



ICAO

International Civil Aviation Organization

Fourth Meeting of Spectrum Review Working Group (SRWG/4)

Bangkok, Thailand, 9 - 10 June 2020

Agenda Item 4: Review of global COM Lists

REVIEW OF GLOBAL COM LIST FOR THE APAC REGION

(Presented by Secretariat)

SUMMARY

This paper presents information on the current status of Frequency List No. 3. It proposes to request States to update specific characteristics for NAV facilities in the Frequency List No. 2 as well as to secure that the information in the Frequency Lists is up-to-date.

1. INTRODUCTION

1.1 During the SRWG/1 meeting, under **Agenda Item 5: Improvement of VHF frequency assignment procedure**, secretariat presented IP04 *ITU MIFR and ICAO Global Database*, which briefed a status on the relation between ITU Master International Frequency Register (MIFR) and ICAO frequency global database.

1.2 The Third Asia/Pacific Regional Air Navigation (ASIA/PAC/3 RAN) Meeting held in 1993 agreed the **Conclusion 11/4 - Procedure for very high frequency (VHF) aeronautical mobile Service (AMS) frequency assignment**, that the ICAO Asia and Pacific Regional Office continue to maintain its frequency selection and coordination role, including the maintenance and promulgation of Frequency List No. 3 at appropriate periodic intervals.

1.3 APANPIRG/26 meeting held from 7 to 10 September 2015 adopted **Conclusion APANPIRG/26/48 – Transition to the new global database:**

That, considering that Frequency Finder and the global database were a necessary toolkit for efficient frequency management across ICAO Regions, and training on using it is needed,

- a) *ICAO be invited to secure the resources to maintain the tool and organize a seminar/workshop on Frequency Finder in 2016,*
- b) *States secure the attendance of their Subject Matter experts to the Seminar/workshop.*

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1.4 With the successful implementation of bullet point **a)** and **b)** of APANPIRG/26/48 Conclusion, there was no more Frequency List No. 3 published by the ICAO Asia and Pacific Regional Office after the 29th Edition in January 2016.

1.5 The ASIA/PAC/3 RAN Meeting also agreed the **Conclusion 12/9 - Procedure for Radio Navigation Aids Frequency Assignment**. The ICAO Regional Office continued to maintain its frequency selection and coordination role, including the maintenance and promulgation of Frequency List Nos. 1 and 2 in a timely and periodic manner. On 1 April 2020, ICAO Asia and Pacific Regional Office updated and published the Frequency List No.1 (34th Edition) and Frequency List No.2 (33rd Edition) through State Letter AP090/20 (CNS) as provided in **Appendix A** to this paper. The 419-page electronic version of this publication can be accessed through ICAO APAC portal procedure.

2. DISCUSSION

2.1 ICAO has been making continuous efforts in improving the Frequency Finder tool and encouraging States/Administration to implement the latest version released on the webpage of FSMP to make as much as possible benefits in transition to global database. By clicking the following hyperlink <https://www.icao.int/safety/FSMP/Pages/Documents.aspx>, then open *FrequencyFinder* folder, the installation package could be accessed. The *Minimum requirements for computer operating Frequency Finder* is provided in **Appendix B** to this paper for reference.

2.2 In APAC region, the frequency coordination for VHF COM at Regional Office has been implemented with Frequency Finder tool since 2016. The up-to-date database (equivalent to Frequency List No. 3 in APAC region) is transparent and visible to all Frequency Finder users. The results of SRWG simulation are still kept in the database, and being replaced by new assignment requested by States/Administrations as there is incompatibility identified due to the SRWG simulated registration.

2.3 With the Export function of Frequency Finder runtime version, States/Administrations can prepare its submission in MS Excel file. The computer name of the user who generated the submission of the frequency will be automatically recorded into the field/item **Ch-By** of the Excel file. The ICAO APAC Regional Office will use Import function of Frequency Finder to test, validate, convert and upload the submission onto the global database. This solution would significantly improve the coordination efficiency.

2.4 Considering the important role of Frequency Finder played in the updating and maintenance of global database, relevant issues including user credential, software robustness, cyber security, etc. should be addressed. States/Administrations are urged to share experience in using VHF COM function of Frequency Finder in various regional CNS events.

2.5 Presently, Frequency List No.1 and Frequency List No.2 are maintained and published regularly by ICAO APAC Regional Office. The computer tool implemented at APAC Regional Office is a standalone software installation to keep the database up-to-date.

2.6 The latest release of Frequency Finder tool is provided with more functional modules, inter alia, new VHF NAV and Mode S SSR II code modules. ICAO APAC Regional Office would like to seize this opportunity to introduce the (revised) frequency assignment planning criteria for NAV¹ facilities, review the currency of the Frequency List No.2, in particular in the light of the increased congestion and even saturation of this band for future ILS or VOR frequency assignments as well as the expected

¹ In this paper NAV systems or NAV facilities refer to ILS (Localizer and Glide Path), VOR, DME and GBAS/VDB.

implementation of GBAS/VDB, furthermore, ensure that the Frequency List is correct and up-to date and lists all NAV stations that are currently in operation or planned.

2.7 ICAO APAC Regional Office has duplicated its work on the VHF NAV module of Frequency Finder as well as on the existing frequency management program for new facility frequency planning upon request from States. It is observed that additional information required for frequency assignment planning for NAV systems is necessary with respect to the e.i.r.p.² of each facility with the view to establish the level of the signal strength of a potentially interfering facility. An incorrect e.i.r.p may result in either an overprotection or an under protection of the desired NAV facility.

2.8 For the ILS-Localizer, it is necessary to include in the COM list 2 the azimuth of the runway that is being served. This would enable in the compatibility assessment to distinguish the e.i.r.p in the front course sector (typically between 27 – 30 dBW) and the other azimuths where the localizer is transmitting. In the absence of such information, an e.i.r.p of 30 dBW is assumed to radiate omnidirectional. This may result in either an overprotection of the desired facility or, alternatively, in an erroneous incompatibility of current frequency assignments.

2.9 DOC³ For the VOR and the DME it is unlikely that the DOC can extend beyond 200 NM. States should reconsider cases where a DOC extends beyond 200 NM and inform ICAO whether the DOC in these cases as in the COM list 2 can be set to 200 NM.

2.10 In some cases, it may be possible that States have put into operation NAV facilities with frequency assignments that have not been coordinated with ICAO. This may result in such facilities not being protected from harmful interference or such facilities causing harmful interference to facilities for which the frequency assignment has been coordinated with ICAO.

2.11 It is recognized that some NAV facilities are in operation and do not cause harmful interference to NAV facilities that are in operation in adjacent countries. Such facilities may not require coordination with ICAO; in these cases, States themselves are responsible for the necessary (internal) frequency coordination. In any case, ICAO holds the view that frequency assignments that have been coordinated with ICAO have priority over those that have not been coordinated.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) consider a new round of simulation for VHF COM with planning requirements in the next 10 years for the region;
- c) consider to urge States to provide ICAO with information of all facilities that are in operation to improve the currency of Frequency lists;
- d) consider establishment of a list of focal point responsible for the operation of Frequency Finder in States;
- e) consider the necessity to organize FF workshop on COM and new NAV Module

² E.i.r.p is the equivalent isotropically radiated power.

³ DOC is the Designated Operational Coverage of the relevant NAV facility



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Ref.: T 8/8.4 & T 8/8.5: AP090/20 (CNS)

01 April 2020

Subject: Frequency List No.: 1 – Thirty Fourth, March 2020; and
Frequency List No.: 2 – Thirty Third Edition, March 2020

Dear Sir/Madam,

I have a pleasure to inform you that following Frequency Lists have been updated and published:

- The Thirty Fourth Edition of the Frequency List No.: 1 containing the list of facilities operating or plan to operate on frequencies in the band 190 -526.5 kHz; and
- The Thirty Third Edition of the Frequency List No.: 2 containing the list of facilities operating or plan to operate on frequencies in the band 108-117.975 MHz and 960 -1 215 MHz.

The above Frequency Lists are published on the following ICAO portal website. It can be accessed through ICAO APAC portal procedure given at the following link:

<https://www.icao.int/APAC/Documents/ICAO%20Secure%20Portal%20Access%20Instructions.pdf>

The purpose of the Frequency Lists is to provide comprehensive information for frequency planning. It should be emphasized that in order for the Lists to be of real value for frequency planning, these documents should be up-to-date. To accomplish this, it is essential that States **coordinate** with the Regional Office for any change in assignment or requirement for new frequencies prior to their use. The Regional Office will update the Lists on a regular basis.

I would appreciate if you please advise this Office of any difficulty in accessing these documents on the ICAO website.

Yours sincerely,

Arun Mishra
Regional Director

Enclosures:

- Frequency List No. 1, 34th Edition – March 2020
- Frequency List No. 2, 33rd Edition – March 2020

The Minimum System Requirements for Operating Frequency Finder (FF)

- MS Windows 7 or higher
- CPU: Intel Core i5 or better, or equivalent AMD recommended
- RAM: 2GB or higher
- Video display with resolution of 1440 x 900 (or better) recommended
- Google Earth installed on the computer
- The user should have right to install a programme on the computer
- The runtime version does not require FileMaker Pro to be installed on the computer.