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VHF COMMUNICATIONS 25 kHz CHANNEL SPACING

1. INTRODUCTION

1.1 This AIC replaces AIC H11/05

1.2 The VHF band (117.975 to 137 MHz) is the primary aeronautical communication frequency band and is divided into a number of discrete channels. Each of these channels is used for communication between an aircraft and ATC as well as other aircraft.

1.3 In Australia, aeronautical frequencies for ATS use are currently assigned with 50 kHz channel spacing.

1.4 The number of frequencies assigned in the VHF band in Australia by Airservices Australia has now increased to the extent that it will not be possible to continue to allocate interference-free frequencies for ATS in high-density traffic areas using the 50 kHz channel spacing. Frequencies based on the 25 kHz channel spacing are already assigned for non-ATS communications; i.e., Company and Department of Defence (DoD) use.

2. CLASS A AIRSPACE FREQUENCIES

2.1 From November 2005, Airservices Australia began assigning frequencies in Class A airspace with 25 kHz channel spacing.

3. OTHER AIRSPACE FREQUENCIES

3.1 Following on from changes in Class A airspace, Airservices Australia will assign 25 kHz channel spacing in other high-density traffic areas (mainly classes C, D and E airspace). 25 kHz will only be introduced in Class G (including CTAF and MBZ) after other frequency planning options are exhausted. Pilots should note that these initial allocations will not involve mandated change to equipment fit for aircraft unless it affects their area of operation.

4. IDENTIFICATION OF 25 kHz CHANNEL SPACING

4.1 The frequency displayed on the majority of radio control panels provides either two or three decimal places when displaying the selected frequency. Channel spacing can be determined by observing the number of decimal places on the radio display and the selectable channel steps. Pilots need to be aware of the radio equipment fit of their aircraft.

4.2 The following table gives examples of radio displays with two and three decimal places that show the differences between 50 and 25 kHz spacing.

Two decimal channel display with 25 kHz spacing	Three decimal channel display with 25 kHz spacing	Two decimal channel display with 50 kHz spacing
118.00	118.000	118.00
118.02	118.025	
118.05	118.050	118.05
118.07	118.075	
118.10	118.100	118.10
118.12	118.125	
118.15	118.150	118.15
118.17	118.175	
118.20	118.200	118.20

Channel Spacing Steps

4.3 In the above table, the channel 118.02 (or 118.025) is the first 25 kHz channel in the VHF communications band.

5. COMMUNICATING 25 kHz CHANNELS

5.1 Whenever VHF communications channels operate on 25 kHz spacing, only the first five (5) digits should be used to identify the transmitting frequency in voice communications. Not more than two (2) significant digits after the decimal point are used. Where there are two zeros, only the first zero is considered significant.

5.2 The following examples illustrate the application of this procedure:

Channel display (2 decimal)	Channel display (3 decimal)	Communicate as...
118.00	118.000	ONE ONE EIGHT DECIMAL ZERO
118.02	118.025	ONE ONE EIGHT DECIMAL ZERO TWO
118.05	118.050	ONE ONE EIGHT DECIMAL ZERO FIVE

Frequency Communication

6. DISPLAYING 25 kHz CHANNELS IN AIP

6.1 25 kHz channel spacing will be displayed in all AIP documents (including ERSA) and charts by showing only two (2) decimal places. For example, an ATS communications facility operating on a transmitting frequency of 118.025 MHz will be represented as 118.02. 118.000 MHz will continue to be represented as 118.0, and 118.050 MHz will continue to be represented as 118.05.

7. USE OF OLDER RADIOS

7.1 Older radios that have either 100 kHz or 50 kHz channel spacing may still be capable of use in some low traffic density areas. However, as the need for additional channels in these areas increases in the future, these older radios will generally not be capable of providing the communication requirements needed. Owners/operators are urged to update their VHF radio equipment at the earliest opportunity.

8. MORE INFORMATION

8.1 Further information on aircraft avionics and their standards can be obtained from CASA

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9. CANCELLATION

9.1 This AIC remains current UFN

10. DISTRIBUTION

10.1 By AVFAX and Airservices Australia website only.