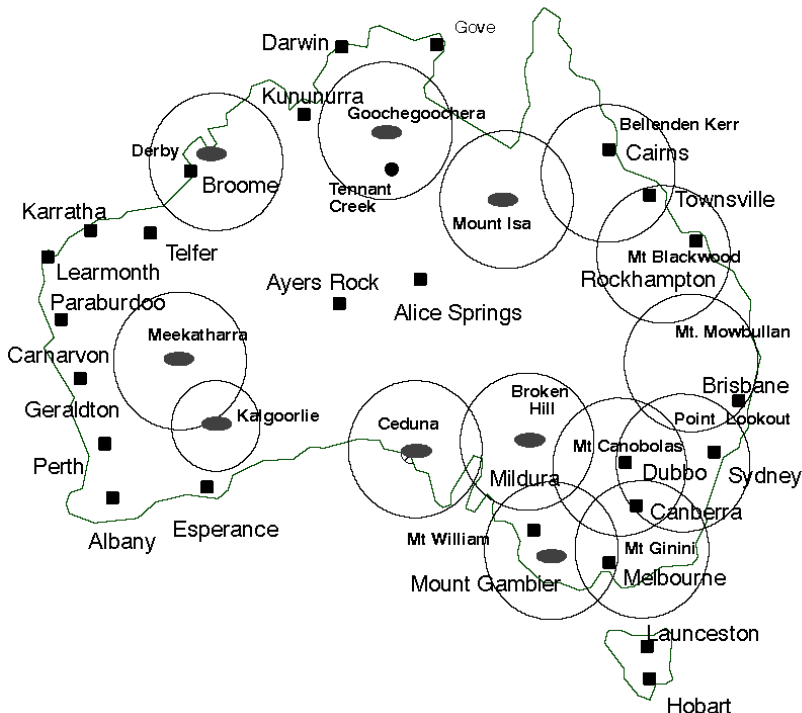


**FIS: IN FLIGHT INFORMATION SERVICES**

**1. AUTOMATIC BROADCAST SERVICES**

**VHF AUTOMATIC EN ROUTE INFORMATION SERVICE (AERIS) NETWORK  
(COVERAGE AT 20,000FT)**



| <b>Outlet</b>  | <b>VHF</b> | <b>METAR/SPECI and TAF (where significant) Menu</b>                                    |
|----------------|------------|--|
| Mt William     | 119.75     | Adelaide, Hobart, Launceston, Melbourne, Perth, Mildura.                               |
| Mt Ginini      | 128.65     | Adelaide, Canberra, Hobart, Melbourne, Wagga Wagga                                     |
| Mt Canobolas   | 127.7      | Adelaide, Alice Springs, Amberley, Brisbane, Melbourne, Perth, Sydney, Williamtown.    |
| Point Lookout  | 119.75     | Amberley, Brisbane, Gold Coast, Canberra, Melbourne, Rockhampton, Sydney, Williamtown. |
| Mt Mowbullan   | 119.95     | Amberley, Brisbane, Gold Coast, Mackay, Rockhampton, Sunshine Coast, Sydney.           |
| Mt Blackwood   | 119.85     | Amberley, Brisbane, Cairns, Hamilton Island, Mackay, Rockhampton, Townsville.          |
| Bellenden Kerr | 119.75     | Amberley, Brisbane, Cairns, Hamilton Island, Mackay, Rockhampton, Townsville.          |
| Mt Isa         | 120.35     | Alice Springs, Amberley, Brisbane, Cairns, Mt Isa, Tindal, Townsville.                 |
| Goochegoochera | 128.45     | Alice Springs, Cairns, Darwin, Tennant Creek, Tindal, Townsville.                      |
| Derby          | 128.45     | Broome, Darwin, Kununurra, Meekatharra, Perth, Port Hedland.                           |
| Meekatharra    | 128.45     | Broome, Karratha, Meekatharra, Mount Magnet, Paraburdoo, Perth, Port Hedland.          |

|             |        |   |
|-------------|--------|---|
| Ceduna      | 128.45 | Adelaide, Alice Springs, Kalgoorlie, Melbourne, Perth, Sydney.          |
| Kalgoorlie  | 128.25 | Adelaide, Alice Springs, Ceduna, Kalgoorlie, Laverton, Perth.           |
| Broken Hill | 128.25 | Adelaide, Alice Springs, Amberley, Brisbane, Darwin, Melbourne, Sydney. |

- 1.1 Automatic Broadcast Services are an essential part of the In-Flight Information Service:
- International flights are catered for by the HF VOLMET service.  
Refer *AIP GEN 3.5*.
  - Flights within 90NM of a Primary Control Zone and 30NM of a General Aviation Control Zone area, are catered for by the Automatic Terminal Information Services (ATIS).  
Refer *ERSA FAC*.
  - Flights operating within Australia, in particular, flights operating in control area, are catered for by an Automatic En Route Information Service (AERIS).
  - Aircraft operating to an aerodrome at which AWS is installed may be catered for by AWIS.

1.2 **AWIS locations not listed in ERSa-FAC**

| Location       | State | Frequency | Phone        |
|----------------|-------|-----------|--------------|
| Batchelor      | NT    |           | 08 7922 2501 |
| Kilmore Gap    | VIC   | 128.6     | 03 8470 3210 |
| Moss Vale      | NSW   |           | 02 9353 6437 |
| Mount Boyce    | NSW   |           | 02 9353 6438 |
| Murrurundi Gap | NSW   |           | 02 9353 6440 |
| Samuel Hill    | QLD   |           | 07 3564 3736 |
| Tarcoola       | SA    |           | 08 8150 3818 |

**2. THE ATS IN-FLIGHT INFORMATION SERVICE**

- 2.1 This consists of three elements:
- ATC initiated FIS;
  - Automatic Broadcast Services; and
  - an on-request service.

**3. ON-REQUEST IN-FLIGHT INFORMATION SERVICE**

- 3.1 THE PILOT IS RESPONSIBLE FOR REQUESTING THE INFORMATION NECESSARY TO MAKE OPERATIONAL DECISIONS.
- 3.2 An on-request Flight Information Service (FIS) is available to aircraft in all classes of airspace on ATC VHF or AusFIC HF (Domestic and International) frequencies using the callsign "FLIGHTWATCH". Broadcast information (as described earlier) is available from ATIS and on the AERIS network to supplement the on-request service.
- 3.3 Pilots should ensure they pre-fix any request for FIS on VHF with the callsign "FLIGHTWATCH". When operating on HF also include the frequency, for example: "FLIGHTWATCH, ROMEO JULIET DELTA, SIX FIVE SIX FIVE, REQUEST ACTUAL WEATHER Halls Creek"  
*Note: This helps to identify the service required and your location.*
- 3.4 Requests will be dealt with on a "first come-first served" basis.
- 3.5 Pilots should be mindful that flight information services provided on HF by the FIS may be delayed while communications for traffic information services are being relayed between air traffic control and pilots of IFR flights.

#### 4. HAZARD ALERTS

- 4.1 Hazard Alerts contain information, assessed by ATS to have an immediate and detrimental effect on the safety of an aircraft, that could assist pilots to avoid hazardous situations. Hazard Alerts will be:
- broadcast on the appropriate ATS FREQ as necessary. Broadcasts will normally be made on receipt, H + 15 and H + 45 or until the availability of an updated FIS product (MET or NOTAM) has been broadcast; and
  - directed to those aircraft maintaining continuous communications with ATS at the time the hazard is assessed that are within one hour flight time of the hazardous conditions.

#### 5. CANCELLATION OF SARWATCH (FULL REPORTING)

- 5.1 The preferred method for pilots using full reporting procedures to cancel SARWATCH is via radio. When two way radio communications are not available, pilots wishing to cancel SARWATCH may do so by telephoning the appropriate ATC Centre:  
Brisbane ATC Centre 07 3866 3868<sup>^</sup>  
Melbourne ATC Centre 03 9235 2039<sup>^</sup>

#### 6. CANCELLATION OF SARTIME

- 6.1 Except when a SARTIME for Departure has been nominated to ATC for an intermediate arrival and departure, all SARTIMEs nominated to Airservices will be held by CENSAR. For those SARTIMEs that will be held by CENSAR, pilots must show CENSAR as the unit responsible for a location when submitting flight notifications.
- 6.2 The preferred method to cancel a SARTIME is via telephone to CENSAR on 1800 814 931<sup>^</sup>. When telephone facilities are not available you may use ATS frequencies.
- 6.3 Pilots are encouraged to nominate a suitable time period for a SARTIME that will provide sufficient time for the flight to take place and to reach suitable facilities for cancellation in the event that radio contact is not available.
- 6.4 Whenever possible a single SARTIME should be nominated to encompass a number of flights that have short time intervals, rather than nominating a SARTIME for each flight stage. Nomination should be by flight notification direct to the FIS and CENSAR.

#### 7. SAFETY RELATED MATTERS

- 7.1 Telephone services may be used to contact Australian ATS units or the Joint Rescue Coordination Centre (JRCC) Australia, as appropriate, for urgent, non-routine and safety-related matters. Telephone numbers are listed below:

| <b>Airservices Australia</b>                             |                           |
|--|---------------------------|
| Brisbane ATC Centre                                      | 07 3866 3868 <sup>^</sup> |
| Melbourne ATC Centre                                     | 03 9338 4032 <sup>^</sup> |
| Perth ATC Centre   | 08 9476 8545 <sup>^</sup> |
| Sydney ATC Centre  | 02 9556 6875 <sup>^</sup> |
| <b>Joint Rescue Coordination Centre (JRCC) Australia</b> |                           |
| SAR Hotline (within Australia)                           | 1800 815 257              |
| SAR Hotline (outside Australia)                          | +61 2 6230 6899           |

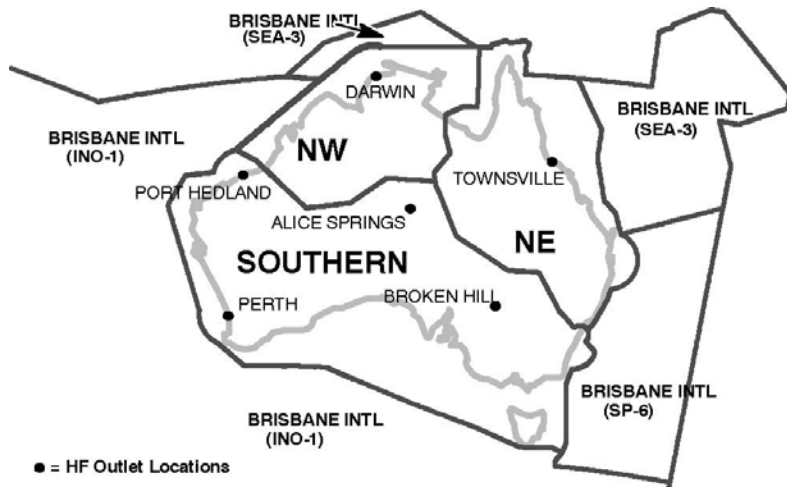
#### 8. UPDATE OF SPFIB/AVFAX PRODUCTS

- 8.1 Pilots in receipt of NAIPS SPFIB or AVFAX briefings may quote the briefing identification number from the top of the first page of the briefing to obtain an update to the NOTAM and the latest MET INFO when airborne, through FLIGHTWATCH. The number is available from the first page of the briefing text. This will ensure that only the route, area and location NOTAM held are updated and will avoid repetition. For example - "FLIGHTWATCH, ALPHA BRAVO CHARLIE, REQUEST UPDATE ON SPFIB (OR AVFAX) BRIEFING NUMBER NINER ZERO ZERO ONE (90001)."

#### 9. FAILURE OF GROUND STATION EQUIPMENT

- 9.1 In the unlikely event of failure of groundstation SSB equipment an alternative SSB FREQ should normally be available to ensure that ACFT are provided with HF communications.

10. **FLIGHTWATCH HF ORGANISATION**



**FREQUENCIES**

|               |      |      |      |       |               |      |      |       |       |             |
|---------------|------|------|------|-------|---------------|------|------|-------|-------|-------------|
| NORTH WESTERN | 3452 | 6541 | 8843 | SP-6  | BRISBANE INTL | 3467 | 5643 | 8867  | 13261 | 17904 (KHZ) |
| NORTH EASTERN | 3452 | 6610 | 8831 | SEA-3 | BRISBANE INTL | 3470 | 6556 | 11396 | 13318 | 17907 (KHZ) |
| SOUTHERN      | 3461 | 6565 | 8822 | INO-1 | BRISBANE INTL | 3476 | 5634 | 8879  | 13306 | 17961 (KHZ) |

- 10.1 Australia is divided into six HF Network Areas known as Regional Domestic Air Route Areas (RDARA). Details of the HF FREQ organisation is shown on PCA. All FREQ quoted are suppressed carrier FREQ, and the upper sideband mode is used. These HF FREQ are operated from Brisbane.
- 10.2 Depending on HF propagation conditions, the best useable RDARA/MWARA frequencies for reception will vary. Pilots can access up to date primary and secondary frequencies for all Domestic and International HF through the Aircservices website. Access is made through Pilot Briefing Services, Location Briefing. Each HF area has been allocated a unique code and once entered into Location Briefing will provide an up to date primary and secondary HF frequency for that selected area. Enter the code that represents the area required in the following table.

| <b>RDARA</b>        | <b>LOCATION CODE</b> |
|---------------------|----------------------|
| Southern            | 165                  |
| North Western       | 170                  |
| North Eastern       | 175                  |
| <b>MWARA</b>        |                      |
| SP-6 Brisbane INTL  | 150                  |
| INO-1 Brisbane INTL | 155                  |
| SEA-3 Brisbane INTL | 160                  |

11. **ATS AREA FREQUENCIES AT UNCONTROLLED AERODROMES**

- 11.1 These are shown on en route and terminal charts.
- 11.2 HF facilities are remotely operated; proximity to these may affect frequency selection. The location of HF outlets and the frequencies operated from each outlets are shown above.

## 12. LOW JET ROUTES

- 12.1 Routes at or below 5,000FT AGL used by military aircraft for low level, high speed operations are designated as Low Jet Routes (LJR). Routes are planned to avoid:
- controlled airspace administered by Airservices Australia;
  - restricted and danger areas not administered by the ADF;
  - civil aerodromes listed in ERSA by at least 5NM laterally or 4,000FT vertically;
  - aerodromes where carriage and use of radio is required unless equipped with the appropriate radio frequency; and
  - sensitive areas and oil/gas platforms as detailed in ERSA.
- 12.2 Notification of routes and duration of LJR operations will be by NOTAM. Information on LJR activity in your area is available from the pre-flight briefing service and FLIGHTWATCH.
- 12.3 Aircraft using LJR may be camouflaged and emit little or no smoke trail, although they will normally show anti-collision beacons. They may operate singly or in close or loose formation. Significant wake turbulence and a large turn radius may be expected.
- 12.4 All LJR aircraft are equipped with UHF and some also have VHF and HF. However, they may often be out of communications (NOCOM) for part of their flight. Although most LJR aircraft are radar equipped, these radars do not enable avoidance of conflicting aircraft.
- 12.5 WHERE POSSIBLE, PILOTS SHOULD PLAN THEIR FLIGHTS TO AVOID ACTIVE LJR.
- 12.6 The following LJR are activated HJ and are flown by F18 aircraft operating at or BLW 5,000FT AGL:
- R638 - 10NM SSW Baryulgil below 3,000FT AGL - Gatton (Climb Point) - Amberley.
  - R638 - Coastal below 3,000FT AGL - Gold Coast - Point Lookout (Stradbroke Island) - Brisbane.
  - Point Lookout - Gold Coast- Coastal below 5,000FT AGL - R638.
  - R638 - Casino 231025 - Amberley 191043 - Amberley
  - Sandy Cape - Coastal below 3,000FT AGL - Double Island Point - Bribie Island - Cape Moreton - Point Lookout.
  - Point Lookout - Cape Moreton - Bribie Island - Coastal below 3,000FT AGL - Double Island Point - Sandy Cape.

**Note: A number of other LJR and Defence activities are in operation at various times in addition to those shown above and will be advised by NOTAM when necessary.**

## 13. NIGHT VISION DEVICES AND EQUIPMENT

- 13.1 Night vision devices and equipment are used in defence, security and law enforcement operations. Current equipment is:
- Night Vision Goggles (NVG) - helmet mounted light amplifying binoculars which sense minute amounts of visible and near infra red light under conditions of near darkness and enhance them through an image intensifier tube assembly.
  - Low Light Television (LLTV) - aircraft equipment which uses TV cameras with powerful zoom lenses, with or without image intensifiers for low light conditions.
  - Forward Looking Infra Red (FLIR) - aircraft mounted sensor which detects temperature differences and displays on a screen, thermal images. May also be capable of looking along other axes. Used in SAR, law enforcement and defence applications.
- 13.2 Various limitations are placed on the aircraft and crews using these devices. In particular, NVG require modifications to aircraft lighting. Masking or extinguishing external lights may create difficulties for other traffic and ATC in providing visual separation, particularly since most of the defence aircraft involved are camouflaged. Much of this activity is carried out at low level and may involve abrupt manoeuvring.

## 14. LOW LEVEL FLIGHTS - NOTIFICATION

- 14.1 Flights at very low level will advise their operating band of levels in the flight notification. Aircraft unlit, or with masked external lights will advise their operating area. In controlled airspace, other traffic will be advised of the activity and separation will be achieved using local procedures agreed between ATS and the night vision device user. In Class G airspace, notification of low level flights will be provided by NOTAM.

## 15. PRECAUTIONS

- 15.1 Because of the likely activities of these device users, e.g. surveillance, law enforcement, SAR and military operations, significant variations to normal aircraft operating procedures may be encountered. Pilots should acquaint themselves of the activity by making use of pre-flight briefing facilities and when in flight take account of possible non-standard procedures.
- 15.2 Aircraft operating in close proximity to such traffic may request that external lighting be displayed. Night agricultural operators in areas known to be used for night vision device training (e.g. Oakey and Townsville) should advise defence authorities of their intentions.

## 16. HIGH ALTITUDE BALLOON FLIGHTS

- 16.1 Large helium-filled plastic balloons are launched periodically from various locations. They carry scientific equipment to record data from the upper atmosphere and normally ascend to altitudes in excess of 70,000 FT with flight duration of 80 hours or more. The main balloon launching station is at Alice Springs but other launching sites, e.g. Charleville, may also be used. Where possible, flight paths will be selected so that the recovery area is outside the more densely populated Eastern/South Eastern/South Western areas. Notification will be by NOTAM.

## 17. DESIGNATED REMOTE AREAS

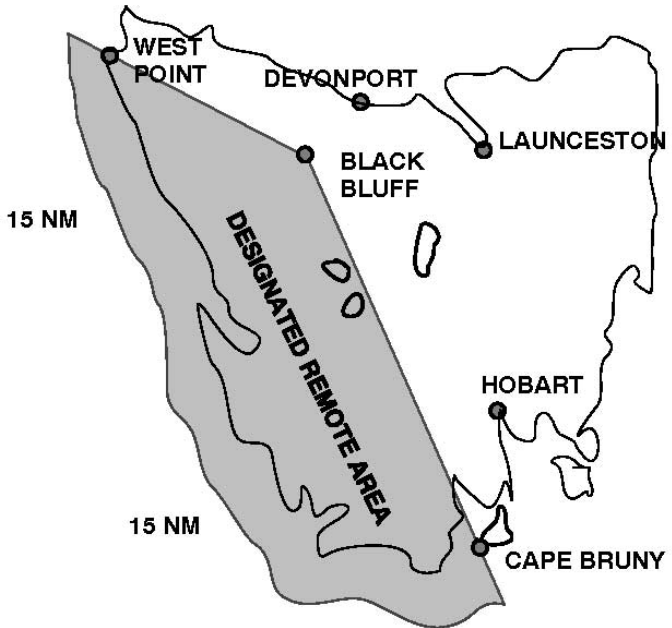
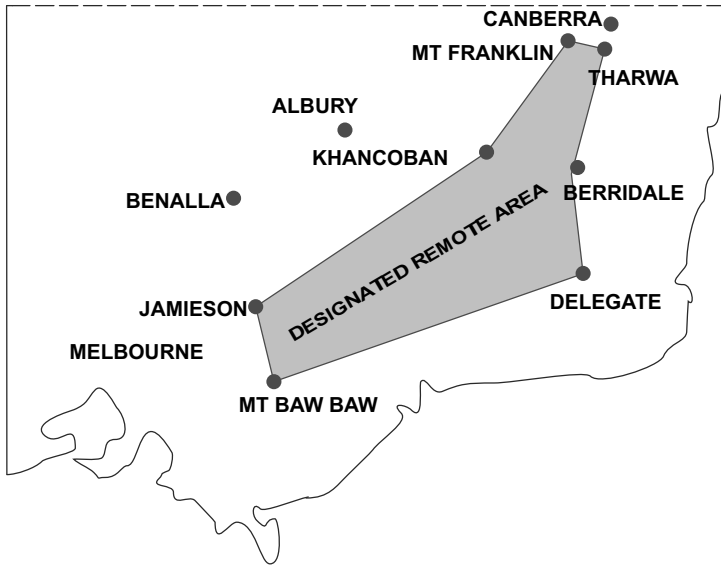


ACFT planned to operate within or through the designated remote area shown in this section are required to carry survival equipment suitable for sustaining life in the area over which the flight is planned as per the civil aviation legislation relevant to their operation.

**Note 1:** Flight through corridors must be made within sight of and not more than five miles from the highway concerned.

**Note 2:** Australian administered islands adjacent to the Remote Area between Anna Plains and Cairns are part of the Designated Remote Area.

**Note 3:** Mainland within 50NM of Darwin excluded from Designated Remote Area.



## 18. **UNMANNED AERIAL VEHICLE (UAV) TESTING**

### 18.1 **Introduction**

- 18.1.1 Unmanned Aerial Vehicle operations including testing and development take place in various Danger Areas and military Restricted Areas.
- 18.1.2 Temporary Danger Areas may be promulgated for other UAV operations if CASA considers there is a risk to other flights such that pilots need to be warned of the danger in order to take appropriate precautions.

### 18.2 **UAV Operations**

- 18.2.1 UAVs may be flown autonomously within the designated areas, but are subject to operator input. The operator will maintain continuous two way communications on the appropriate aeronautical frequencies, make regular broadcasts advising location, altitude and intention of the UAV and will respond to calls.
  - 18.2.2 Pilots wishing to operate within a Danger Area designated for UAV activity are advised to contact the UAV ground station on the appropriate FIA/CTAF e.g. "UAV TRAFFIC - [location] AREA THIS IS...". While no response from the ground station would normally mean that no UAV is airborne, pilots are encouraged to maintain an enhanced lookout.
-



**NAVIGATION AND COMMUNICATION**

**1. ADF MODERNISED HIGH FREQUENCY COMMUNICATIONS SYSTEM (MHFCS)**

- 1.1 The ADF MHFCS is a high frequency (3-30MHz) radio network providing communication services for the operational control and support of ADF and allied aircraft, marine craft and land units. Visiting military aircraft may use either the ADF or RNZAF system when contact with Australian/New Zealand based military authorities is required. Neither system provides a civil or military Air Traffic Control Service.
- 1.2 The ADF MHFCS is centrally controlled by the Defence Communications Station Canberra (DCSC) at the Network Management Facility (NMF) located in Canberra, ACT, Australia.
- 1.3 The MHFCS system consists of four Transmit and Receive Nodes located at:

|                            |                           |
|----------------------------|---------------------------|
| EXMOUTH, Western Australia | TOWNSVILLE, Queensland    |
| DARWIN, Northern Territory | RIVERINA, New South Wales |

These nodes are remotely controlled from the NMF.

- 1.4 DCSC provides 5 continuously monitored Voice Contact Net (VCN) frequencies from each of the four nodes as follows:

| VCN   | Assigned   | Dial/Suppressed carrier | Hours of Operation |
|-------|------------|-------------------------|--------------------|
| VCN 1 | 22869.5kHz | 22868kHz                | Continuous         |
| VCN 2 | 5879.5kHz  | 5878kHz                 | Continuous         |
| VCN 3 | 9048.5kHz  | 9047.0Hz                | Continuous         |
| VCN 4 | 15963.5kHz | 15962kHz                | Continuous         |
| VCN 5 | 12173.5kHz | 12172kHz                | Continuous         |

- 1.4.1 Emission: 3K00J3E (Offset - subtract 1.5kHz from assigned)
- 1.4.2 Discrete frequencies are available as required and allocated after initial contact on the VCN.
- 1.4.3 Telephone patch facilities between aircraft and ground appointments are available as required, after initial contact on VCN.
- 1.4.4 Continuous monitoring of military distress frequency 5696kHz.
- 1.4.5 SELCAL. Available to suitably equipped aircraft/vessels.
- 1.5 **Hours of Operation**  
DCSC - H24.
- 1.6 **Mode Of Operation**  
DCSC is capable of operating independent side band (ISB) or AM modes however, the normal mode of operation is Upper Side Band (USB) or suppressed carrier.
- 1.7 **Callsign**  
DCSC uses the following self evident callsign: "Canberra Control".
- 1.8 Telephone/fax contact numbers:

| Location | Telephone       | Fax             |
|----------|-----------------|-----------------|
| DCSC     | +61 2 6263 8126 | +61 2 6263 8143 |

**2. RNZAF AIR OPERATIONS COMMUNICATIONS CENTRE AUCKLAND (AOCCAK)**

- 2.1 AOCCAK is a high frequency (3-30MHz) station providing HF communications services to RNZAF, RAAF and other allied aircraft. Visiting military aircraft may use either the ADF or RNZAF system when contact with Australian/New Zealand based military authorities is required. Neither system provides a civil or military Air Traffic Control Service.
- 2.2 AOCC Auckland is located at RNZAF Whenuapai, Auckland, New Zealand.
- 2.3 AOCCAK provides 4 General Purpose Net (GPN) frequencies, which consist of the following (note station hours of operation are currently not 24/7):

| Assigned   | Dial/Suppressed Carrier | Normal Hours of Operation | When 24HR Operations |
|------------|-------------------------|---------------------------|----------------------|
| 3033.4kHz  | 3032kHz                 | 0900-1000Z<br>1900-2100Z  | 0900-2100Z           |
| 5688.4kHz  | 5687kHz                 | 1900-1000Z                | CONTINUOUS           |
| 8975.4kHz  | 8974kHz                 | 1900-1000Z                | CONTINUOUS           |
| 11236.4kHz | 11235kHz                | 1900-1000Z                | CONTINUOUS           |
| 13207.4kHz | 13206kHz                | 2100-0900                 | 2100-0900            |

- 2.3.1 Emission 2K80J9W (Offset - Subtract 1.4kHz from assigned).
- 2.3.2 Discrete frequencies are available as required and allocated after initial contact on the GPN.
- 2.3.3 Telephone patch facilities between aircraft and ground appointments are available in emergencies or at supervisor's discretion.
- 2.3.4 SELCAL. Available to suitably equipped aircraft/vessels.

2.4 **Hours of Operation**

AOCCA - 1900Z - 1000Z daily

2.5 **Mode of Operation**

AOCCA is capable of operating Independent Side Band (ISB), the normal mode of operation is Upper Side Band (USB) or suppressed carrier.

2.6 **Callsign**

AOCCA uses the following self evident callsign: "Air Force Auckland".

2.7 Telephone contact number.

AOCCA -: +64 9 417 7831.

3. **MILITARY HF COMMUNICATIONS**

- 3.1 In addition to that which DCSC supplies, the following HF nets are available:
  - a. RAAF Butterworth. Aircraft transiting to/from Butterworth may relay message traffic via DCSC. Aircraft requiring HF contact with Butterworth are to make prior arrangement through DCSC.
  - b. PNGDF General Purpose Network

| Location     | C/S  | Frequencies                                  | HR of OPS    |
|--------------|------|--|--------------|
| Port Moresby | P2A2 | 5746(P) LGG<br>7496(S) LGH<br>3175 (S) LGF   | H24          |
| Lae          | P2A3 | 5746 (P) LGG<br>7496 (S) LGH<br>3175 (S) LGF | 2200-0700 JO |

4. **AIR-TO-AIR COMMUNICATIONS - CIVIL**

- 4.1 Interpilot air-to-air communications in Australian FIRs may be conducted on frequency 123.45MHz. Aircraft engaged in flights over remote and oceanic areas, out of range of VHF ground stations, and not in the vicinity of a charted non-controlled aerodrome, should use this channel to exchange operational information. Communications between aircraft on this frequency are restricted to the exchange of information relating to aircraft operations. Communications are to be established by either a directed call to a specific aircraft or a general call, taking into account conditions pertaining to the use of the particular channel. As target aircraft may be guarding more than one frequency, the initial call should include the distinctive channel identification "INTERPILOT" or identification of the air-to-air frequency.
- 4.2 The following examples illustrate the application of the calling procedures.
  - a. Qantas 2, SPEEDBIRD 15, INTERPILOT, DO YOU READ?; or
  - b. ANY AIRCRAFT VICINITY 10S 135E, QANTAS 5, 123.45, OVER.

**5. AIR TRAFFIC SERVICES DATALINK SERVICES****5.1 HF SELCAL Check**

- 5.1.1 For aircraft departing Australian airspace, a SELCAL check is not mandatory. However, flight crews wishing to satisfy themselves with HF performance should perform a SELCAL check after departure, but prior to being transferred to CPDLC. The primary HF frequency will be advised with the transfer instruction. The HF operator will confirm the primary and secondary HF frequencies on first contact.
-