International Civil Aviation Organization

NINTH MEETING OF SPECTRUM REVIEW WORKING GROUP (SRWG/9)

Bangkok, Thailand, 07 – 09 May 2025

Agenda Item 4: Review Frequency planning requirements for the Asia/Pacific Region

4.1 VHF COM Frequency Allotment Plan for APAC

FOLLOW-UP ACTIONS FOR REVISED VHF COM FREQUENCY ALLOTMENT PLAN FOR APAC

(Presented by Secretariat)

SUMMARY

This paper presents the latest actions taken on approved VHF COM Frequency Allotment Plan for APAC Region.

1. INTRODUCTION

1.1 The Thirty-Fifth Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/35) was held at the ICAO APAC Regional Office, Bangkok, Thailand, from 25 to 27 November 2024. The Meeting was attended by **163** participants from **24** Member States, **2** Special Administrative Regions of China, and **6** International Organizations. The APANPIRG/35 meeting report, working papers, information papers, and other resources can be accessed by the following link:

https://www.icao.int/APAC/Meetings/Pages/2024-APANPIRG-35.aspx

1.2 The Twenty-Eighth Meeting of the Communications, Navigation and Surveillance Sub-group (CNS SG/28) of APAC Air Navigation Planning and Implementation Regional Group (APANPIRG) was held at the ICAO APAC Regional Office, Bangkok, Thailand, from 1 to 5 July 2024. The Meeting was attended by **120** participants from **25** States/Administrations, **3** International Organizations, and **6** participants from industry partners. The Meeting report and other documents of the Meeting can be accessed at the ICAO APAC Meeting webpage at:

https://www.icao.int/APAC/Meetings/Pages/2024-CNS-SG-28.aspx

1.3 The Eighth Meeting of the Spectrum Review Working Group (SRWG/8) of APANPIRG was held in the ICAO APAC Regional Office, Bangkok, Thailand, with the hybrid option of video teleconferencing on 5 – 7 March 2024. The Meeting was attended by **48** participants (41 in-

person attendance and 7 virtual attendance) from **14** States/Administrations and **2** International Organizations. The working papers, information papers, meeting report, and other resources of SRWG/8 are available at:https://www.icao.int/APAC/Meetings/Pages/2024-SRWG8.aspx

1.4 This paper provides the actions taken by the ICAO Secretariat after approval of the *VHF COM Frequency Allotment Plan for the APAC Region* by APANPIRG/35**.**

2. DISCUSSION

2.1. ICAO Annex 10, Volume V, Chapter 4 contains a general allotment of the frequency band 117.975–137 MHz, which the ITU allocates to the **Aeronautical Mobile (R) Service**. The main subdivisions of this band are the frequency bands allocated to both **international and national services** and frequency bands solely allocated to **national services**. Specific allotments to services are to be determined regionally.

2.2. VHF Allotment plans have been developed for all ICAO Regions. These allotment plans sub-divide the frequency band 117.975 – 137 MHz into sub-bands that are to be used for specific aeronautical applications or services such as TWR, ACC, APP, VOLMET etc. These allotment plans are part of the ICAO Regional Air Navigation Plan.

2.3. Currently, the VHF COM frequency coordination and registration in the APAC region is supported by the ICAO tool Frequency Finder (FF). The tool is updated to implement the planning principle of Doc 9718 Volume II (Second Edition, 2022) as well as the VHF COM Frequency Allotment Plan for APAC, which is provided in Doc 9718 Volume II as APP B-2.

2.4. Simulations of future spectrum requirements had shown that specific allotments in the current allotment plan were becoming saturated, while other allotments were underutilized and could provide space for accommodating new requirements. In addition, some proposals by States/Administrations were identified as falling into the Not Allotted part of the VHF COM Frequency Allotment Plan for APAC.

2.5. The Seventh Meeting of the Spectrum Review Working Group (SRWG/7) held in **2023** reconsidered the VHF COM Frequency Allotment Plan for the APAC Region. Subsequently, the SRWG/7 agreed to form **an ad hoc expert group with China as the rapporteur** and Mr. Robert Witzen as an advisor, to study the allotment plan, analyze the actual usage of allotment registered in FF, identify areas for improvement and propose solutions (technical and administrative), explore the potential in reallocating sub-bands/pools, and survey the use of TIBA.

2.6. The interim introduction of the progress on the VHF COM Frequency Allotment Plan for the APAC Region was presented to CNS SG/27 as IP/13, and further review and discussion were needed in this SRWG/8 Meeting.

2.7. In the SRWG/8 Meeting, by WP/16, China presented the latest actions taken on the VHF COM Frequency Allotment Plan for the APAC Region, including the statistical analyses of the actual usage of frequencies in the APAC Region, and suggested simplifying the APAC Frequency Allotment Plan by **converging the various allotments of "sub-services" to the main service**, and proposed **the twelve frequencies which have not been allotted to any services**, be allotted to ACC services.

2.8. It was informed that the revised VHF COM Frequency Allotment Plan in the Table and the Chart for the APAC Region, provided in **Appendix A**, was included in the revised Asia/Pacific Regional Aeronautical Radio Frequency Management Guidance Material v1.1 which was adopted by SRWG/8 by **Conclusion SRWG/8/5** - Asia Pacific Regional Aeronautical Radio Frequency

Management Guidance Material Edition 1.1. In addition, it was noted that **the new allotment of twelve (12) frequencies**, belonging to the International and National Aeronautical Mobile Services band, having not been included in any of the Asia-Pacific conference outcomes, which was proposed to be allotted to ACC services in SRWG/7, were listed.

2.9. The SRWG/8 Meeting endorsed a draft Conclusion to simplify the VHF COM Frequency Allotment Plan and to clarify the function of these twelve frequencies for ACC service in the APAC Region. APANPIRG/35 meeting adopted the proposed draft **Conclusion APANPIRG/35/8** *(Conclusion CNS SG/28/06 (SRWG/8/2)* – **VHF COM Frequency Allotment Plan for APAC Region**, which was endorsed by CNS SG/28.

2.10. It was agreed that the Secretariat would notify the CNSS of the ANB about updates to the regional VHF COM Allotment Plan to ensure the Frequency Finder tool incorporates the latest revisions. To enhance the efficiency of frequency use in the APAC region, Member States/Administrations were requested to review and update the frequencies uploaded in the Frequency Finder (FF), ensuring the database remains current.

2.11. ICAO APAC Office coordinated with ICAO HQ to incorporate the *revised VHF COM Frequency Allotment Plan for the APAC Region* in the FF tool. After coordination, the amendment to the allotment plan was incorporated into the Frequency Finder tool in February 2025. The tool will be released with the latest version of Frequency Finder 2025.01.

2.12. Furthermore, Volume II of the Handbook on Radio Frequency Spectrum Requirements for Civil Aviation (ICAO Doc 9718, Volume II) is in the process of being updated with the revised APAC VHF COM allotment plan. It will then be placed on the ICAO NET in due course.

3. ACTION BY THE MEETING

3.1 The Meeting is invited to:

a) note the information contained in this paper and **Appendix A**;

b) encourage States/Administrations to provide contributions to the VHF COM Frequency Allotment Plan and raise their respective concerns over the frequency allotment; and

c) discuss any relevant matter as appropriate.

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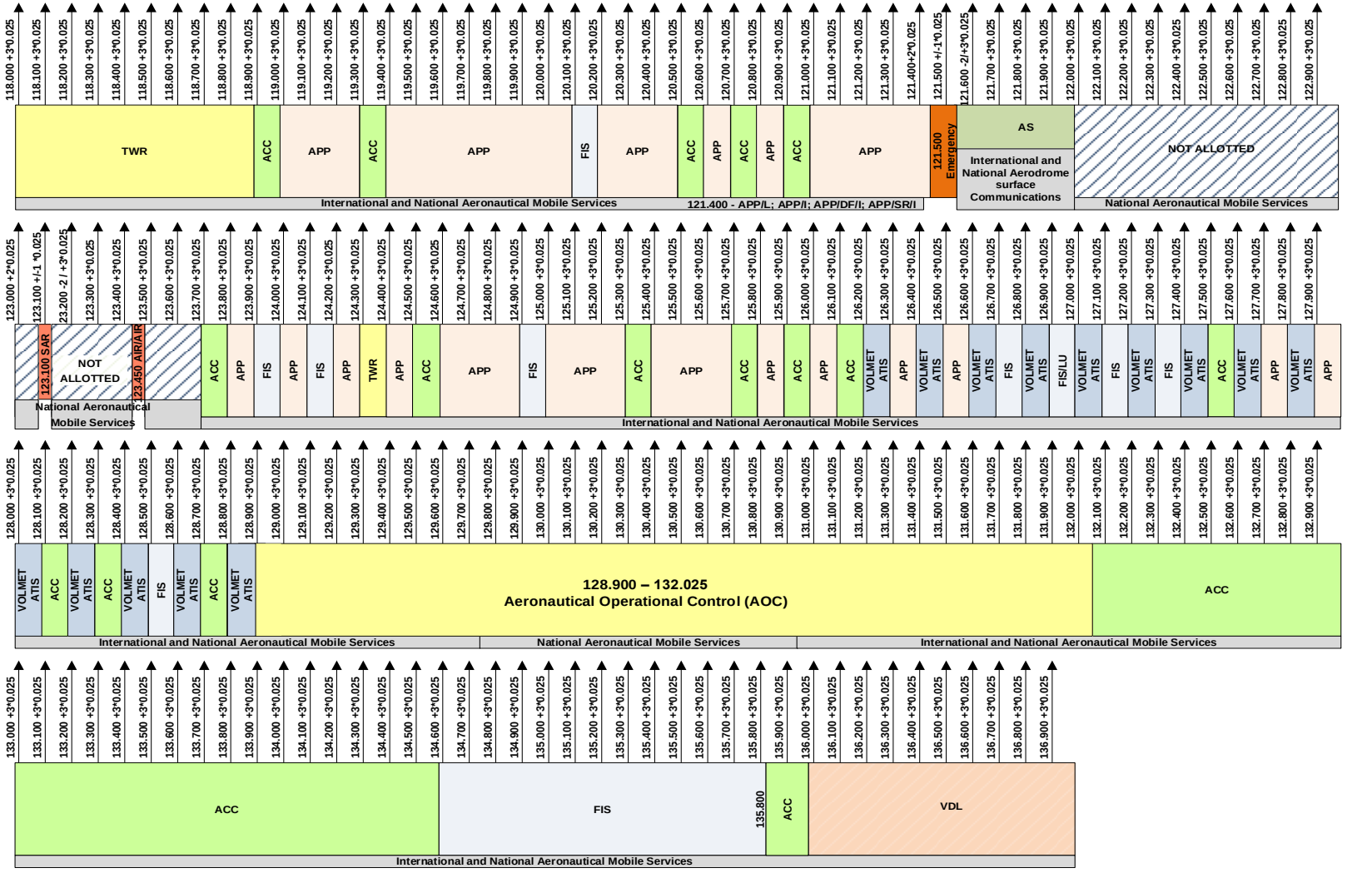
APAC Frequency Allotment Plan

Function (revised)	**Function**	**Frequencies (MHz)**
TWR 118.000-118.875MHz 124.300-124.375MHz	TWR	118.000 118.025 118.050 118.075 118.100 118.125 118.150 118.175 118.200 118.225 118.250 118.275 118.300 118.325 118.350 118.375 118.400 118.425 118.450 118.475 118.500 118.525 118.550 118.575 118.600 118.625 118.650 118.675 118.700 118.725 118.750 118.775 118.800 118.825 118.850 118.875 124.300 124.325 124.350 124.375
AS 121.550-121.975MHz	AS	**121.550 121.575** 121.600 121.625 121.650 121.675 121.700 121.725 121.750 121.775 121.800 121.825 121.850 121.875 121.900 121.925 121.950 121.975
APP 119.000-119.275MHz 119.400-120.075MHz 120.200-120.475MHz 120.600-120.675MHz 120.800-120.875MHz 121.000-121.450MHz 123.800-123.875MHz 124.000-124.075MHz 124.200-124.275MHz 124.400-124.475MHz 124.600-124.875MHz 125.000-125.275MHz 125.400-125.675MHz 125.800-125.875MHz 126.000-126.075MHz 126.300-126.375MHz 126.500-126.575MHz 127.700-127.775MHz 127.900-127.975MHz	APP	119.500 119.525 119.550 119.575 119.600 119.625 119.650 119.675 119.800 119.825 119.850 119.875 119.900 119.925 119.950 119.975
	APP-L, APP-I, Also used for APP Direction finding or APP Surveillance radar	119.100 119.125 119.150 119.175 119.200 119.225 119.250 119.275 119.400 119.425 119.450 119.475 119.700 119.725 119.750 119.775 120.000 120.025 120.050 120.075 120.200 120.225 120.250 120.275 120.400 120.425 120.450 120.475 120.600 120.625 120.650 120.675 120.800 120.825 120.850 120.875 121.000 121.025 121.050 121.075 121.100 121.125 121.150 121.175 121.200 121.225 121.250 121.275 121.400 **121.425 121.450** 123.800 123.825 123.850 123.875 124.000 124.025 124.050 124.075 124.700 124.725 124.750 124.775 125.100 125.125 125.150 125.175 125.500 125.525 125.550 125.575 126.500 126.525 126.550 126.575 127.700 127.725 127.750 127.775 127.900 127.925 127.950 127.975
	APP-U	120.300 120.325 120.350 120.375 121.300 121.325 121.350 121.375 124.200 124.225 124.250 124.275 124.400 124.425 124.450 124.475 124.600 124.625 124.650 124.675 124.800 124.825 124.850 124.875 125.000 125.025 125.050 125.075 125.200 125.225 125.250 125.275 125.400 125.425 125.450 125.475

		125.600 125.625 125.650 125.675 125.800 125.825 125.850 125.875 126.000 126.025 126.050 126.075 126.300 126.325 126.350 126.375
ACC 118.900-118.975MHz 119.300-119.375MHz 120.500-120.575MHz 120.700-120.775MHz 120.900-120.975MHz 123.700-123.775MHz 124.500-124.575MHz 125.300-125.375MHz 125.700-125.775MHz 125.900-125.975MHz 126.100-126.175MHz 127.500-127.575MHz 128.100-128.175MHz 128.300-128.375MHz 128.700-128.775MHz 132.050-134.575MHz 135.825-135.975MHz	ACC-L Also used for ACC-L Surveillance Radar	126.100 126.125 126.150 126.175 127.500 127.525 127.550 127.575 128.300 128.325 128.350 128.375 128.700 128.725 128.750 128.775
	ACC-U ACC-L	118.900 118.925 118.950 118.975 119.300 119.325 119.350 119.375 120.500 120.525 120.550 120.575 120.700 120.725 120.750 120.775 120.900 120.925 120.950 120.975 123.700 123.725 123.750 123.775 124.500 124.525 124.550 124.575 125.300 125.325 125.350 125.375 125.700 125.725 125.750 125.775 125.900 125.925 125.950 125.975 128.100 128.125 128.150 128.175 132.050 132.075 132.100 132.125 132.150 132.175 132.200 132.225 132.250 132.275 132.300 132.325 132.350 132.375 132.400 132.425 132.450 132.475 132.500 132.525 132.550 132.575 132.600 132.625 132.650 132.675 132.700 132.725 132.750 132.775 132.800 132.825 132.850 132.875 132.900 132.925 132.950 132.975 133.000 133.025 133.050 133.075 133.100 133.125 133.150 133.175 133.200 133.225 133.250 133.275 133.300 133.325 133.350 133.375 133.400 133.425 133.450 133.475 133.500 133.525 133.550 133.575 133.600 133.625 133.650 133.675 133.700 133.725 133.750 133.775 133.800 133.825 133.850 133.875 133.900 133.925 133.950 133.975 134.000 134.025 134.050 134.075 134.100 134.125 134.150 134.175 134.200 134.225 134.250 134.275 134.300 134.325 134.350 134.375 134.400 134.425 134.450 134.475 134.500 134.525 134.550 134.575 135.825 135.850 135.875 135.900 135.925 135.950 135.975
FIS 120.100-120.175MHz 123.900-123.975MHz 124.100-124.175MHz 124.900-124.975MHz 126.700-126.775MHz 126.900-126.975MHz	FIS-L FIS-U	120.100 120.125 120.150 120.175 123.900 123.925 123.950 123.975 124.100 124.125 124.150 124.175 124.900 124.925 124.950 124.975 126.700 126.725 126.750 126.775 126.900 126.925 126.950 126.975 127.100 127.125 127.150 127.175

127.100-127.175MHz 127.300-127.375MHz 128.500-128.575MHz 134.600-135.800MHz		127.300 127.325 127.350 127.375 128.500 128.525 128.550 128.575
	FIS-U Also used for General purpose communications	134.600 134.625 134.650 134.675 134.700 134.725 134.750 134.775 134.800 134.825 134.850 134.875 134.900 134.925 134.950 134.975 135.000 135.025 135.050 135.075 135.100 135.125 135.150 135.175 135.200 135.225 135.250 135.275 135.300 135.325 135.350 135.375 135.400 135.425 135.450 135.475 135.500 135.525 135.550 135.575 135.600 135.625 135.650 135.675 135.700 135.725 135.750 135.775 135.800
VOLMET/ATIS 126.200-126.275MHz 126.400-126.475MHz 126.600-126.675MHz 126.800-126.875MHz 127.000-127.075MHz 127.200-127.275MHz 127.400-127.475MHz 127.600-127.675MHz 127.800-127.875MHz 128.000-128.075MHz 128.200-128.275MHz 128.400-128.475MHz 128.600-128.675MHz 128.800-128.875MHz	VOLMET/ATIS	126.200 126.225 126.250 126.275 126.400 126.425 126.450 126.475 126.600 126.625 126.650 126.675 126.800 126.825 126.850 126.875 127.000 127.025 127.050 127.075 127.200 127.225 127.250 127.275 127.400 127.425 127.450 127.475 127.600 127.625 127.650 127.675 127.800 127.825 127.850 127.875 128.000 128.025 128.050 128.075 128.200 128.225 128.250 128.275 128.400 128.425 128.450 128.475 128.600 128.625 128.650 128.675 128.800 128.825 128.850 128.875
AOC	AOC	128.900-132.025(Except 128.950MHz)
DATA LINK	DATA LINK	136.000-136.975
AIR-TO-AIR	AIR-TO-AIR	123.450 128.950 (TIBA)
NOT ALLOTED	NOT ALLOTED	122.000-123.675(Except 123.100MHz, 123.450MHz)

Note: The allotment of 12 yellow highlighted frequencies for ACC services has not been included in the Asia-Pacific conference outcomes.


118.000 +3*0.025
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118.200 +3*0.025
118.300 +3*0.025
118.400 +3*0.025
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121.100 +3*0.025
121.200 +3*0.025
121.300 +3*0.025
121.400+2*0.025
121.500 +/-1*0.025
121.600 -2/+3*0.025
121.700 +3*0.025
121.800 +3*0.025
121.900 +3*0.025
122.000 +3*0.025
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122.700 +3*0.025
122.800 +3*0.025
122.900 +3*0.025
TWR
ACC
APP
ACC
APP
FIS
APP
ACC
APP
ACC
APP
ACC
APP
121.500 Emergency
AS
International and National Aerodrome surface Communications
NOT ALLOTTED
International and National Aeronautical Mobile Services
121.400 - APP/L; APP/I; APP/DF/I; APP/SR/I
National Aeronautical Mobile Services
123.000 +2*0.025
123.100 +/-1 *0.025
123.200 -2 / +3*0.025
123.300 +3*0.025
123.400 +3*0.025
123.500 +3*0.025
123.600 +3*0.025
123.700 +3*0.025
123.800 +3*0.025
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127.700 +3*0.025
127.800 +3*0.025
127.900 +3*0.025
123.100 SAR
NOT ALLOTTED
123.450 AIR/AIR
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FIS
APP
FIS
APP
TWR
APP
ACC
APP
FIS
APP
ACC
APP
ACC
APP
ACC
APP
ACC
VOLMET ATIS
APP
VOLMET ATIS
APP
VOLMET ATIS
FIS
VOLMET ATIS
FIS/LU
VOLMET ATIS
FIS
VOLMET ATIS
FIS
VOLMET ATIS
ACC
VOLMET ATIS
APP
VOLMET ATIS
APP
National Aeronautical Mobile Services
International and National Aeronautical Mobile Services
128.000 +3*0.025
128.100 +3*0.025
128.200 +3*0.025
128.300 +3*0.025
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132.600 +3*0.025
132.700 +3*0.025
132.800 +3*0.025
132.900 +3*0.025
VOLMET ATIS
ACC
VOLMET ATIS
ACC
VOLMET ATIS
FIS
VOLMET ATIS
ACC
VOLMET ATIS
128.900 – 132.025
Aeronautical Operational Control (AOC)
ACC
International and National Aeronautical Mobile Services
National Aeronautical Mobile Services
International and National Aeronautical Mobile Services
133.000 +3*0.025
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136.800 +3*0.025
136.900 +3*0.025
ACC
FIS
135.800
ACC
VDL
International and National Aeronautical Mobile Services
LEGEND
TWR
Aerodrome Control Service
APP
Approach Control Service
May be used for APP/L, APP/I and APP/U
ACC
Area Control Service
May be used for ACC/L, ACC/I and ACC/U
FIS
Flight Information Service
May be used for FIS/L and FIS/U
VOLMET ATIS
VOLMET broadcasts
Automatic Terminal Information Service
AS
Aerodrome Surface (Surface Movement Control)
VDL
VHF Data Link
Special frequencies (not assignable)
International and National Aeronautical Mobile Services
Allotments as per Annex 10