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| **US Radiocommunication Sector**  **FACT SHEET** | |
| **Study Group:** USWP 5C | **Document No:** USWP5C23\_09\_rev3 |
| **Reference:** [Annex 16 to 5C/135](https://www.itu.int/md/R19-WP5C-C-0135/en) | **Date:** 1/06/21 |
| **Document Title:**Fixed Service Characteristics for WRC-23 Studies | |
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| **Purpose:** To complete the development of fixed service characteristics necessary for sharing studies supporting WRC-23 agenda items 1.13, 1.16, 1.17 and 1.19. | |
| **Abstract:** While WP5C has provided initial liaison statements to the responsible WPs for WRC-23 agenda items, additional contributions which provide updated fixed service characteristics have been discussed at the previous two meetings of Working Party 5C. In support of the CPM23-1 deadline, WP 5C has developed draft liaison statements for several agenda items, which will need to be considered at the upcoming meeting. NOTE: This document is not intended to address the draft liaison statements for other Agenda Items (1.2 and 1.5 in Annex 16 to 5C/135). | |
| **Fact Sheet Preparer:** Michael Mullinix, CTIA | |

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| **Radiocommunication Study Groups** |  |
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| Received: *Date* 2021  Reference: Annex 16 to Document [5C/135](https://www.itu.int/md/R19-WP5C-C-0135/en) | **Document XX/-E** |
| ***Date* 2021** |
| **Original: English** |
| United States of America | |
| Fixed service characteristics for WRC-23 agenda item 1.13, 1.16, 1.17 and 1.19 studies | |
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ITU-R Working Party 5C (WP 5C) was designated as a contributing group by CPM23-1 discussions for several WRC-23 agenda items that could impact the use of existing and planned fixed service operations. During the 23rd and 24th meetings of WP 5C, liaison statements were submitted to the responsible Working Parties, providing information contained in existing ITU-R Reports and Recommendations. In order to meet the CPM23-1 established deadline for providing service characteristics and parameters required to conduct sharing and compatibility studies, WP 5C members have provided updated Fixed Service characteristics that were compiled into a draft liaison statement(s) that were carried forward as an attachment to the WP 5C Chairman’s Report.

The United States supports sending these liaison statements, as modified in the attachments, to provide updated Fixed Service parameters for sharing and compatibility studies for WRC-23 agenda items 1.13, 1.16, 1.17 and 1.19.

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| **ATTACHMENT 1**  **Working Party 5C (WG 5C-2)** |
| DRAFT REPLY LIAISON STATEMENT TO WORKING PARTY 7B  (COPY FOR INFORMATION TO WORKING PARTIES 3M, 5A, 7C AND 7D) |
| WRC-23 agenda item 1.13 |
| **Characteristics and protection criteria for fixed service systems operating  in the frequency band 14.8-15.35 GHz** |

Working Party (WP) 5C thanks WP 7B for their liaison statements contained in Document [5C/83](http://www.itu.int/md/R19-WP5C-C-0083/en) on its preparations in conducting sharing and compatibility studies with respect to the space research service for WRC-23 agenda item 1.13. WP 5C previously liaised in Document [7B/31](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R19-WP7B-C-0031) information on technical and operational characteristics, as well as protection criteria, with respect to systems operating in the fixed service (FS) in the frequency band 14.8-15.35 GHz.

WP 5C has received contributions containing information on additional fixed service parameters operating in the 14.8-15.35 GHz band. This information is to be taken into account, along with the information previously provided by WP 5C, in the sharing studies for WRC-23 agenda item 1.13.

**Additional FS parameters for 14.8-15.35 GHz**

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| Modulation | 4QAM – 4096QAM |
| Channel spacing and receiver noise bandwidth (MHz) | 2.5, 3.5, 7, 14, 28, 40, 56,112 |
| TX output power range (dBW) | −40~0 |
| Feeder/multiplexer loss range (dB) | 0~10 |
| Antenna gain range (dBi) | 31.9~49 |
| Receiver noise figure typical (dB) | 5 |
| Antenna Pattern | Rec. ITU-R F.699 for single-entry interference  Rec. ITU-R F.1245 for aggregate interference |

WP 5C notes the receiver noise figure in the in-force Recommendation ITU-R F.758-7 is 8 dB. The noise figure of 5 dB provided here may be used by WP 7B for WRC-23 agenda item 1.13 studies. WP 5C requests to be kept informed on the progress of the studies under WRC-23 agenda item 1.13. The next meeting of WP 5C is currently scheduled for [date] 2021.

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| **ATTACHMENT 2**  **Working Party 5C (WG 5C-2)** |
| DRAFT REPLY LIAISON STATEMENT TO WORKING PARTY 4A  (COPY TO WORKING PARTIES 3M, 4B, 4C, 5A, 5B AND 7B  FOR INFORMATION) |
| **WRC-23 agenda items 1.16 and 1.17**  **Characteristics and protection criteria for fixed service systems operating  in the frequency bands 17.7- 19.7 GHz and 27.5-29.5 GHz** |

Working Party (WP) 5C thanks WP 4A for their liaison statements contained in Document [5C/133](https://www.itu.int/dms_ties/itu-r/md/19/wp5c/c/R19-WP5C-C-0133!!MSW-E.docx) (agenda item 1.16) and [5C/131](https://www.itu.int/dms_ties/itu-r/md/19/wp5c/c/R19-WP5C-C-0131!!MSW-E.docx) (agenda item 1.17) on its preparations for WRC-23 agenda items 1.16 and 1.17. WP 5C previously liaised in Documents [4A/45](https://www.itu.int/dms_ties/itu-r/md/19/wp4a/c/R19-WP4A-C-0045!!MSW-E.docx) and [4A/46](https://www.itu.int/dms_ties/itu-r/md/19/wp4a/c/R19-WP4A-C-0046!!MSW-E.docx) information on technical and operational characteristics, as well as protection criteria, with respect to systems operating in the fixed service (FS) in the frequency band 17.7-19.7 GHz and 27.5-29.5 GHz.

WP 5C has received contributions containing information on additional fixed service parameters operating in the 17.7-19.7 GHz and 27.5-29.5 GHz bands. This information is to be taken into account, along with the information previously provided by WP5C, in the sharing studies for WRC‑23 agenda items 1.16 and 1.17.

Table 1

**Additional FS parameters for 17.7-19.7 GHz**

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| --- | --- |
| Modulation | 4QAM – 4096QAM |
| Channel spacing and receiver noise bandwidth (MHz) | 1.25, 1.75, 2.5, 3.5, 5, 7, 7.5, 10, 13.75, 20, 27.5, 30, 40, 50, 55, 60, 110, 220 |
| TX output power range (dBW) | -40~0 |
| Feeder/multiplexer loss range (dB) | 0~9.3 |
| Antenna gain range (dBi) | 32~48 |
| Receiver noise figure typical (dB) | 5 |
| Antenna Pattern | Recommendation ITU-R F.699 for single-entry interference  Recommendation ITU-R F.1245 for aggregate interference |

Table 2

**Additional FS parameters for 27.5-29.5 GHz**

|  |  |
| --- | --- |
| Modulation | 4QAM – 4096QAM |
| Channel spacing and receiver noise bandwidth (MHz) | 2.5, 3.5, 7, 14, 28, 30, 40, 56, 60, 112 |
| TX output power range (dBW) | -40~0 |
| Feeder/multiplexer loss range (dB) | 0~6.3 |
| Antenna gain range (dBi) | 31.5~48 |
| Receiver noise figure typical (dB) | 6.5 |
| Antenna Pattern | Recommendation ITU-R F.699 for single-entry interference  Recommendation ITU-R F.1245 for aggregate interference |

WP 5C requests to be kept informed on the progress of the studies under WRC-23 agenda items 1.16 and 1.17. The next meeting of WP 5C is currently scheduled for [date] 2021.

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| **ATTACHMENT 3**  **Working Party 5C (WG 5C-2)** |
| DRAFT REPLY LIAISON STATEMENT TO WORKING PARTY 4A  (COPY TO WORKING PARTIES 3M, 5A, 5B AND 7B FOR INFORMATION) |
| WRC-23 agenda item 1.19 |
| **Characteristics and protection criteria for fixed service systems operating  in the frequency band 17.7- 19.7 GHz** |

Working Party (WP) 5C thanks WP 4A for their liaison statements contained in Document [5C/130](http://www.itu.int/md/R19-WP5C-C-0130/en) on its preparations for WRC-23 agenda item 1.19. WP 5C previously liaised in Document [4A/44](https://www.itu.int/md/R19-WP4A-C-0044/en) information on technical and operational characteristics, as well as protection criteria, with respect to systems operating in the fixed service (FS) in the frequency band 17.7-19.7 GHz.

WP 5C has received contributions containing information on additional fixed service parameters operating in the 17.7-19.7 GHz band. This information is to be taken into account, along with the information previously provided by WP 5C, in the sharing studies for WRC-23 agenda item 1.19.

**Additional FS parameters for 17.7-19.7 GHz**

|  |  |
| --- | --- |
| Modulation | 4QAM – 4096QAM |
| Channel spacing and receiver noise bandwidth (MHz) | 1.25, 1.75, 2.5, 3.5, 5, 7, 7.5, 10, 13.75, 20, 27.5, 30, 40, 50, 55, 60, 110, 220 |
| TX output power range (dBW) | -40~0 |
| Feeder/multiplexer loss range (dB) | 0~9.3 |
| Antenna gain range (dBi) | 32~48 |
| Receiver noise figure typical (dB) | 5 |
| Antenna Pattern | Rec. ITU-R F.699 for single-entry interference  Rec. ITU-R F.1245 for aggregate interference |

WP 5C requests to be kept informed on the progress of the studies under WRC-23 agenda item 1.19. The next meeting of WP 5C is currently scheduled for [date] 2021.

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| **Status:** For action | |
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