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**CONSULTATION, COMMAND AND CONTROL BOARD (C3B)**

**CIVIL/MILITARY SPECTRUM CAPABILITY PANEL (CAP 3)**

**CIVIL/MILITARY SESSION**

**Document for NJFA 2021 (Extract for Public Disclosure)**

**Reference**: AC/322(CP/3)WP(2023)0006 dated 30 May 2023

1. In preparation of 23rd CaP 3 civil/military session decision on the release of the NJFA 2021 Public version, the document (at reference) has been published on NC3Info website.

2. On 22 June 2023 the 23rd CaP 3 in civil/military session agreed to release the Public version of the NJFA 2021 (Extract for Public Disclosure) attached as Annex 1.

3. The NJFA 2021 Extract for Public Disclosure has no caveat and can be published outside of NATO.

(Signed) Stefan KRETSCHMER
LTC, DEU AR
CaP 3 Secretary

Annex 1: NJFA 2021 Extract for Public Disclosure

Action Officer: LTC Stefan Kretschmer (ext. 5619)

1 Annex

Original: English

NORTH ATLANTIC TREATY ORGANISATION
Consultation, Command and Control Board
Civil/Military Spectrum Capability Panel

# NATO JOINT CIVIL/MILITARY FREQUENCY AGREEMENT (NJFA)

***Extract for Public Disclosure***

# 2021

## NATO JOINT CIVIL/MILITARY FREQUENCY AGREEMENT (NJFA)

## INTRODUCTION

1. The North Atlantic Treaty Organization (NATO) is a political and military Alliance with the essential purpose to safeguard the freedom and security of its members through political and military means. It promotes democratic values and encourages consultation and cooperation on defence and security issues to build trust and, in the long run, prevent conflict.

2. Alliance defence capabilities are critically dependent on access to the radio frequency (RF) spectrum, in environments, including hostile ones that require the use of a complex mix of military equipment to ensure the robustness of operations. Spectrum, however, is a finite natural resource and the demand for access to it from all users, military and civil, is growing.

3. In addition to the access to spectrum for NATO operations, RF spectrum is also essential for keeping high readiness and for the training of NATO and member nations' forces.

4. As the demand for access to spectrum for NATO military use often competes with that for civil spectrum users, efficient RF spectrum planning and use is essential. Insufficient access to the RF spectrum for operations or high readiness and training will jeopardize NATO military operations.

## AIM OF THIS DOCUMENT

5. In order to satisfy the requirement for mobility and interoperability of forces, and to improve commonality in RF spectrum utilisation for military operations, this document identifies frequency bands that are in general military use by NATO Nations throughout NATO Europe. The NJFA NATO refers to such frequency bands as "harmonised"[1]. In general, the harmonised military bands should provide a common military frequency resource in order to facilitate common exercises and operations throughout the territory of NATO Nations in ITU Region 1. These frequencies include the core frequency assets for day-to-day training, exercise, combat readiness, deployment and to support Electronic Warfare (EW) [2] training.

6. The military use of RF spectrum is based on the relevant provisions of the ITU Constitution the Radio Regulations and in accordance with national allocation tables of Nations. These provisions allow for mobility and flexible use of RF spectrum by NATO forces.

7. This document provides an extract releasable version of the joint agreement between the civil and military authorities of the NATO Nations on the current use of RF spectrum for military purposes required by NATO forces or in support of NATO.

[1] "NATO harmonised" does not refer to the defined harmonised frameworks with the EU or CEPT. A "NATO harmonized band" is a frequency band identified by NATO where a permanent essential military requirement exists in NATO Europe or a band which fulfils an important military requirement. Such a frequency band forms a basis for military training use and planning. The band can be shared between civil and military users according to national requirements and legislation.

[2] The purpose of EW is to deny the opponent the advantage of, and ensure friendly unimpeded access to the electromagnetic spectrum. EW can be applied from air, sea, land and space, and target communication and radar systems. It involves the use of the electromagnetic energy to provide improved understanding of the operational environment as well as to achieve specific effects on the modern battlefield.

8. Extended military requirements and the conditions of RF spectrum use during states of emergency and in times of crisis or war are not included in this document.

## PROVISIONS

9. The use of RF spectrum for military purposes required by NATO forces or in support of NATO applies throughout the territory of NATO Nations in ITU Region 1. However, it should be taken into account that many military radio frequency requirements apply to all NATO Nations. For European NATO Nations, the Annex of this document identifies the collective RF spectrum requirements of NATO for military use in Europe. This will be supported by NATO Nations to the maximum extent possible through their national spectrum regulatory framework.

10. When specific military requirements cannot be met using the harmonised RF spectrum identified in this NATO document, military requirements may be satisfied nationally in RF allocations which are not listed in this document.

11. European NATO Nations agree to support in the Conference of European Postal and Telecommunications Administrations (CEPT) the appropriate incorporation of military spectrum utilisation as listed in the Annex into the European Table of Frequency Allocations and Applications (ECA).

12. This document provides information about the military utilisation to the civilian environment through national RF allocation tables and ERC Report 25 (ECA table) in accordance with existing spectrum supportability and coordination procedures within NATO.

## INFORMATION PROVIDED IN ECA TABLE

13. According to the NJFA, NATO harmonised RF bands include bands where a permanent essential military requirement exists in NATO Europe or a band which fulfils an important military requirement.

14. Annex 1 contains those ECA table bands that are identified for operational effectiveness of NATO forces. Where usage of RF bands has been harmonised by NATO and NATO member nations for military use this does not exclude the utilisation for civil applications.

15. The table structure in the annex is as follows:

a. column (a) shows the frequency range based on the ECA table;

b. column (b) shows the military applications in accordance with the definitions of EFIS DB, wherever possible up to Layer 2 terminology;

c. column (c) shows additional military information which can be used to get a better understanding and/or as an input for the “notes” in the ECA table.

## ADDITIONAL INFORMATION

16. This document also provides for information in Appendix 2 frequency bands where a NATO requirement is identified for a possible future harmonised military use.

# NATO JOINT CIVIL/MILITARY FREQUENCY AGREEMENT (NJFA)

| (a)<br>Frequency Range | (b)<br>Applications used by Military | (c)<br>Additional information on Military Requirement |
|---|---|---|
| **14 kHz - 19.95 kHz** | Land military systems<br>Maritime military systems | |
| **20.05 kHz - 70 kHz** | Land military systems<br>Maritime military systems | |
| **70 kHz - 72 kHz** | Land military systems<br>Maritime military systems | |
| **72 kHz - 84 kHz** | Land military systems<br>Maritime military systems | |
| **84 kHz - 86 kHz** | Land military systems<br>Maritime military systems | |
| **86 kHz - 90 kHz** | Land military systems<br>Maritime military systems | |
| **90 kHz - 110 kHz** | Land military systems<br>Maritime military systems | |
| **110 kHz - 112 kHz** | Land military systems<br>Maritime military systems | |
| **112 kHz - 115 kHz** | Land military systems<br>Maritime military systems | |
| **115 kHz - 117.6 kHz** | Land military systems<br>Maritime military systems | |
| **117.6 kHz - 126 kHz** | Land military systems<br>Maritime military systems | |
| **126 kHz - 129 kHz** | Land military systems<br>Maritime military systems | |
| **129 kHz - 130 kHz** | Land military systems<br>Maritime military systems | |
| **130 kHz - 135.7 kHz** | Land military systems<br>Maritime military systems | |

| (a)<br>Frequency Range | (b)<br>Applications used by Military | (c)<br>Additional information on Military Requirement |
|---|---|---|
| **135.7 kHz - 137.8 kHz** | Land military systems<br>Maritime military systems | |
| **137.8 kHz - 148.5 kHz** | Land military systems<br>Maritime military systems | |
| **255 kHz - 283.5 kHz** | Aeronautical military systems<br>Maritime military systems | |
| **283.5 kHz - 315 kHz** | Aeronautical military systems<br>Maritime military systems | |
| **315 kHz - 325 kHz** | Aeronautical military systems<br>Maritime military systems | |
| **325 kHz - 405 kHz** | Aeronautical military systems | |
| **405 kHz - 415 kHz** | Aeronautical military systems<br>Maritime military systems | |
| **415 kHz - 435 kHz** | Aeronautical military systems<br>Maritime military systems | |
| **435 kHz - 472 kHz** | Aeronautical military systems<br>Maritime military systems | |
| **472 kHz - 479 kHz** | Aeronautical military systems<br>Maritime military systems | |
| **479 kHz - 495 kHz** | Aeronautical military systems<br>Maritime military systems | |
| **495 kHz - 505 kHz** | Maritime military systems | |
| **505 kHz - 526.5 kHz** | Aeronautical military systems<br>Maritime military systems | |
| **1606.5 kHz - 1625 kHz** | Land military systems<br>Maritime military systems | |
| **1625 kHz - 1635 kHz** | Radiolocation (military) | |
| **1635 kHz - 1800 kHz** | Land military systems<br>Maritime military systems | |
| **1800 kHz - 1810 kHz** | Radiolocation (military) | |

| (a)<br>Frequency Range | (b)<br>Applications used by Military | (c)<br>Additional information on Military Requirement |
|---|---|---|
| **1850 kHz - 2000 kHz** | Land military systems<br>Maritime military systems | |
| **2000 kHz - 2025 kHz** | Land military systems<br>Maritime military systems | |
| **2025 kHz - 2045 kHz** | Land military systems<br>Maritime military systems | |
| **2045 kHz - 2160 kHz** | Land military systems<br>Maritime military systems | |
| **2160 kHz - 2170 kHz** | Radiolocation (military) | |
| **2170 kHz - 2173.5 kHz** | Maritime military systems | |
| **2190.5 kHz - 2194 kHz** | Maritime military systems | |
| **2194 kHz - 2300 kHz** | Land military systems<br>Maritime military systems | |
| **2300 kHz - 2498 kHz** | Land military systems<br>Maritime military systems | |
| **2502 kHz - 2625 kHz** | Land military systems<br>Maritime military systems | |
| **2625 kHz - 2650 kHz** | Maritime military systems | |
| **2650 kHz - 2850 kHz** | Land military systems<br>Maritime military systems | |
| **2850 kHz - 3025 kHz** | Aeronautical military systems | |
| **3025 kHz - 3155 kHz** | Aeronautical military systems | |
| **3155 kHz - 3200 kHz** | Land military systems<br>Maritime military systems | |
| **3200 kHz - 3230 kHz** | Land military systems<br>Maritime military systems | |
| **3230 kHz - 3400 kHz** | Land military systems<br>Maritime military systems | |
| **3400 kHz - 3500 kHz** | Aeronautical military systems | |
| **3500 kHz - 3800 kHz** | Land military systems<br>Maritime military systems | |

| (a)<br>Frequency Range | (b)<br>Applications used by Military | (c)<br>Additional information on Military Requirement |
|---|---|---|
| **3800 kHz - 3900 kHz** | Aeronautical military systems<br>Land military systems | |
| **3900 kHz - 3950 kHz** | Aeronautical military systems | |
| **3950 kHz - 4000 kHz** | Land military systems | |
| **4000 kHz - 4063 kHz** | Land military systems<br>Maritime military systems | |
| **4063 kHz - 4438 kHz** | Maritime military systems | |
| **4438 kHz - 4488 kHz** | Land military systems<br>Maritime military systems<br>Radiolocation (military) | |
| **4488 kHz - 4650 kHz** | Land military systems<br>Maritime military systems | |
| **4650 kHz - 4700 kHz** | Aeronautical military systems | |
| **4700 kHz - 4750 kHz** | Aeronautical military systems | |
| **4750 kHz - 4850 kHz** | Aeronautical military systems<br>Land military systems | |
| **4850 kHz - 4995 kHz** | Land military systems | |
| **5005 kHz - 5060 kHz** | Land military systems | |
| **5060 kHz - 5250 kHz** | Land military systems<br>Maritime military systems | |
| **5250 kHz - 5275 kHz** | Land military systems<br>Maritime military systems<br>Radiolocation (military) | |
| **5275 kHz - 5351.5 kHz** | Land military systems<br>Maritime military systems | |
| **5351.5 kHz - 5366.5 kHz** | Land military systems<br>Maritime military systems | |
| **5366.5 kHz - 5450 kHz** | Land military systems<br>Maritime military systems | |
| **5450 kHz - 5480 kHz** | Aeronautical military systems<br>Land military systems | |

| (a)<br>Frequency Range | (b)<br>Applications used by Military | (c)<br>Additional information on Military Requirement |
|---|---|---|
| **5480 kHz - 5680 kHz** | Aeronautical military systems | |
| **5680 kHz - 5730 kHz** | Aeronautical military systems | |
| **5730 kHz - 5900 kHz** | Land military systems | |
| **6200 kHz - 6525 kHz** | Maritime military systems | |
| **6525 kHz - 6685 kHz** | Aeronautical military systems | |
| **6685 kHz - 6765 kHz** | Aeronautical military systems | |
| **6765 kHz - 7000 kHz** | Land military systems<br>Maritime military systems | |
| **7450 kHz - 8100 kHz** | Land military systems<br>Maritime military systems | |
| **8100 kHz - 8195 kHz** | Land military systems<br>Maritime military systems | |
| **8195 kHz - 8815 kHz** | Maritime military systems | |
| **8815 kHz - 8965 kHz** | Aeronautical military systems | |
| **8965 kHz - 9040 kHz** | Aeronautical military systems | |
| **9040 kHz - 9305 kHz** | Land military systems | |
| **9305 kHz - 9355 kHz** | Land military systems | |
| **9355 kHz - 9400 kHz** | Land military systems | |
| **9900 kHz - 9995 kHz** | Land military systems | |
| **10005 kHz - 10100 kHz** | Aeronautical military systems | |
| **10100 kHz - 10150 kHz** | Land military systems | |
| **10150 kHz - 11175 kHz** | Land military systems<br>Maritime military systems | |
| **11175 kHz - 11275 kHz** | Aeronautical military systems | |
| **11275 kHz - 11400 kHz** | Aeronautical military systems | |
| **11400 kHz - 11600 kHz** | Land military systems | |
| **12100 kHz - 12230 kHz** | Land military systems | |
| **12230 kHz - 13200 kHz** | Maritime military systems | |
| **13200 kHz - 13260 kHz** | Aeronautical military systems | |
| **13260 kHz - 13360 kHz** | Aeronautical military systems | |

| (a)<br>Frequency Range | (b)<br>Applications used by Military | (c)<br>Additional information on Military Requirement |
|---|---|---|
| **13360 kHz - 13410 kHz** | Land military systems | |
| **13410 kHz - 13450 kHz** | Land military systems<br>Maritime military systems | |
| **13450 kHz - 13550 kHz** | Land military systems<br>Maritime military systems | |
| **13550 kHz - 13570 kHz** | Land military systems<br>Maritime military systems | |
| **13870 kHz - 14000 kHz** | Land military systems<br>Maritime military systems | |
| **14350 kHz - 14990 kHz** | Land military systems<br>Maritime military systems | |
| **15010 kHz - 15100 kHz** | Aeronautical military systems | |
| **15800 kHz - 16100 kHz** | Land military systems | |
| **16100 kHz - 16200 kHz** | Land military systems | |
| **16200 kHz - 16360 kHz** | Land military systems | |
| **16360 kHz - 17410 kHz** | Maritime military systems | |
| **17410 kHz - 17480 kHz** | Land military systems | |
| **17900 kHz - 17970 kHz** | Aeronautical military systems | |
| **17970 kHz - 18030 kHz** | Aeronautical military systems | |
| **18030 kHz - 18052 kHz** | Land military systems | |
| **18052 kHz - 18068 kHz** | Land military systems | |
| **18168 kHz - 18780 kHz** | Land military systems<br>Maritime military systems | |
| **18780 kHz - 18900 kHz** | Maritime military systems | |
| **19020 kHz - 19680 kHz** | Land military systems | |
| **19680 kHz - 19800 kHz** | Maritime military systems | |
| **19800 kHz - 19990 kHz** | Land military systems | |
| **20010 kHz - 21000 kHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems | |

| (a)<br>Frequency Range | (b)<br>Applications used by Military | (c)<br>Additional information on Military Requirement |
|---|---|---|
| **21850 kHz - 21870 kHz** | Land military systems | |
| **21870 kHz - 21924 kHz** | Land military systems | |
| **21924 kHz - 22000 kHz** | Aeronautical military systems | |
| **22000 kHz - 22855 kHz** | Maritime military systems | |
| **22855 kHz - 23000 kHz** | Land military systems | |
| **23000 kHz - 23200 kHz** | Land military systems<br>Maritime military systems | |
| **23200 kHz - 23350 kHz** | Aeronautical military systems<br>Land military systems | |
| **23350 kHz - 24000 kHz** | Land military systems<br>Maritime military systems | |
| **24000 kHz - 24450 kHz** | Land military systems | |
| **24450 kHz - 24600 kHz** | Land military systems | |
| **24600 kHz - 24890 kHz** | Land military systems | |
| **25010 kHz - 25070 kHz** | Land military systems<br>Maritime military systems | |
| **25070 kHz - 25210 kHz** | Maritime military systems | |
| **25210 kHz - 25550 kHz** | Land military systems<br>Maritime military systems | |
| **26100 kHz - 26175 kHz** | Maritime military systems | |
| **26175 kHz - 26200 kHz** | Land military systems<br>Maritime military systems | |
| **26200 kHz - 26350 kHz** | Land military systems<br>Maritime military systems | |
| **26350 kHz - 27500 kHz** | Land military systems<br>Maritime military systems | |
| **27500 kHz - 28 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems | |

| (a)<br>Frequency Range | (b)<br>Applications used by Military | (c)<br>Additional information on Military Requirement |
|---|---|---|
| **29.7 MHz - 30.005 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems | |
| **30.005 MHz - 30.01 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems | |
| **30.01 MHz - 37.5 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems | |
| **37.5 MHz - 38.25 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems | |
| **38.25 MHz - 39 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems | |
| **39 MHz - 39.5 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems | |
| **39.5 MHz - 39.986 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems | |
| **39.986 MHz - 40.02 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems | |
| **40.02 MHz - 40.66 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems | |
| **40.66 MHz - 40.7 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems | |

| (a)<br>Frequency Range | (b)<br>Applications used by Military | (c)<br>Additional information on Military Requirement |
|---|---|---|
| **40.7 MHz - 40.98 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems | |
| **40.98 MHz - 41.015 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems | |
| **41.015 MHz - 42 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems | |
| **42 MHz - 42.5 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems | |
| **42.5 MHz - 44 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems | |
| **44 MHz - 47 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems | |
| **47 MHz - 50 MHz** | Land military systems | |
| **50 MHz - 52 MHz** | Land military systems | |
| **52 MHz - 68 MHz** | Land military systems | |
| **68 MHz - 70.45 MHz** | Land military systems<br>Maritime military systems | |
| **70.45 MHz - 74.8 MHz** | Land military systems<br>Maritime military systems | |
| **75.2 MHz - 87.5 MHz** | Land military systems<br>Maritime military systems | |
| **137 MHz - 137.025 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems<br>Satellite systems (military) | |

| (a)<br>Frequency Range | (b)<br>Applications used by Military | (c)<br>Additional information on Military Requirement |
|---|---|---|
| **137.025 MHz - 137.175 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems<br>Satellite systems (military) | |
| **137.175 MHz - 137.825 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems<br>Satellite systems (military) | |
| **137.825 MHz - 138 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems<br>Satellite systems (military) | |
| **138 MHz - 143.6 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems | |
| **143.6 MHz - 143.65 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems | |
| **143.65 MHz - 144 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems | |
| **146 MHz - 148 MHz** | Maritime military systems | |
| **148 MHz – 149.9 MHz** | Maritime military systems | |
| **149.9 MHz – 150.05 MHz** | Maritime military systems | |
| **150.05 MHz – 153 MHz** | Maritime military systems | |
| **153 MHz – 154 MHz** | Maritime military systems | |
| **154 MHz – 156.4875 MHz** | Maritime military systems | |
| **156.4875 MHz – 156.5125 MHz** | Maritime military systems | |
| **156. 5125 MHz – 156.5375 MHz** | Maritime military systems | |
| **156. 5375 MHz – 156.5625 MHz** | Maritime military systems | |
| **156. 5625 MHz – 156.7625 MHz** | Maritime military systems | |

| (a)<br>Frequency Range | (b)<br>Applications used by Military | (c)<br>Additional information on Military Requirement |
|---|---|---|
| **156. 7625 MHz – 156.7875 MHz** | Maritime military systems | |
| **156. 7875 MHz – 156.8125 MHz** | Maritime military systems | |
| **156. 8125 MHz – 156.8375 MHz** | Maritime military systems | |
| **156. 8375 MHz – 157.1875 MHz** | Maritime military systems | |
| **157.1875 MHz – 157.3375 MHz** | Maritime military systems | |
| **157.3375 MHz – 161.7875 MHz** | Maritime military systems | |
| **161.7875 MHz – 161.9375 MHz** | Maritime military systems | |
| **161.9375 MHz – 161.9625 MHz** | Maritime military systems | |
| **161.9625 MHz – 161.9875 MHz** | Maritime military systems | |
| **161.9875 MHz – 162.0125 MHz** | Maritime military systems | |
| **162.0125 MHz – 162.0375 MHz** | Maritime military systems | |
| **162.0375 MHz – 169.4 MHz** | Maritime military systems | |
| **169.4 MHz – 169.8125 MHz** | Maritime military systems | |
| **169.8125 MHz – 174 MHz** | Maritime military systems | |
| **225 MHz - 230 MHz** | Defence Systems | The range 225-399.9 MHz is essential to NATO and is in military use for land mobile, mobile-satellite, Air/Ground/Air and specific maritime and terrestrial communications, including ITU Region 2. This NATO UHF band 225-400 MHz is the only harmonised and commonly available resource managed by NATO on a daily basis in and for NATO nations. |
| **230 MHz - 235 MHz** | Defence Systems | See 225-230 MHz |
| **235 MHz - 240 MHz** | Defence Systems | See 225-230 MHz |
| **240 MHz - 242.95 MHz** | Defence Systems | See 225-230 MHz |
| **243.05 MHz - 267 MHz** | Defence Systems | See 225-230 MHz |
| **267 MHz - 272 MHz** | Defence Systems | See 225-230 MHz |
| **272 MHz - 273 MHz** | Defence Systems | See 225-230 MHz |
| **273 MHz - 312 MHz** | Defence Systems | See 225-230 MHz |
| **312 MHz - 315 MHz** | Defence Systems | See 225-230 MHz |
| **315 MHz - 322 MHz** | Defence Systems | See 225-230 MHz |
| **322 MHz - 328.6 MHz** | Defence Systems | See 225-230 MHz |
| **328.6 MHz - 335.4 MHz** | Defence Systems | See 225-230 MHz |

| (a)<br>Frequency Range | (b)<br>Applications used by Military | (c)<br>Additional information on Military Requirement |
|---|---|---|
| **335.4 MHz - 380 MHz** | Defence Systems | See 225-230 MHz |
| **380 MHz - 385 MHz** | Defence Systems | 380-385 MHz and 390-395 MHz are currently shared with Emergency Services. |
| **385 MHz - 387 MHz** | Defence Systems | See 225-230 MHz |
| **387 MHz - 390 MHz** | Defence Systems | See 225-230 MHz |
| **390 MHz - 395 MHz** | Defence Systems | 380-385 MHz and 390-395 MHz are currently shared with Emergency Services.. |
| **395 MHz - 399.9 MHz** | Defence Systems | See 225-230 MHz |
| **406.1 MHz - 410 MHz** | Land military systems<br>Maritime military systems | |
| **410 MHz - 420 MHz** | Land military systems<br>Maritime military systems | |
| **420 MHz - 430 MHz** | Land military systems<br>Maritime military systems<br>Radiolocation (military) | |
| **430 MHz - 432 MHz** | Radiolocation (military) | |
| **432 MHz - 433.05 MHz** | Radiolocation (military) | |
| **433.05 MHz - 434.79 MHz** | Radiolocation (military) | |
| **434.79 MHz - 438 MHz** | Radiolocation (military) | |
| **438 MHz - 440 MHz** | Radiolocation (military) | |
| **440 MHz - 450 MHz** | Land military systems<br>Maritime military systems<br>Radiolocation (military) | |
| **862 MHz - 870 MHz** | Land military systems<br>Maritime military systems | |
| **870 MHz - 876 MHz** | Land military systems<br>Maritime military systems<br>Telemetry/Telecommand (military) | The bands 870-876 MHz and 915-921 MHz are NATO harmonised and used for land and naval systems specifically for unmanned systems. In countries where these bands are or will be in civil use according to ERC/ECC Deliverables, Shared use of the bands should be considered on a national basis. |
| **876 MHz - 880 MHz** | Land military systems<br>Maritime military systems | |
| **880 MHz - 890 MHz** | Land military systems<br>Maritime military systems | |

| (a)<br>Frequency Range | (b)<br>Applications used by Military | (c)<br>Additional information on Military Requirement |
|---|---|---|
| **890 MHz - 915 MHz** | Land military systems<br>Maritime military systems | |
| **915 MHz - 921 MHz** | Land military systems<br>Maritime military systems<br>Telemetry/Telecommand (military) | The bands 870-876 MHz and 915-921 MHz are NATO harmonised and used for land and naval systems specifically for unmanned systems. In countries where these bands are or will be in civil use according to ERC/ECC Deliverables, Shared use of the bands should be considered on a national basis. |
| **921 MHz - 925 MHz** | Land military systems<br>Maritime military systems | |
| **925 MHz - 942 MHz** | Land military systems<br>Maritime military systems | |
| **960 MHz - 1164 MHz** | Aeronautical military systems | Military use includes JTIDS/MIDS |
| **1164 MHz - 1215 MHz** | Aeronautical military systems<br>Satellite systems (military) | Military use includes JTIDS/MIDS |
| **1215 MHz - 1240 MHz** | Radiolocation (military)<br>Satellite systems (military) | |
| **1240 MHz - 1300 MHz** | Radiolocation (military)<br>Satellite systems (military) | |
| **1300 MHz - 1350 MHz** | Radiolocation (military)<br>Satellite systems (military) | |
| **1350 MHz - 1400 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems<br>Radiolocation (military) | |
| **1427 MHz - 1429 MHz** | Land military systems<br>Maritime military systems<br>Telemetry/Telecommand (military) | |
| **1429 MHz - 1452 MHz** | Land military systems<br>Maritime military systems<br>Telemetry/Telecommand (military) | |
| **1492 MHz - 1518 MHz** | Land military systems<br>Maritime military systems<br>Telemetry/Telecommand (military) | |

| (a)<br>Frequency Range | (b)<br>Applications used by Military | (c)<br>Additional information on Military Requirement |
|---|---|---|
| **1518 MHz - 1525 MHz** | Land military systems<br>Maritime military systems<br>Telemetry/Telecommand (military) | |
| **1675 MHz - 1690 MHz** | Land military systems<br>Maritime military systems<br>Meteorological aids (military) | |
| **1690 MHz - 1700 MHz** | Land military systems<br>Maritime military systems<br>Meteorological aids (military) | |
| **1700 MHz - 1710 MHz** | Land military systems<br>Maritime military systems<br>Meteorological aids (military) | |
| **1785 MHz - 1800 MHz** | Land military systems | |
| **1800 MHz - 1805 MHz** | Land military systems | |
| **2025 MHz - 2110 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems<br>Telemetry/Telecommand (military) | |
| **2200 MHz - 2290 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems<br>Telemetry/Telecommand (military) | |
| **2300 MHz - 2400 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems<br>Telemetry/Telecommand (military) | |
| **2700 MHz - 2900 MHz** | Radiolocation (military) | |
| **2900 MHz - 3100 MHz** | Radiolocation (military) | |
| **3100 MHz - 3300 MHz** | Radiolocation (military) | |
| **3300 MHz - 3400 MHz** | Radiolocation (military) | |
| **3400 MHz - 3600 MHz** | Radiolocation (military) | Upper limit for airborne radars is 3410 MHz. |

| (a)<br>Frequency Range | (b)<br>Applications used by Military | (c)<br>Additional information on Military Requirement |
|---|---|---|
| **4200 MHz - 4400 MHz** | Aeronautical military systems | |
| **4400 MHz - 4500 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems<br>Telemetry/Telecommand (military) | |
| **4500 MHz - 4800 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems<br>Telemetry/Telecommand (military) | |
| **4800 MHz - 4990 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems<br>Telemetry/Telecommand (military) | |
| **4990 MHz - 5000 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems<br>Telemetry/Telecommand (military) | |
| **5250 MHz - 5255 MHz** | Radiolocation (military) | |
| **5255 MHz - 5350 MHz** | Radiolocation (military) | |
| **5350 MHz - 5450 MHz** | Radiolocation (military) | |
| **5450 MHz - 5460 MHz** | Radiolocation (military) | |
| **5460 MHz - 5470 MHz** | Radiolocation (military) | |
| **5470 MHz - 5570 MHz** | Radiolocation (military) | |
| **5570 MHz - 5650 MHz** | Radiolocation (military) | |
| **5650 MHz - 5725 MHz** | Radiolocation (military) | |
| **5725 MHz - 5830 MHz** | Radiolocation (military) | |
| **5830 MHz - 5850 MHz** | Radiolocation (military) | |
| **7250 MHz - 7300 MHz** | Land military systems<br>Maritime military systems<br>Satellite systems (military) | |

| (a)<br>Frequency Range | (b)<br>Applications used by Military | (c)<br>Additional information on Military Requirement |
|---|---|---|
| **7300 MHz - 7375 MHz** | Land military systems<br>Maritime military systems<br>Satellite systems (military) | |
| **7375 MHz - 7450 MHz** | Land military systems<br>Maritime military systems<br>Satellite systems (military) | |
| **7450 MHz - 7550 MHz** | Land military systems<br>Maritime military systems<br>Satellite systems (military) | |
| **7550 MHz - 7750 MHz** | Land military systems<br>Maritime military systems<br>Satellite systems (military) | |
| **7900 MHz - 8025 MHz** | Land military systems<br>Satellite systems (military) | |
| **8025 MHz - 8175 MHz** | Land military systems<br>Satellite systems (military) | |
| **8175 MHz - 8215 MHz** | Land military systems<br>Satellite systems (military) | |
| **8215 MHz - 8400 MHz** | Land military systems<br>Satellite systems (military) | |
| **8500 MHz - 8550 MHz** | Aeronautical military systems<br>Radiolocation (military) | Ship-, Land- and Airborne surveillance. |
| **8550 MHz - 8650 MHz** | Aeronautical military systems<br>Radiolocation (military) | Ship-, Land- and Airborne surveillance. |
| **8650 MHz - 8750 MHz** | Aeronautical military systems<br>Radiolocation (military) | Ship-, Land- and Airborne surveillance. |
| **8750 MHz - 8850 MHz** | Aeronautical military systems<br>Radiolocation (military) | Ship-, Land- and Airborne surveillance. |
| **8850 MHz - 9000 MHz** | Aeronautical military systems<br>Radiolocation (military) | Ship-, Land- and Airborne surveillance. |
| **9000 MHz - 9200 MHz** | Aeronautical military systems<br>Radiolocation (military) | Ship-, Land- and Airborne surveillance. |

| (a)<br>Frequency Range | (b)<br>Applications used by Military | (c)<br>Additional information on Military Requirement |
|---|---|---|
| **9200 MHz - 9300 MHz** | Aeronautical military systems<br>Radiolocation (military) | Ship-, Land- and Airborne surveillance. |
| **9300 MHz - 9500 MHz** | Aeronautical military systems<br>Radiolocation (military)<br>Satellite systems (military) | Ship-, Land- and Airborne surveillance. |
| **9500 MHz - 9800 MHz** | Aeronautical military systems<br>Radiolocation (military)<br>Satellite systems (military) | Ship-, Land- and Airborne surveillance. |
| **9800 MHz - 9900 MHz** | Aeronautical military systems<br>Radiolocation (military)<br>Satellite systems (military) | Ship-, Land- and Airborne surveillance. |
| **9900 MHz - 10000 MHz** | Aeronautical military systems<br>Radiolocation (military)<br>Satellite systems (military) | Ship-, Land- and Airborne surveillance. |
| **10000 MHz - 10400 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems<br>Radiolocation (military) | |
| **10400 MHz - 10450 MHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems<br>Radiolocation (military) | |
| **10450 MHz - 10.5 GHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems<br>Radiolocation (military) | |
| **13.4 GHz - 13.65 GHz** | Radiolocation (military) | |
| **13.65 GHz - 13.75 GHz** | Radiolocation (military) | |
| **13.75 GHz - 14 GHz** | Radiolocation (military) | |
| **14.5 GHz - 14.75 GHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems | |

| (a)<br>Frequency Range | (b)<br>Applications used by Military | (c)<br>Additional information on Military Requirement |
|---|---|---|
| **14.75 GHz - 14.8 GHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems | |
| **14.8 GHz - 15.35 GHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems | |
| **15.7 GHz - 16.6 GHz** | Radiolocation (military) | |
| **16.6 GHz - 17.1 GHz** | Radiolocation (military) | |
| **17.1 GHz - 17.2 GHz** | Radiolocation (military) | |
| **17.2 GHz - 17.3 GHz** | Radiolocation (military) | |
| **17.3 GHz - 17.7 GHz** | Radiolocation (military) | |
| **20.2 GHz - 21.2 GHz** | Satellite systems (military) | |
| **21.2 GHz - 21.4 GHz** | Aeronautical military systems | |
| **24.05 GHz - 24.25 GHz** | Radiolocation (military) | |
| **25.25 GHz - 25.5 GHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems | |
| **25.5 GHz - 26.5 GHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems | |
| **26.5 GHz - 27 GHz** | Land military systems | |
| **27 GHz - 27.5 GHz** | Land military systems | |
| **30 GHz - 31 GHz** | Satellite systems (military) | |
| **33.4 GHz - 34.2 GHz** | Radiolocation (military) | |
| **34.2 GHz - 34.7 GHz** | Radiolocation (military) | |
| **34.7 GHz - 35.2 GHz** | Radiolocation (military) | |
| **35.2 GHz - 35.5 GHz** | Radiolocation (military) | |
| **35.5 GHz - 36 GHz** | Radiolocation (military) | |

| (a)<br>Frequency Range | (b)<br>Applications used by Military | (c)<br>Additional information on Military Requirement |
|---|---|---|
| **43.5 GHz - 45.5 GHz** | Aeronautical military systems<br>Land military systems<br>Maritime military systems<br>Satellite systems (military) | |

| (a)<br>Frequency Range | (b)<br>Applications used by Military | (c)<br>Additional information on Military Requirement |
|---|---|---|
| **450 MHz - 455 MHz** | Defence Systems | Identified for a potential new military requirement if the evolution of the regulation in this frequency range facilitates it. |
| **455 MHz - 456 MHz** | Defence Systems | Identified for a potential new military requirement if the evolution of the regulation in this frequency range facilitates it. |
| **456 MHz - 459 MHz** | Defence Systems | Identified for a potential new military requirement if the evolution of the regulation in this frequency range facilitates it. |
| **459 MHz - 460 MHz** | Defence Systems | Identified for a potential new military requirement if the evolution of the regulation in this frequency range facilitates it. |
| **460 MHz - 470 MHz** | Defence Systems | Identified for a potential new military requirement if the evolution of the regulation in this frequency range facilitates it. |
| **470 MHz - 694 MHz** | Defence Systems | Identified for a potential new military requirement if the evolution of the regulation in this frequency range facilitates it. |
| **694 MHz - 790 MHz** | Defence Systems | Identified for a potential new military requirement if the evolution of the regulation in this frequency range facilitates it. |
| **15.4 GHz - 15.43 GHz** | Radiolocation (military) | The range 15.4-15.7 GHz is a future military requirement in the radiolocation service for the use of land, airborne and naval radars, as an extension of 15.7-17.3 GHz, in specific for imaging radars. |
| **15.43 GHz - 15.63 GHz** | Radiolocation (military) | The range 15.4-15.7 GHz is a future military requirement in the radiolocation service for the use of land, airborne and naval radars, as an extension of 15.7-17.3 GHz, in specific for imaging radars. |
| **15.63 GHz - 15.7 GHz** | Radiolocation (military) | The range 15.4-15.7 GHz is a future military requirement in the radiolocation service for the use of land, airborne and naval radars, as an extension of 15.7-17.3 GHz, in specific for imaging radars. |
| **59 GHz - 59.3 GHz** | Defence Systems | The range 59-63 GHz is a future military requirement for the military use by various applications of the fixed, mobile and radiolocation services. |
| **59.3 GHz - 64 GHz** | Defence Systems | The range 59-63 GHz is a future military requirement for the military use by various applications of the fixed, mobile and radiolocation services. |
| **71 GHz - 74 GHz** | Defence Systems | The band 71-74 GHz is a future military requirement for the military use by various applications of the fixed, mobile, fixed-satellite and mobile-satellite services, specifically for high-bandwidth access radio links in accordance with ECC Recommendation (05)07, paired with 81-84 GHz. |

| (a)<br>Frequency Range | (b)<br>Applications used by Military | (c)<br>Additional information on Military Requirement |
|---|---|---|
| **81 GHz - 84 GHz** | Defence Systems | The band 81-84 GHz is a future military requirement for military use by various applications of the fixed, mobile, fixed-satellite and mobile-satellite services, specifically for high-bandwidth access radio links in accordance with ECC Recommendation (05)07, paired with 71-74 GHz. |
| **92 GHz - 94 GHz** | Defence Systems | The band 92-94 GHz is a future military requirement for military use by various applications of the fixed, mobile and radiolocation services, specifically for high-bandwidth access radio links in accordance with ECC Recommendation (14)01, paired with 94.1-95 GHz. |
| **94 GHz - 94.1 GHz** | Defence Systems | The band 94-94.1 GHz is a future military requirement for military use by applications of the earth exploration-satellite and radiolocation services. |
| **94.1 GHz - 95 GHz** | Defence Systems | The band 94.1-95 GHz is a future military requirement for military use by various applications of the fixed, mobile and radiolocation services, specifically for high-bandwidth access radio links in accordance with ECC Recommendation (14)01, paired with 92-94 GHz. |
| **95 GHz - 100 GHz** | Defence Systems | The band 95-100 GHz is a future military requirement for military use by various applications of the fixed, mobile, radiolocation, radionavigation and radionavigation-satellite services. |