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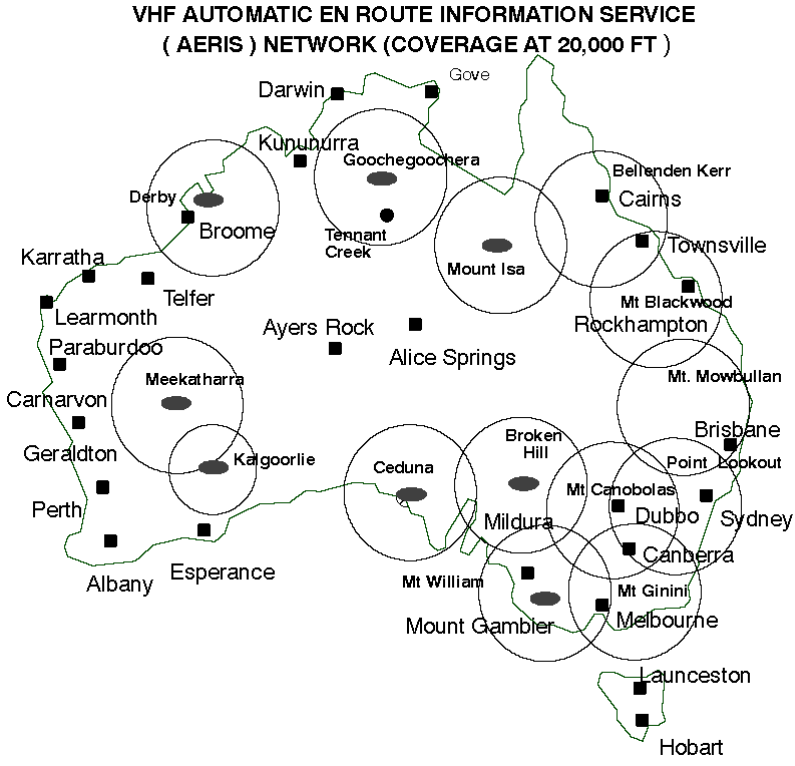
FIS: IN FLIGHT INFORMATION SERVICES

1. AUTOMATIC BROADCAST SERVICES

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



Outlet	VHF	METAR Menu
MT. William	119.75	Adelaide, Hobart, Launceston, Melbourne, Perth, Mildura.
MT. Ginini	128.65	Adelaide, Canberra, Hobart, Melbourne, Wagga Wagga
MT. Canobolas	119.85	Adelaide, Alice Springs, Brisbane, Melbourne, Perth, Sydney.
Point Lookout	119.75	Brisbane, Gold Coast, Canberra, Melbourne, Rockhampton, Sydney.
MT. Mowbullan	119.95	Brisbane, Gold Coast, Mackay, Rockhampton, Sunshine Coast, Sydney.
MT. Blackwood	119.85	Brisbane, Cairns, Hamilton Island, Mackay, Rockhampton, Townsville.
Bellenden Kerr	119.75	Brisbane, Cairns, Hamilton Island, Mackay, Rockhampton, Townsville.
Mt Isa	120.35	Alice Springs, 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, 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, Brisbane, Darwin, Melbourne, Sydney.

1.1 Automatic Broadcast Services are an essential part of the In-Flight Information Service:

a. International flights are catered for by the Sydney HF VOLMET service. Refer ERSA FAC.

b. 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.

c. Flights operating within Australia, in particular, flights operating in control area, are catered for by an Automatic En Route Information Service (AERIS).

d. Aircraft operating to an aerodrome at which AWS is installed may be catered for by AWIS.

2. THE ATS IN-FLIGHT INFORMATION SERVICE

2.1 This consists of three elements:

a. ATC initiated FIS;

b. Automatic Broadcast Services; and

c. 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 call-sign "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:

a. 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

b. 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
Melbourne ATC Centre 03 9235 2039

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. 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.

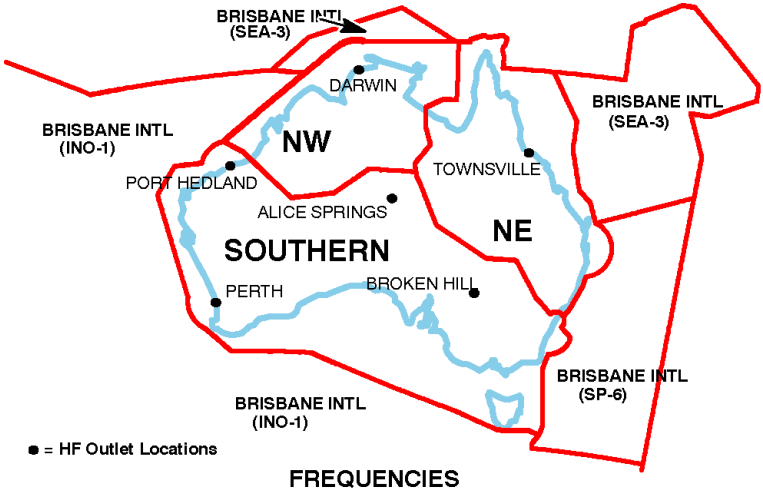
7. UPDATE OF SPFIB/AVFAX PRODUCTS

7.1 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 ZERO ONE (90001)."

8. FAILURE OF GROUND STATION EQUIPMENT

8.1 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.

9. 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)

9.1 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. ATS AREA FREQUENCIES AT UNCONTROLLED AERODROMES

10.1 These are shown on en route and terminal charts.

10.2 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.

11. MILITARY LOW JET ROUTES

11.1 Low level flying exercises are carried out by military aircraft from a number of airfields. Routes at or below 5,000 FT AGL used by military jet aircraft for low level, high speed navigation or terrain following exercises are designated as Military Low Jet Routes (MLJR). Routes are planned to avoid:

a. controlled airspace administered by Airservices Australia;
b. civil restricted and danger areas;
c. civil aerodromes listed in ERSA by at least 5NM laterally or 4,000FT vertically;
d. aerodromes where carriage and use of radio is required unless equipped with the appropriate radio frequency; and
e. sensitive areas and oil/gas platforms as detailed in FLIP Planning Part 1.

11.2 Notification of routes and duration of MLJR operations will be by NOTAM. Information on MLJR activity in your area is available from the preflight briefing service and FLIGHTWATCH.

11.3 Aircraft using MLJR 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.

11.4 All MLJR aircraft are equipped with UHF and some also have VHF and HF. However they may often be out of communications for part of their flight. Most are equipped with navigation and/or terrain following radar, but these radars do not enable avoidance of conflicting aircraft.

11.5 WHERE POSSIBLE, PILOTS SHOULD PLAN THEIR FLIGHTS TO AVOID ACTIVE MLJR.

11.6 The following MLJR are activated H24 and are flown by F111 aircraft operating at or BLW 5,000FT AGL:

a. 15NM SE Gold Coast(Descent Point) - 6NM SSW Evans Head 5,000FT AGL (remaining E of the coast) - R641.
b. R641 - 10NM SSW Baryulgil below 3,000FT AGL - 6NM SSW Evans Head - R641.
c. R641 - 10NM SSW Baryulgil below 3,000FT AGL - Gatton (Climb Point) - Amberley.
d. R641 - Porpoise Point (remaining 10NM E of the coast) - Amberley (6,000FT).
e. R641 - Coastal below 3,000FT AGL - Gold Coast - Point Lookout (Stradbroke Island) - Brisbane.
f. Point Lookout - Gold Coast- Coastal below 5,000FT AGL - R641.
g. R641 - Casino 231025 - Amberley 191043 - Amberley

NOTE: A number of other MLJR and Defence activities are in operation at various times in addition to those shown above and will be advised by NOTAM when necessary. Pilots must refer to this information to gain an appreciation of military operations that might affect their operation.

12. NIGHT VISION DEVICES AND EQUIPMENT

12.1 Night vision devices and equipment are used in defence, security and law enforcement operations. Current equipment is:

a. 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.
b. Low Light Television (LLTV) - aircraft equipment which uses TV cameras with powerful zoom lenses, with or without image intensifiers for low light conditions.
c. 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.
d. Terrain Following Radar (TFR) - aircraft equipment which uses radar returns from the earth's surface to maintain a flight path following terrain contours. Fitted to F111 aircraft.

12.2 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.

13. LOW LEVEL FLIGHTS - NOTIFICATION

13.1 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.

14. PRECAUTIONS

14.1 Because of the likely activities of these device users, eg 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.

14.2 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 (eg Oakey and Townsville) should advise defence authorities of their intentions.

15. HIGH ALTITUDE BALLOON FLIGHTS

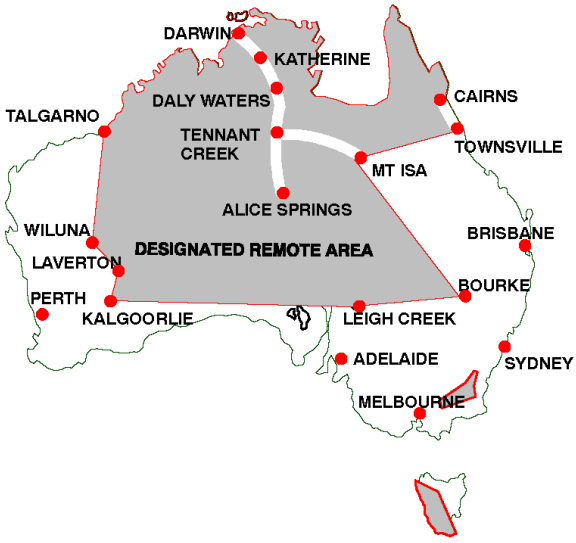
15.1 Large helium-filled plastic balloons are launched periodically from various locations. They carry scientific equipment to record data from the upper atmosphere and normally ascend to altitudes in excess of 7,0000 FT with flight duration of 80 hours or more. The main balloon launching station is at Alice Springs but other launching sites, eg 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.

16. USE OF MOBILE TELEPHONES IN AIRCRAFT

16.1 In the event of an emergency, and when other conventional means of communication are either inadequate or not available, mobile telephones may be used for contact with Air Traffic Control Centres and Terminal Control Units (TCUs) and with Australian Search and Rescue (AusSAR). Telephone numbers for the individual ATC locations and the SAR Hotline are listed below.

Adelaide ATC Centre	08	8238	7988
Brisbane ATC Centre	07	3866	3868
Melbourne ATC Centre	03	9338	4032
Perth ATC Centre	08	9277	1086
Sydney ATC Centre	02	9556	6564
SAR Hotline 1800 815 257			

17. DESIGNATED REMOTE AREAS

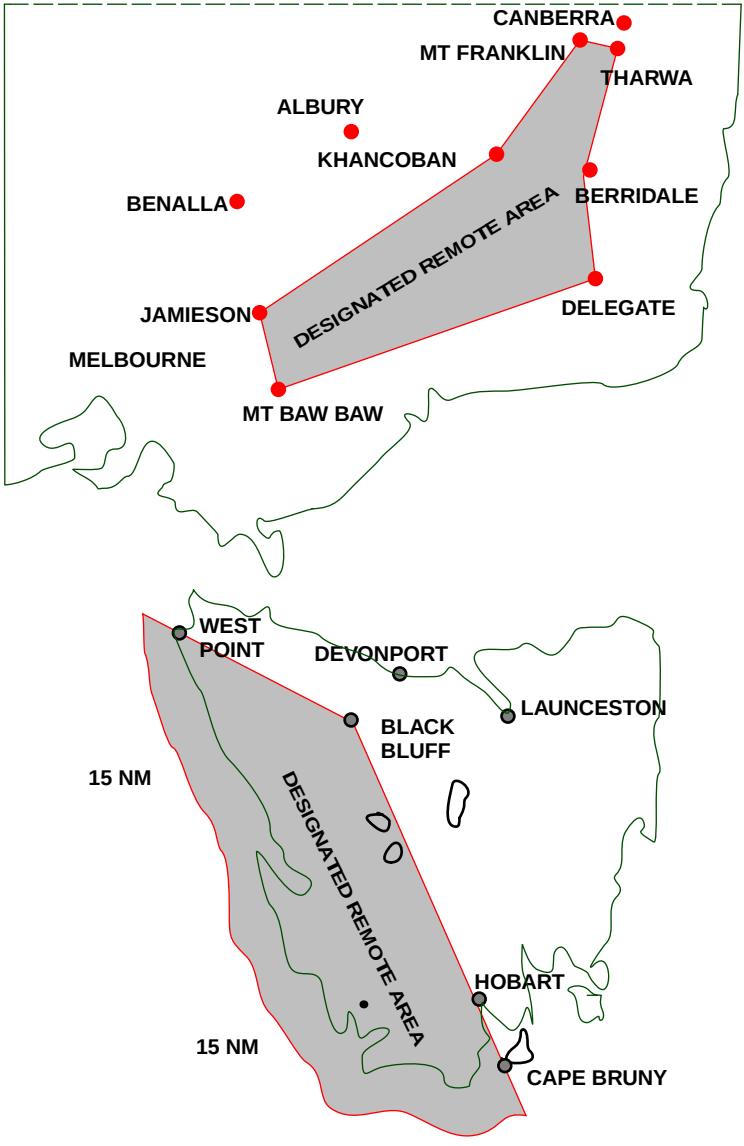


ACFT planned to operate within or through the designated remote area shown in this section are required to carry survival equipment suitable for sustaining life in the area over which the flight is planned (CAO 20.11).

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 Talgarno 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 The continued development of unmanned aircraft by a number of organisations has required the establishment of semi-permanent Danger Areas for developmental testing of UAVs. They are located near Hamilton (D386AB) and Welshpool (D371A & D371B), Victoria, and near Marulan, New South Wales (D451).

18.1.2 The hours of activity of these Danger Areas will be notified by NOTAM.

18.2 **UAV OPERATIONS**

18.2.1 UAVs are flown autonomously within the designated areas, but are subject to operator input. The operators maintain continuous two-way communications on the appropriate aeronautical frequencies.

18.2.2 Operating Procedures. Because UAV activities develop and expand the flight envelope and operating limitations of the particular UAV system, no set profile can be predicted. However, in each case, the operator will make regular broadcasts before, during, and on completion of each flight advising location, altitude and intention of the UAV.

18.2.3 Communications. Pilots wishing to operate within Danger Areas designated for UAV activity during the published periods of operation are advised to contact the UAV ground station on the appropriate area frequency eg. "UAV TRAFFIC - WELSHPOOL 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.

18.2.4 **Call-signs**. The ground stations controlling UAV activity will use the following call-signs:

a. D386AB Hamilton: AEROSONDE
b. D371AB Welshpool: MONASH
c. D451 Marulan: BRUMBY

18.3 **AIRSPACE DEPICTION**

18.4 These Danger Areas are depicted diagrammatically on aeronautical charts.

18.5 Pilots will note that D371A and D371B Welshpool are essentially two parts of the one area which is contained within a circle of 2.7NM radius centred on S38 41.8 E146 27.2. Declaration of two areas was necessary because of the different upper limits required to the base of the existing CTA. Both Danger areas are always activated simultaneously.

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