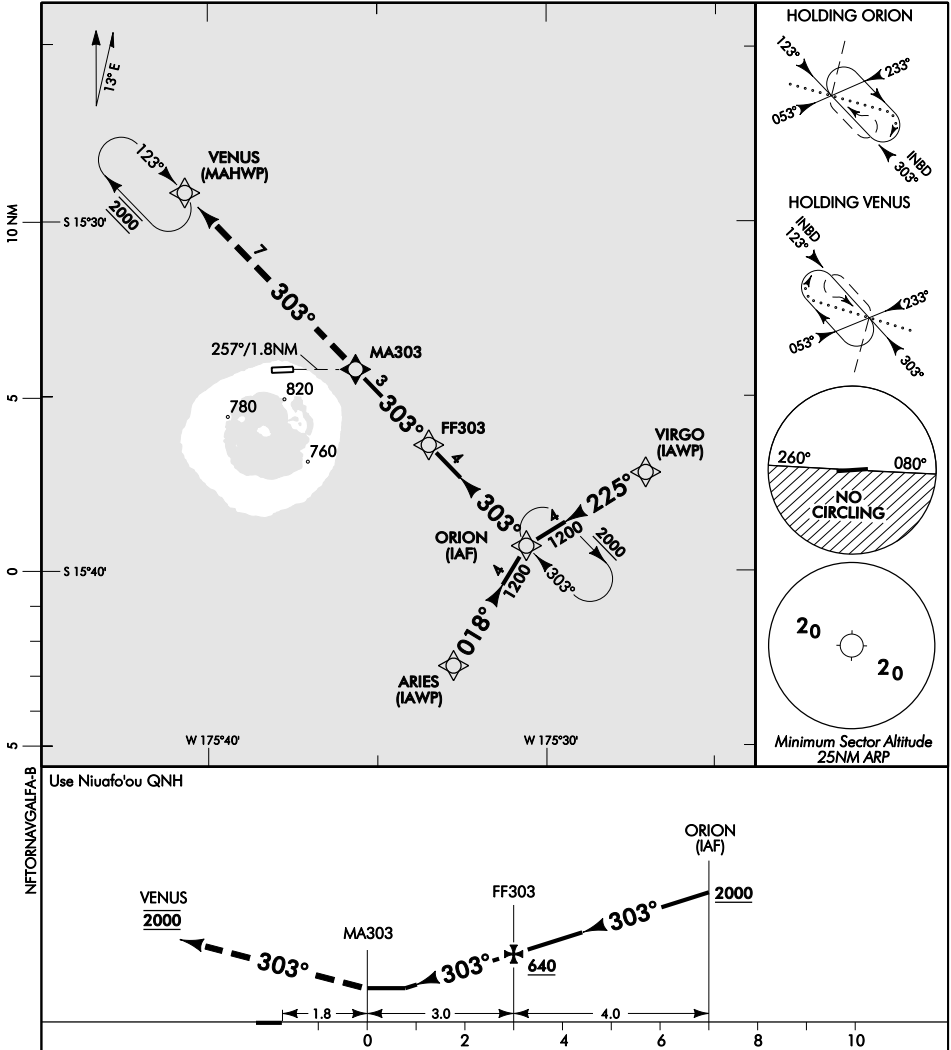
ELEV 149

CAT A,B

RWY 26 THR ELEV 110

NIUAFO'OU
RNAV (GNSS) ALFA

NIUAFO'OU RADIO: 118.1



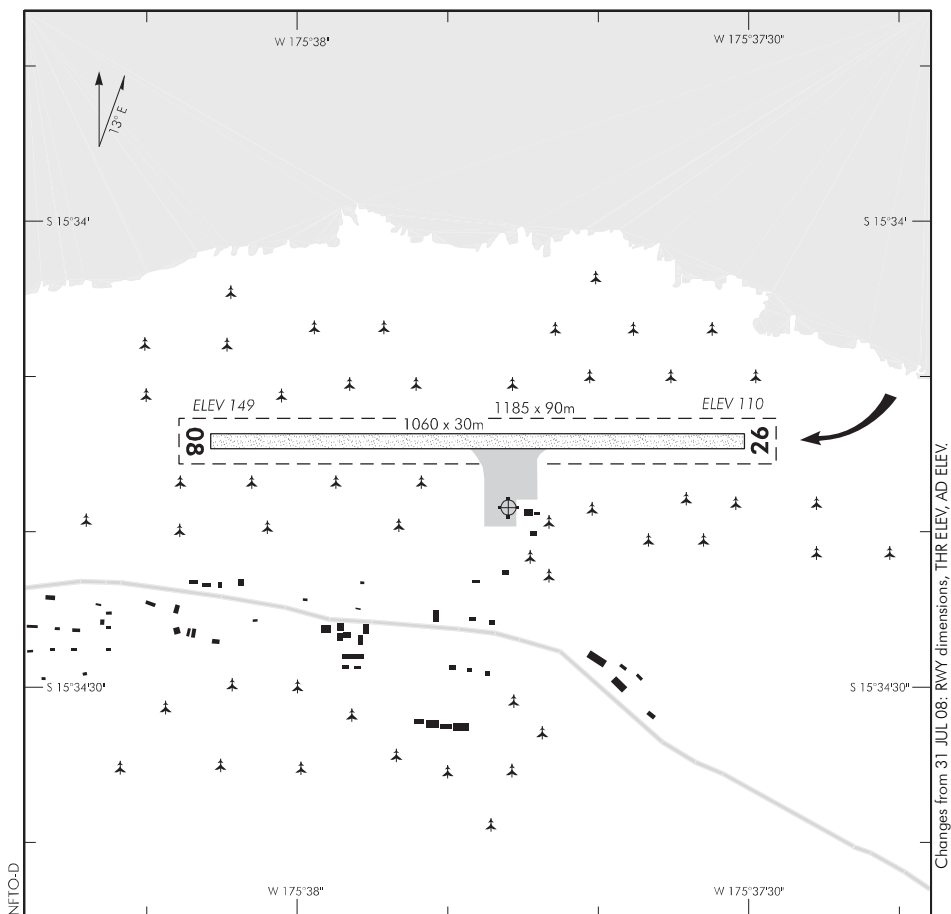
Changes from 17 DEC 09 (SUP): Nil.

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ELEV 149

NIUAFO'OU AERODROME (1)

UNATTENDED: 118.1



1. Circuit: RWY 08 — Left hand
RWY 26 — Right hand

D

2. RMKS: RWY edge marked by white painted tyres placed into the ground at 100m intervals along the length of the RWY, protruding by 1 inch and 6 inches from the RWY edge.

Marker boards placed on both sides to mark RWY THR.

D

S 15 34 18.4 W 175 37 46.0

Effective: 19 NOV 09

WGS 84 Co-ordinates
© Government of Tonga

NIUAFO'OU AERODROME (1)

NIUAFO'OU

AERODROME (2)

3. CAUTION:

- ♦ Transitional side surfaces infringed by trees and aerial mast, height 112ft AGL, south of RWY 08/26, adjacent to terminal building.
- ♦ Seismograph satellite disc height 7ft AGL located south-eastern corner of RWY strip.
- ♦ Braking action poor when wet.
- ♦ Beware of stray animals.

VFR MINIMA

CEILING (ft) & VISIBILITY (m or km)		
	DAY	NIGHT
Air Transport	1000 – 5	NA
All Other	600 – 1500	NA

NFTP AD - 2.1 AERODROME LOCATION INDICATOR AND NAME

NFTP	NIUATOPUTAPU
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NFTP AD - 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP co-ordinates, location	S 15°58'38.7" W 173°47'29.65" East of apron
2	Direction and distance from city	1.5NM south of Hihifo township
3	Elevation/Reference temperature	17ft 31°
4	MAG VAR/Annual change	13°52'E 13"
5	AD Administration, address, telephone, telefax, telex, AFS	Chief Executive Officer, Tonga Airports Limited, Fua'amotu International Airport PO Box 876, Nuku'alofa Tonga Tel (676) 21 864 Fax (676) 27 942 AFTN NTFYDYX Email dcusack@tongaairports.com AIRPORT CONTACT DETAILS Tel (676) 85 007
6	Types of traffic permitted (IFR/VFR)	VFR/IFR
7	Remarks	Nil

NFTP AD - 2.3 OPERATIONAL HOURS

1	AD Administration	Mon – Fri excluding holidays 1930 – 0330UTC (0830 – 1630L)
2	AD	HS Mon – Sat. Daylight operation and approved flights only
3	Customs and immigration	O/R 48HRS PN
4	AIS Briefing Service	HS — provided by AFIS
5	ATS Reporting Office (ARO)	HS
6	MET Briefing Service	HS
7	AFIS	HS
8	Fuelling	Nil
9	Handling	Nil
10	Security	Nil
11	De-icing	Nil
12	Health and sanitation	O/R 48HRS PN
13	Remarks	Nil

NFTP AD - 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	Prior arrangement with airline operator
2	Fuel/oil types	Nil
3	Fuelling facilities/ capabilities	Nil
4	De-icing facilities	Nil
5	Hangar space for visiting aircraft	Nil
6	Repair facilities for visiting aircraft	Nil
7	Remarks	Nil

NFTP AD - 2.5 PASSENGER FACILITIES

1	Hotels	One guest house at Hihifo township
2	Restaurants	Nil
3	Transportation	Limited transport available
4	Medical facilities	Nil at airport. Public hospital 5km to the airport.
5	Bank and Post Office	Limited available
6	Tourist Office	Nil
7	Remarks	Nil

NFTP AD - 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	Nil
2	Rescue equipment	Nil
3	Capability for removal of disabled aircraft	Nil
4	Remarks	Nil

NFTP AD - 2.7 SEASONAL AVAILABILITY — CLEARING

1	Types of clearing equipment	Nil
2	Clearance priorities	Nil
3	Remarks	Nil

NFTP AD - 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	Apron surface and strength	Grass
2	Taxiway width, surface and strength	Grass
3	ACL location and elevation	Nil
4	VOR/INS checkpoints	Nil
5	Remarks	Nil

**NFTP AD - 2.9 SURFACE MOVEMENT GUIDANCE,
CONTROL SYSTEM AND MARKINGS**

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	Nil
2	RWY and TWY markings and LGT	Nil
3	Stop bars	Nil
4	Remarks	Nil

NFTP AD - 2.10 AERODROME OBSTACLES

In approach/take-off areas			Remarks
RWY/Area affected	Obstacle type Elevation Markings/LGT	Co-ordinates	Remarks
RWY 11			
RWY 29			

In circling area and at aerodrome			Remarks
RWY/Area affected	Obstacle type Elevation Markings/LGT	Co-ordinates	Remarks
AERODROME			Movement areas unfenced — beware of wandering animals
AERODROME	Aerial Mast HGT 10ft AGL Painted Grey/Unlit		Located to south of RWY 11/29 in front of Terminal, 78ft to the west
AERODROME	NDB: Treated Wooden Mast HGT 60ft AGL Painted Green/Unlit		Located to south of RWY 11/29 abeam the Terminal to the west approximately 210ft
AERODROME	Anemometer HGT 30ft AGL Painted Red and White/Unlit		Located to south of RWY 11/29 abeam the Terminal to the west approximately 86ft

NFTP AD - 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	Fua'amotu MET Office
2	Hours of service MET Office	(0001 – 0600 and 1100 – 2400 Daily)
3	Office responsible for TAF preparation Periods of validity	Nil
4	Type of landing forecast Interval of issuance	Nil
5	Briefing/consultation provided	Available from Fua'amotu MET Office Phone/Fax (676) 35 123
6	Flight documentation Language(s) used	English
7	Charts and other information available for briefing or consultation	Nil
8	Supplementary equipment available for providing information	Nil
9	ATS units provided with information	Niutoputapu AFIS
10	Additional information (limitation of service, etc)	Nil

NFTP AD - 2.12 RWY PHYSICAL CHARACTERISTICS



RWY	TRUE and MAG BRG	Dimensions of RWY (m)	Strength (PCN) and surface of RWY and SWY	THR co-ordinates	THR elevation and highest elevation of TDZ of precision APP RWY
11		1200 x 30	Grass	S 15 58 25.521 W 173 47 45.631	10ft
29		1200 x 30	Grass	S 15 58 48.548 W 173 47 13.069	15ft

NFTP AD - 2.13 DECLARED DISTANCES

RWY	TORA (m)	TODA (m)	ASDA (m)	LDA (m)	Remarks
11	1200	1200	1200	1200	Nil
29	1200	1200	1200	1200	Nil

NFTP AD - 2.14 APPROACH AND RWY LIGHTING

Remarks	Nil	Nil
SWY LGT LEN (m) Colour	Nil	Nil
RWY End LGT Colour WBAR	Nil	Nil
RWY Edge LGT LEN Spacing Colour, INTST	Nil	Nil
RWY Centre Line LGT LEN Spacing Colour, INTST	Nil	Nil
TDZ LGT LEN	Nil	Nil
VASIS (MEHT) PAPI	Nil	Nil
THR LGT Colour WBAR	Nil	Nil
APCH LGT Type LEN INTST	Nil	Nil
RWY	11	29

NFTP AD - 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	Nil
2	LDI location and LGT, Anemometer location and LGT	LDI — Nil Anemometer — S of RWY 11/29 ABM Terminal to the W by APRX 86ft
3	Secondary power supply/switch-over time	Nil
4	Remarks	Nil

NFTP AD - 2.16 HELICOPTER LANDING AREA

1	Co-ordinates of TLOF or THR of FATO	Nil
2	TLOF and/or FATO elevation (ft)	Nil
3	TLOF and FATO area dimensions, surface, strength and markings	Nil
4	True and MAG BRG of FATO	Nil
5	Declared distance available	Nil
6	APP and FATO lighting	Nil
7	Remarks	Nil

NFTP AD - 2.17 ATS AIRSPACE

1	Designation and lateral limits	MBZ radius of 25NM centred on NFTP ARP
2	Vertical limits	MBZ — FM SFC to 3500ft
3	Airspace classification	Class G
4	ATS unit callsign, language	Niuatoputapu Flight Service English
5	Transition altitude	13,000ft
6	Remarks	

NFTP AD - 2.18 ATS COMMUNICATIONS FACILITIES

Service Designation	Callsign	Frequency	Hours of Operation	Remarks
FIS	Niuatoputapu Flight Service	3226, 5832, 8995	As AD	
APP				Nil
TWR				Nil
AFIS	Niuatoputapu Flight Service	118.1	As AD	

NFTP AD - 2.19 RADIO NAVIGATION AND LANDING AIDS

Remarks	Withdrawn
Elevation of DME antenna	
Co-ordinates	
Hours of Operation	
Frequency	
Identification	
Type of Aid, CAT (for ILS), Variation	NDB

NFTP AD - 2.20 LOCAL TRAFFIC REGULATIONS

1 AERODROME REGULATIONS

Nil.

2 TAXIING TO AND FROM STANDS

Nil.

3 PARKING AREA FOR GENERAL AVIATION

Nil.

4 PARKING AREA FOR HELICOPTERS

Nil.

5 APRON — TAXIING

Nil.

6 TAXIING — LIMITATIONS

Nil.

7 TRAINING FLIGHTS — USE OF RWYS

Nil.

8 HELICOPTER TRAFFIC — LIMITATIONS

Nil.

9 REMOVAL OF DISABLED AIRCRAFT

Nil.

NFTP AD - 2.21 AERODROME TRAFFIC CIRCUIT RULES

1 GENERAL

Nil.

NFTP AD - 2.22 FLIGHT PROCEDURES

1 POSITION AND ALTITUDE REPORTING — LOCAL VFR FLIGHTS

Nil.

2 POSITION REPORTING ON DEPARTURE

Nil.

3 AERODROME TRAFFIC CIRCUIT RULES

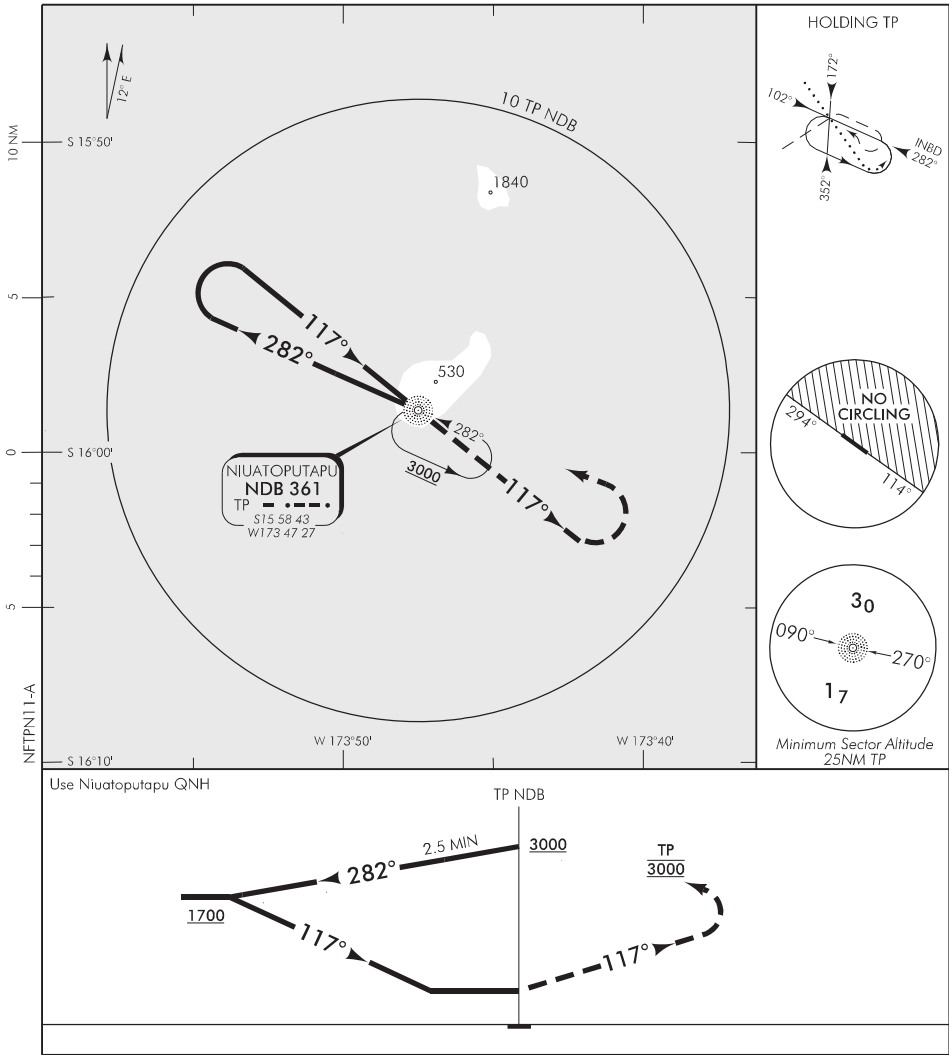
RWY 11: Right hand

RWY 29: Left hand

ELEV 17
RWY 11 THR ELEV 10
FLIGHT SERVICE: 118.1

CAT A,B

NIUATOPUTAPU
NDB RWY 11



MISSED APCH: Climb on 117°, turn LEFT, enter holding at 3000

Category	A	B	C	D
NDB	D 680(663) – 2500		NA	
Circling *	D 680(663) – 2500	D 680(663) – 2800		
* Circling NA north of RWY 11/29				

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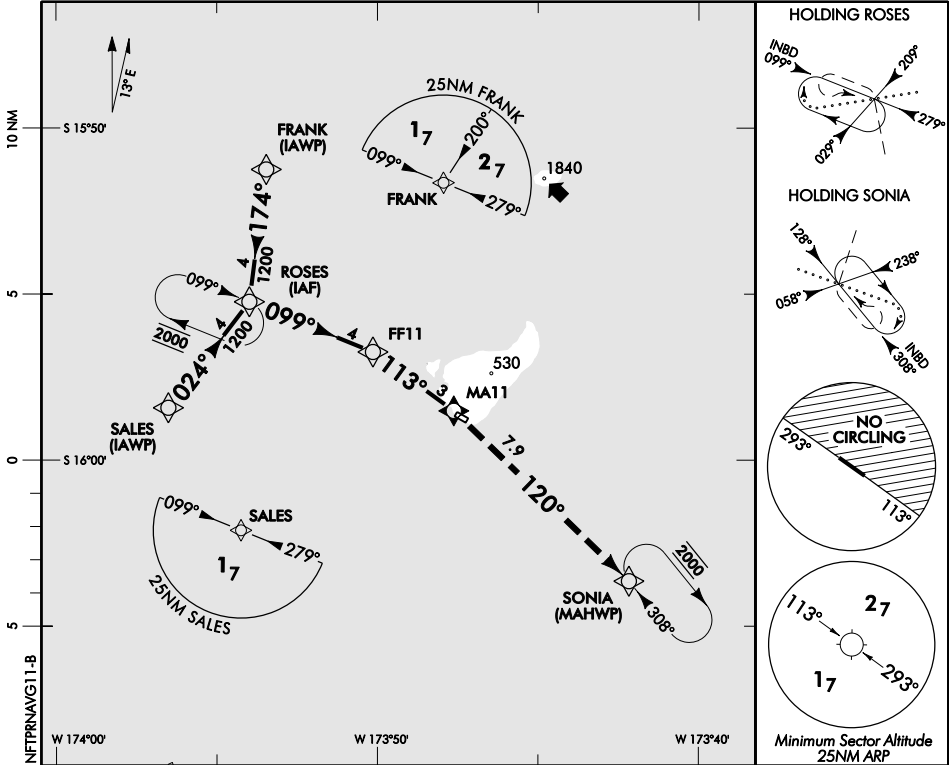
ELEV 17

CAT A,B

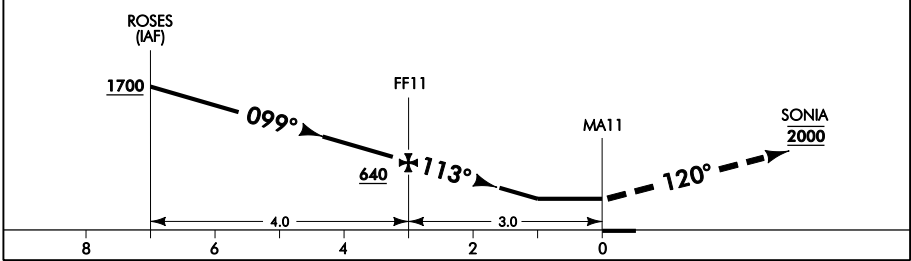
NIUATOPUTAPU
RNAV (GNSS) RWY 11

RWY 11 THR ELEV 10

NIUATOPUTAPU RADIO: 118.1



Use Niutoputapu QNH



MISSED APCH: Climb on track 120° to SONIA. Hold 2000 ft.

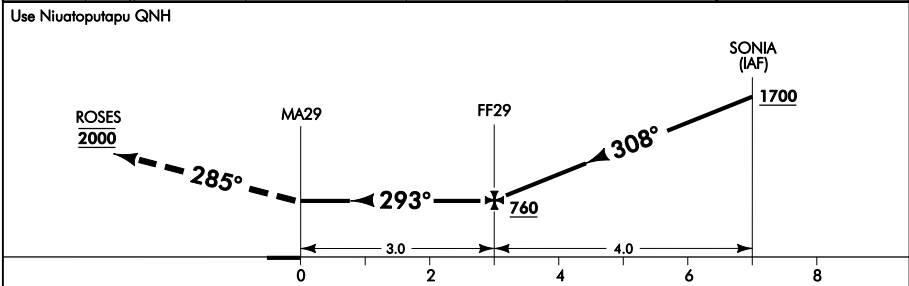
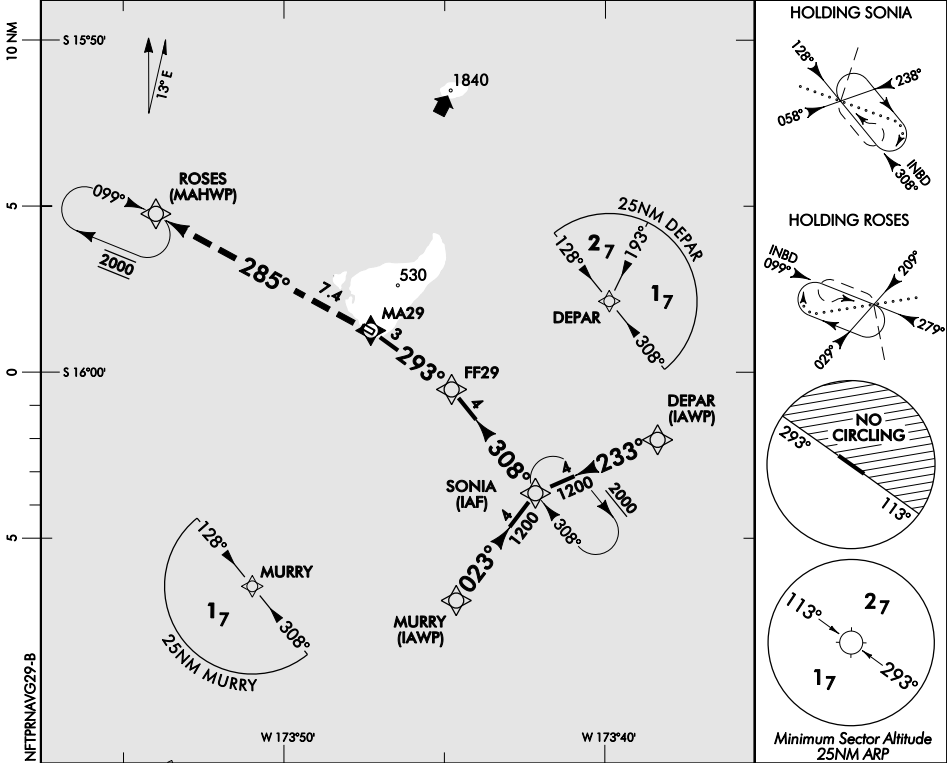
DISTANCE TO WPT	ROSES	3	2	1	FF11	2	1	MA11	
Advisory Altitude 5%	2160	1860	1560	1260	960	660	MDA	MDA	
Category	A			B			C		D
GNSS (DAY)	480(464) – 1900			510(494) – 2800			NA		
Circling (DAY)	480(464) – 1900			510(494) – 2800					

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NIUATOPUTAPU
RNAV (GNSS) RWY 11

Changes from 17 DEC 09 (SUP): Nil.



MISSED APCH: Climb on track 285° to ROSES. Hold 2000 ft.

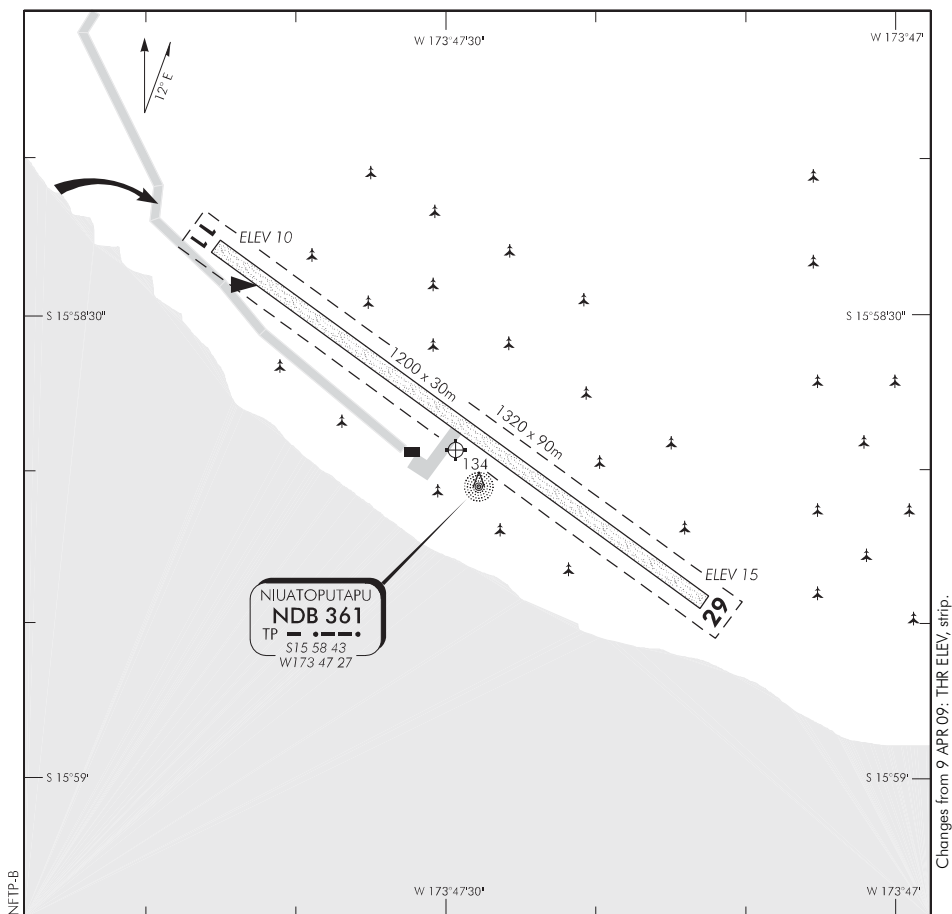
DISTANCE to WPT	MA29	1	2	FF29	1	2	3	SONIA	
Advisory Altitude 5%	MDA	MDA	MDA	960	1260	1560	1860	2160	
Category	A			B			C		D
GNSS (DAY)	760(744) – 1900			760(744) – 2800			NA		
Circling (DAY)	760(744) – 1900			760(744) – 2800					

Changes from 17 DEC 09 (SUP): Nil.

ELEV 17

NIUATOPUTAPU AERODROME (1)

FLIGHT SERVICE: 118.1



1. Circuit: RWY 11 — Right hand
RWY 29 — Left hand
 2. RMKS: RWY edge marked by white painted tyres placed into the ground at 100m intervals along the length of the RWY, protruding by 1 inch and 6 inches from the RWY edge.
- Marker boards placed on both sides to mark RWY THR.

S 15 58 38.7 W 173 47 29.7

Effective: 19 NOV 09
WGS 84 Co-ordinates
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**NIUATOPUTAPU
AERODROME (1)**

NIUATOPUTAPU

AERODROME (2)

3. CAUTION:

- ◆ Transitional side surfaces infringed by an aerial mast and trees.
- ◆ Braking action poor when wet.
- ◆ Beware of stray animals.
- ◆ All ACFT operating into Queen Mata’aho airport, make every turn on the RWY as wide as possible.

VFR MINIMA

CEILING (ft) & VISIBILITY (m or km)		
	DAY	NIGHT
Air Transport	1000 – 5000	NA
All Other	600 – 1500	NA

IFR TAKE-OFF MINIMA

CEILING (ft) & VISIBILITY (m or km)		
RWY	DAY	NIGHT
11/29	500 – 2000	NA

NFTV AD - 2.1 AERODROME LOCATION INDICATOR AND NAME

NFTV	VAVA'U
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NFTV AD - 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP co-ordinates, location	S 18°35'08.09" W 173°58'04.96"
2	Direction and distance from city	4NM north of Nelaflu
3	Elevation/Reference temperature	233ft 30°
4	MAG VAR/Annual change	13°E 13"
5	AD Administration, address, telephone, telefax, telex, AFS	<p>Chief Executive Officer, Tonga Airports Limited, Fua'amotu International Airport PO Box 876, Nuku'alofa Tonga</p> <p>Tel (676) 21 864 Fax (676) 27 942 AFTN NFTFYDYX Email dcusack@tongaairports.com</p>
6	Types of traffic permitted (IFR/VFR)	VFR/IFR
7	Remarks	Nil

NFTV AD - 2.3 OPERATIONAL HOURS

1	AD Administration	Mon – Fri excluding holidays 1930 – 0330UTC (0830 – 1630L)
2	AD	HS Mon – Sat. Approved flights only
3	Customs and immigration	HS
4	AIS Briefing Service	HS
5	ATS Reporting Office (ARO)	HS
6	MET Briefing Service	HS
7	AFIS	HS
8	Fuelling	HS
9	Handling	HS
10	Security	HS
11	De-icing	Nil
12	Health and sanitation	O/R
13	Remarks	Nil

NFTV AD - 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	Nil
2	Fuel/oil types	Fuel Nil Oil Nil
3	Fuelling facilities/capabilities	
4	De-icing facilities	Nil
5	Hangar space for visiting aircraft	Nil
6	Repair facilities for visiting aircraft	Nil
7	Remarks	Nil

NFTV AD - 2.5 PASSENGER FACILITIES

1	Hotels	Available in Neiafu
2	Restaurants	Available in Neiafu
3	Transportation	Buses and taxis
4	Medical facilities	Hospital in Neiafu
5	Bank and Post Office	Available in Neiafu
6	Tourist Office	Available in Neiafu
7	Remarks	Nil

NFTV AD - 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	CAT 4
2	Rescue equipment	Rescue equipment for land operations only
3	Capability for removal of disabled aircraft	Nil
4	Remarks	Nil

NFTV AD - 2.7 SEASONAL AVAILABILITY — CLEARING

1	Types of clearing equipment	Nil
2	Clearance priorities	Nil
3	Remarks	Nil

NFTV AD - 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	Apron surface and strength	Bitumen, LCN 10, H = 22.5
2	Taxiway width, surface and strength	Width — 13.5m Surface — bitumen Strength — LCN 10, H = 22.5
3	ACL location and elevation	Nil
4	VOR/INS checkpoints	Nil
5	Remarks	Nil

NFTV AD - 2.9 SURFACE MOVEMENT GUIDANCE, CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	TWY guide lines to and from apron stands
2	RWY and TWY markings and LGT	RWY MARKINGS Designator, Threshold, Displaced threshold, Centreline, aiming point RWY LIGHTING REDL, Threshold Wingbar, RTHL, RENL TWY MARKINGS Centreline, Holding Position TWY LIGHTING Edge
3	Stop bars	Nil
4	Remarks	Nil

NFTV AD - 2.10 AERODROME OBSTACLES

In approach/take-off areas			Remarks
RWY/Area affected	Obstacle type Elevation Markings/LGT	Co-ordinates	Remarks
RWY 08/26			Transitional side surfaces are infringed by palm trees

In circling area and at aerodrome			Remarks
RWY/Area affected	Obstacle type Elevation Markings/LGT	Co-ordinates	Remarks
CIRCLING AREA	NDB	S 18°35'13" W 173°58'18"	
CIRCLING AREA	MAST 427ft AMSL Lit with 2 red lights	S 18° 35' 58" W 173° 58' 34"	

NFTV AD - 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	Fua'amotu MET Office
2	Hours of service MET Office	(0001 – 0600 and 1100 – 2400 UTC)
3	Office responsible for TAF preparation Periods of validity	Fiji Meteorological Service
4	Type of landing forecast Interval of issuance	TAF
5	Briefing/consultation provided	Available from ATS unit Phone/Fax (676) 70 288
6	Flight documentation Language(s) used	English
7	Charts and other information available for briefing or consultation	Nil
8	Supplementary equipment available for providing information	Nil
9	ATS units provided with information	Vava'u Flight Service
10	Additional information (limitation of service, etc)	Nil

NFTV AD - 2.12 RWY PHYSICAL CHARACTERISTICS

RWY	TRUE and MAG BRG	Dimensions of RWY (m)	Strength (PCN) and surface of RWY and SWY	THR co-ordinates	THR elevation and highest elevation of TDZ of non precision APP RWY
1	2	3	4	5	6
08		1700 x 30	Bitumen	S 18 35 04.82 W 173 58 15.10	223ft
26		1700 x 30	Bitumen	S 18 35 10.82 W 173 57 17.49	233ft
Slope of RWY-SWY	SWY dimensions (m)	CWY dimensions (m)	Strip dimensions (m)	OFZ	Remarks
7	8	9	10	11	12
0.18U	Nil	Nil	1874 x 120	Nil	Nil
0.18D	Nil	Nil	1874 x 120	Nil	Nil

NFTV AD - 2.13 DECLARED DISTANCES

RWY	TORA (m)	TODA (m)	ASDA (m)	LDA (m)	Remarks
08	1400	1400	1700	1200	Nil
26	1200	1200	1700	1400	Nil

NFTV AD - 2.14 APPROACH AND RWY LIGHTING

RWY	APCH LGT Type LEN INTST	THR LGT Colour WBAR	VASIS (MEHT) PAPI	TDZ LGT LEN	RWY Centre Line LGT LEN Spacing Colour; INTST	RWY Edge LGT LEN Spacing Colour; INTST	RWY End LGT Colour WBAR	SWY LGT LEN (m) Colour	Remarks
08	Nil	DTHR Green WBAR	PAPI Left/3.5° (47ft)	Nil	Nil	1700m, 60m, White LIL	Red	Nil	Nil
26	Nil	DTHR Green WBAR	PAPI Left/3.5° (47ft)	Nil	Nil	1700m, 60m White, LIL	Red	Nil	Nil

NFTV AD - 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	ABN — At tower building, ALTN FLG GW 2.4 sec. HS IBN — Nil
2	LDI location and LGT, Anemometer location and LGT	LDI — Windsock THR RWY 08/26, lit WDI — ABM end of RWY 08/26, lit Anemometer — E TWY, lit
3	TWY edge and centre line lighting	TWY and apron edges — blue
4	Secondary power supply/switch-over time	All aerodrome facilities/12 sec
5	Remarks	Flood LGT — white

NFTV AD - 2.16 HELICOPTER LANDING AREA

1	Co-ordinates of TLOF or THR of FATO	Nil
2	TLOF and/or FATO elevation (ft)	Nil
3	TLOF and FATO area dimensions, surface, strength and markings	Nil
4	True and MAG BRG of FATO	Nil
5	Declared distance available	Nil
6	APP and FATO lighting	Nil
7	Remarks	Nil

NFTV AD - 2.17 ATS AIRSPACE

1	Designation and lateral limits	MBZ radius of 25NM centred on NFTV ARP
2	Vertical limits	MBZ — FM SFC to 3500ft
3	Airspace classification	Class G
4	ATS unit callsign, language	Vava'u Flight Service English
5	Transition altitude	13,000ft
6	Remarks	

NFTV AD - 2.18 ATS COMMUNICATIONS FACILITIES

Service Designation	Callsign	Frequency	Hours of Operation	Remarks
FIS	Vava'u Flight Service	3226, 5832, 8995	As AD	
APP				Nil
TWR				Nil
AFIS	Vava'u Flight Service	118.1	As AD	

NFTV AD - 2.19 RADIO NAVIGATION AND LANDING AIDS

Remarks	
Elevation of DME antenna	Nil
Co-ordinates	S 18°35'08" W 173°58'11"
Hours of Operation	HS
Frequency	400
Identification	TV
Type of Aid, CAT (for ILS), Variation	NDB

NFTV AD - 2.20 LOCAL TRAFFIC REGULATIONS

1 AERODROME REGULATIONS

Nil.

2 TAXIING TO AND FROM STANDS

Nil.

3 PARKING AREA FOR GENERAL AVIATION

Nil.

4 PARKING AREA FOR HELICOPTERS

Nil.

5 APRON — TAXIING

Nil.

6 TAXIING — LIMITATIONS

Nil.

7 TRAINING FLIGHTS — USE OF RWYS

Nil.

8 HELICOPTER TRAFFIC — LIMITATIONS

Nil.

9 REMOVAL OF DISABLED AIRCRAFT

Nil.

NFTV AD - 2.21 NOISE ABATEMENT PROCEDURES

1 GENERAL

Nil.

NFTV AD - 2.22 FLIGHT PROCEDURES

1 POSITION AND ALTITUDE REPORTING — LOCAL VFR FLIGHTS

Nil.

2 POSITION REPORTING ON DEPARTURE

Nil.

3 AERODROME TRAFFIC CIRCUIT RULES

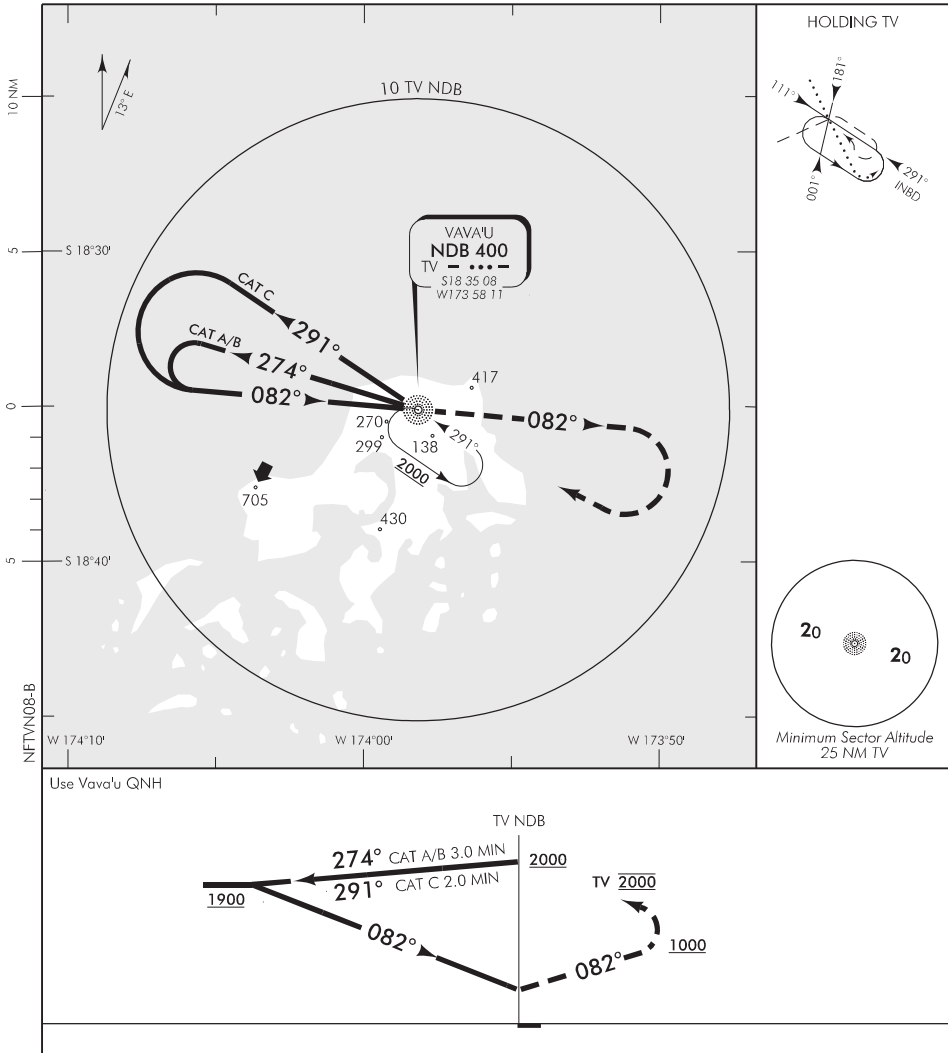
RWY 08: Left hand

RWY 26: Left hand

ELEV 233
RWY 08 THR ELEV 226
FLIGHT SERVICE: 118.1

CAT A,B,C

VAVA'U
NDB RWY 08



MISSED APCH: Climb on 082° to 1000, turn RIGHT, enter TV holding 2000

Category	A	B	C	D
NDB (D)	960(734) - 2500		960(734) - 4000	NA
Circling (D)	990(757) - 2800		1090(854) - 4000	
NDB (N)	960(734) - 3700		960(734) - 4400	
Circling (N)	1100(867) - 5			

Effective: 19 NOV 09

WGS 84 Co-ordinates
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VAVA'U
NDB RWY 08

ELEV 233

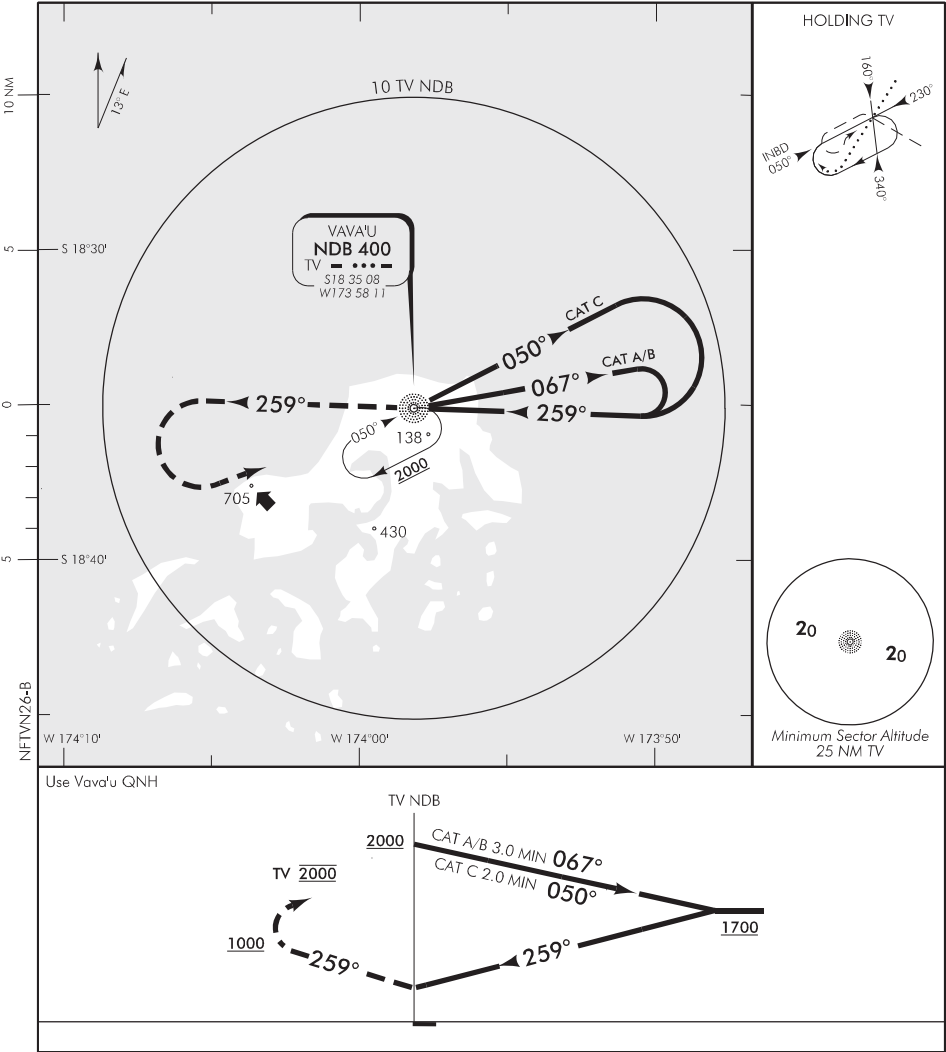
RWY 26 THR ELEV 233

FLIGHT SERVICE: 118.1

CAT A,B,C

VAVA'U

NDB RWY 26



MISSED APCH: Climb on 259° to 1000, turn LEFT, enter TV holding 2000

Category	A	B	C	D
NDB (D)	890(657) - 2500		920(687) - 3600	NA
Circling (D)	990(757) - 2800		1090(857) - 3700	
NDB (N)	890(654) - 3700		920(684) - 4000	
Circling (N)	1100(867) - 5			

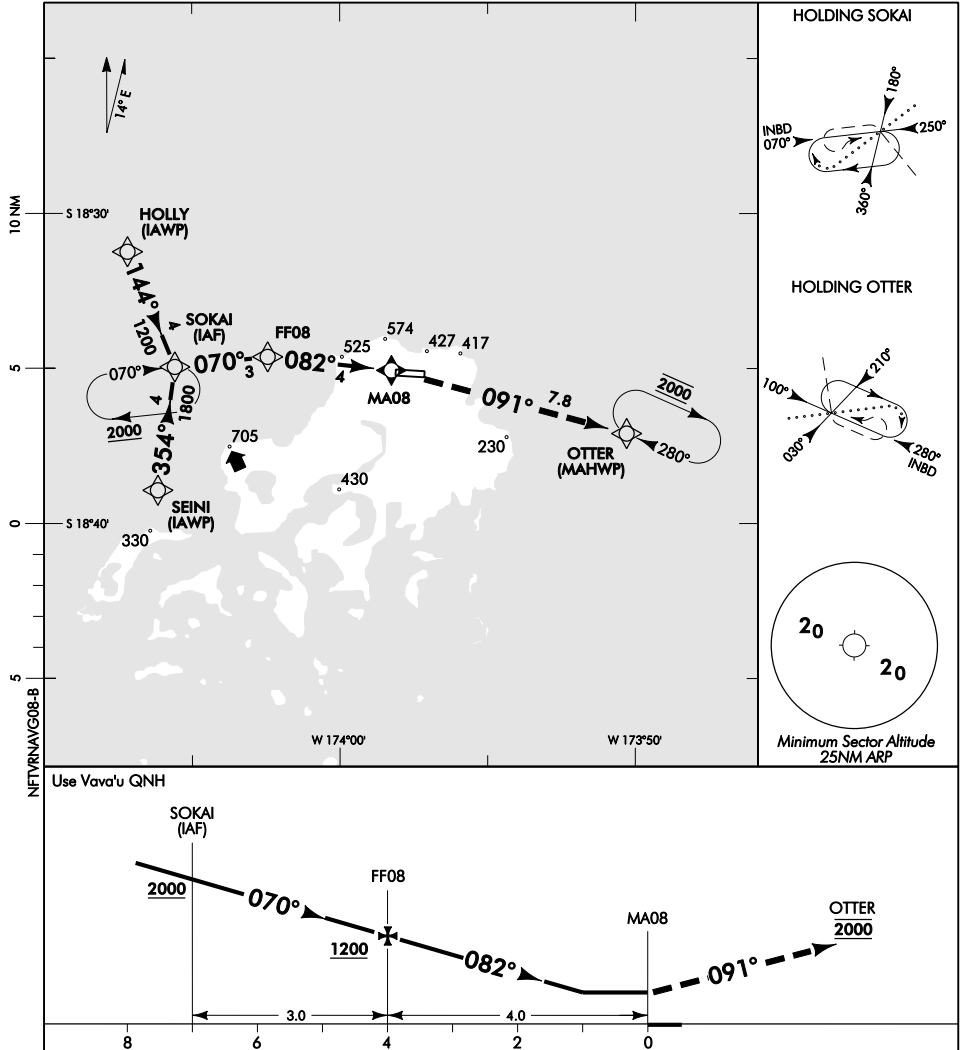
Changes from 14 APR 05: Minima, ELEV, AD ELEV.

ELEV 233

CAT A,B

RWY 08 THR ELEV 226

FLIGHT SERVICE: 118.1

VAVA'U**RNAV (GNSS) RWY 08**

DISTANCE to WPT	SOKAI	2	1	FF08	3	2	1	MA08	
Advisory Altitude 5%	2400	2100	1800	1500	1200	900	MDA	MDA	
Category	A			B			C		D
GNSS (DAY)	870(649) – 2500						NA		
Circling (DAY)	970(737) – 2800								

Effective: 18 NOV 10

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VAVA'U
RNAV (GNSS) RWY 08

Changes from 17 DEC 09 (SUP): Nil.

ELEV 233

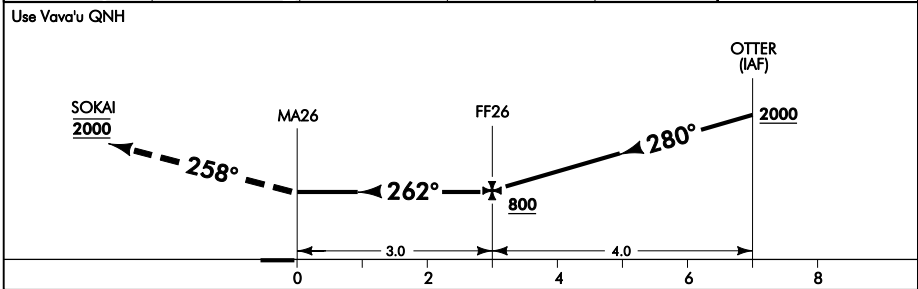
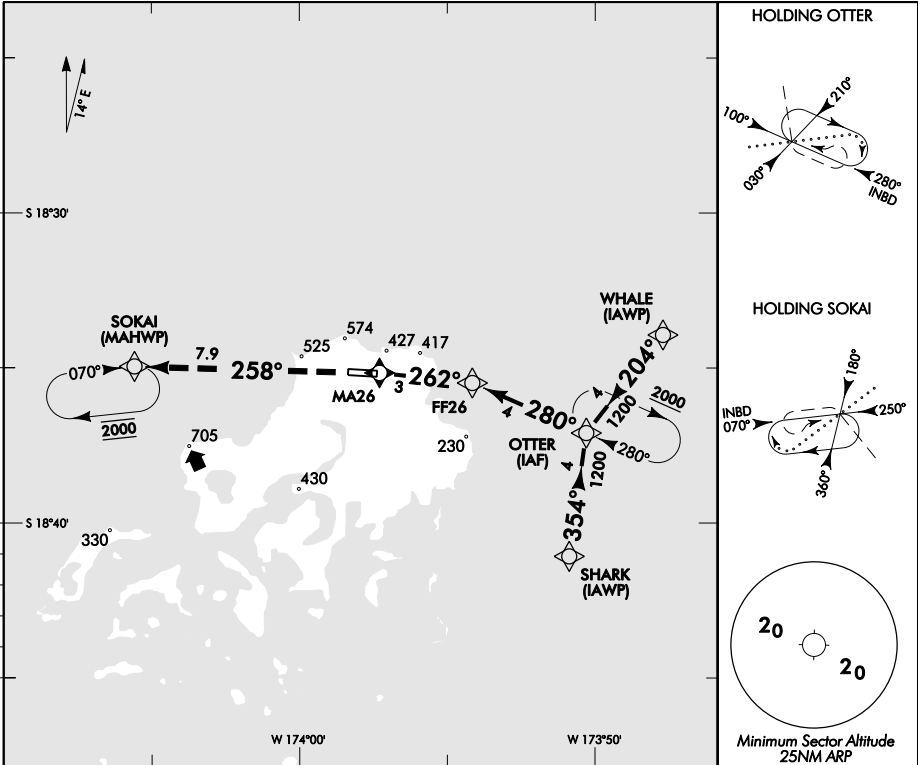
CAT A,B

VAVA'U

RWY 26 THR ELEV 233

RNAV (GNSS) RWY 26

FLIGHT SERVICE: 118.1



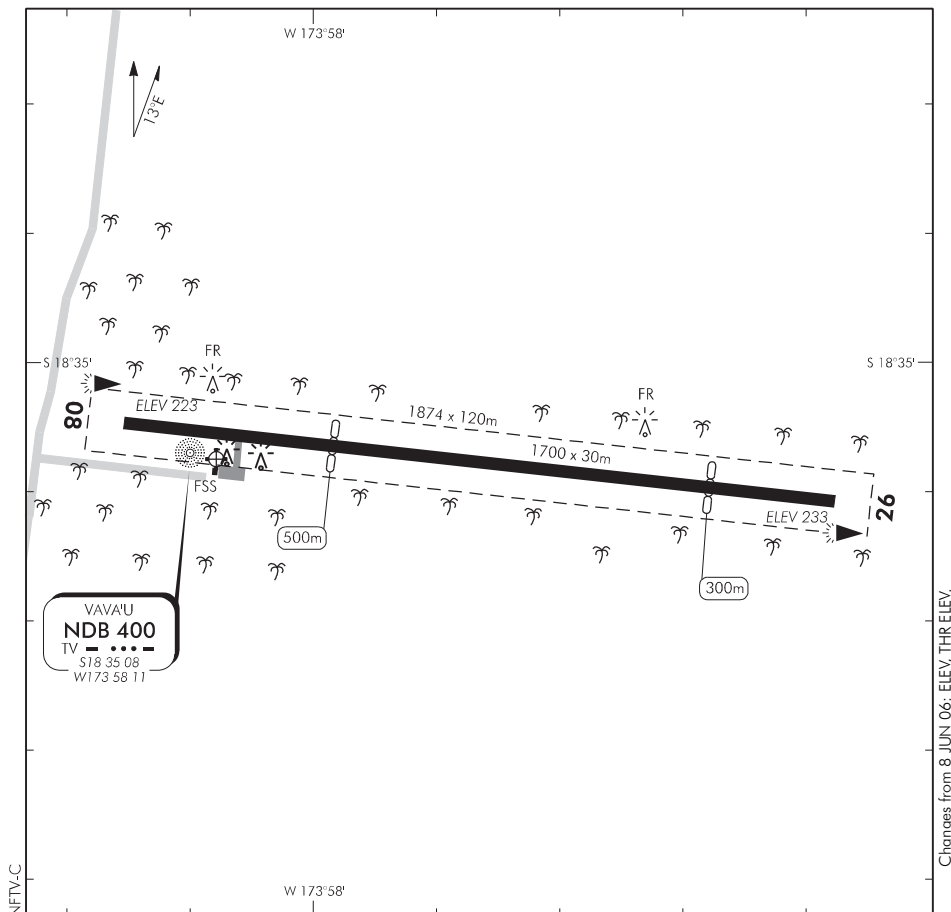
MISSED APCH: Climb on track 258° to SOKAI. Hold 2000 ft.

DISTANCE to WPT	MA26	1	2	FF26	1	2	3	OTTER	
Advisory Altitude 5%	MDA	MDA	900	1200	1500	1800	2100	2400	
Category	A			B			C		D
GNSS (DAY)	800(567) – 2500			NA					
Circling (DAY)	970(737) – 2800								

ELEV 233

VAVA'U AERODROME (1)

FLIGHT SERVICE: 118.1



1. Circuit: RWY 08 — Left hand
RWY 26 — Left hand
2. Sunday operations not permitted except in an emergency.
3. **CAUTION:** Rising terrain to north and west.
4. Transitional side surfaces infringed by palm trees.
5. PAPI must be operational for night landings.
6. All aircraft operating into and out of Vava'u shall make every turn on the runway as wide as possible to avoid runway damage.

S 18 35 08.1 W 173 58 05.0

Effective: 19 NOV 09

WGS 84 Co-ordinates
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VAVA'U AERODROME (1)

VAVA’U

AERODROME (2)

VFR MINIMA

CEILING (ft) & VISIBILITY (m or km)		
	DAY	NIGHT
Air Transport	1000 – 5000	3000 – 16
All Other	600 – 1500	3000 – 16

IFR TAKE-OFF MINIMA

CEILING (ft) & VISIBILITY (m or km)		
RWY	DAY	NIGHT
08	500 – 2000	700 – 5000
26	500 – 2000	700 – 5000