



MCMC SRSP FS 7.111
25 FEBRUARY 2026

Standard Radio System Plan

REQUIREMENTS FOR
FIXED WIRELESS SYSTEMS
OPERATING IN THE FREQUENCY BAND OF
7111 MHz to 7425 MHz

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TABLE OF CONTENTS

1. FOREWORD	3
2. ABBREVIATIONS	5
3. INTENT	6
4. GENERAL	6
5. CHANNEL ARRANGEMENT	7
6. REQUIREMENTS FOR USAGE OF SPECTRUM	9
7. PRINCIPLES OF ASSIGNMENT	11
8. COORDINATION REQUIREMENT	12
9. IMPLEMENTATION	13
10. REVOCATION	13
11. REFERENCES	14
APPENDIX A: CHANNEL ARRANGEMENT	15
APPENDIX B: INTERFERENCE RESOLUTION PROCESS	19

1. FOREWORD

- 1.1 This Standard Radio System Plan (“**SRSP**”) is prepared by the Malaysian Communications and Multimedia Commission (“**MCMC**”) pursuant to the Communications and Multimedia Act 1998 (“**Act**”) and the Spectrum Plan (“**Spectrum Plan**”) to provide information on the minimum technical and regulatory requirements for the efficient use of the **7111 MHz to 7425 MHz** frequency band (“**the said band**”).
- 1.2 This SRSP does not attempt to establish any detailed equipment standards.
- 1.3 In the event there are any inconsistencies between this SRSP and the Act or any subsidiary legislations made under the Act, the Act or the subsidiary legislation shall prevail.
- 1.4 It is to be noted that the World Radiocommunication Conference 2023, through the International Telecommunication Union Radio Regulations **No. 5.457E**¹, has identified the frequency band from **7025 MHz to 7125 MHz** in **Region 3** for use by the terrestrial component of International Mobile Telecommunications (“**IMT**”) systems.

¹**5.457E** The frequency bands **6 425-7 125 MHz in Region 1** and **7 025-7 125 MHz in Region 3** are identified for use by administrations wishing to implement the terrestrial component of the IMT. This identification does not preclude the use of these frequency bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. Resolution **220 (WRC-23)** applies.

- 1.5 In view of this development, the MCMC is reviewing the current use of the frequency band of **7025 MHz to 7125 MHz** for potential future deployment of IMT systems. Existing assignment holders may be required to vacate the frequency band of **7025 MHz to 7125 MHz** upon finalisation of the policy governing IMT usage. Such vacation shall be subject to and carried out in accordance with the provisions and procedures under the Act and its subsidiary legislation including the Communications and Multimedia (Spectrum) Regulations 2000 ("**Spectrum Regulations**"). Accordingly, this SRSP incorporates the relevant provisions to facilitate potential adoption of IMT within the frequency band of **7111 MHz to 7425 MHz**.

2. ABBREVIATIONS

AA	Apparatus Assignment
CA	Class Assignment
dBW	Decibel-watt
EIRP	Equivalent Isotropically Radiated Power
FACSMAB	Frequency Assignment Committee of Singapore, Malaysia and Brunei Darussalam
FS	Fixed Service
FSS	Fixed Satellite Service
FWS	Fixed Wireless System
GHz	Gigahertz
ITU	International Telecommunication Union
ITU-R	ITU Radiocommunication Sector
JCC	Joint Committee on Communications between the Republic of Indonesia and Malaysia
JTC	Joint Technical Committee on Coordination and Assignment of Frequencies along Malaysia–Thailand Common Border
km	kilometre
MHz	Megahertz
NA	Not Applicable
NFP(I)	Network Facilities Provider (Individual)
RF	Radio Frequency
RR	Radio Regulations
SRSP	Standard Radio System Plan
TRILATERAL	Trilateral Coordination Meeting between the Republic of Indonesia, Malaysia and Singapore
TX/RX	Transmit and Receive
WRC-23	World Radiocommunication Conference 2023

3. INTENT

- 3.1 This SRSP is intended to ensure efficient provision of FWS in Malaysia with minimal service disruption and RF interference among the service providers.
- 3.2 This SRSP provides the minimum requirements for the utilisation of FWS in the said band for the digital transmission of FWS.
- 3.3 The intended use of this FWS is for transport (trunking) and mobile backhaul networks only.

4. GENERAL

- 4.1 The technical characteristics of the FWS equipment shall conform to all applicable Malaysian standards and international standards, including the ITU and its RR as agreed and adopted by Malaysia.
- 4.2 Although the FWS shall conform to the requirements of this SRSP, MCMC may require that modifications be made to the system whenever interference is caused or is likely to be caused to other radio stations or systems of services as listed in the Spectrum Plan.
- 4.3 For avoidance of doubt, MCMC shall not be responsible for any costs incurred as a result of the system modification. The cost of modification shall be fully borne by the assignment holder.
- 4.4 All FWS communications equipment installations shall comply with all requirements as specified in the applicable standards.
- 4.5 The FWS communications equipment used shall be certified under **regulation 14** of the Communications and Multimedia (Technical Standards) Regulations 2000.

- 4.6 The allocation, requirements and information in this SRSP are subject to further review by MCMC from time to time to reflect new developments on the use of the said band in the communications and multimedia industry.

5. CHANNEL ARRANGEMENT

- 5.1 The allocation of services within the said band is described in the Spectrum Plan.
- 5.2 Referring to the **sections 1.4** and **1.5** above, this SRSP will incorporate the corresponding revision to the channel arrangements in the frequency range from **7111 MHz to 7125 MHz** as shown in **Tables 1 to 4** of **APPENDIX A** of this SRSP.
- 5.3 For this SRSP, the preferred RF channel arrangement for the system operating in the said band, is derived as follows:

Let:

f_0 be the frequency of the centre of the band of frequencies occupied (MHz) where $f_0 = 7268$ MHz;

f_n be the centre frequency of one (1) RF channel in the lower half of the frequency band (MHz); and

f'_n be the centre frequency of one (1) RF channel in the upper half of the frequency band (MHz).

- 5.4 The separation between the corresponding transmit and receive is 168 MHz, 161 MHz and 154 MHz. The frequencies of individual channels are expressed by the following relationships:

For Tx/Rx separation of 168 MHz and channel spacing of 7 MHz, 14 MHz and 28 MHz:

lower half of the band:	$f_n = f_0 - 168 + (7 \text{ or } 14 \text{ or } 28) n \text{ MHz}$	For channel bandwidth 7MHz, $n = 2, 3, 4, 5 \dots 21$; For channel bandwidth 14MHz, $n = 1, 2, 3, 4 \dots 10$; For channel bandwidth 28MHz, $n = 1, 2, 3, 4, 5$
upper half of the band:	$f'_n = f_0 + (7 \text{ or } 14 \text{ or } 28) n \text{ MHz}$	

For Tx/Rx separation of 161 MHz and channel spacing of 7 MHz, 14 MHz and 28 MHz:

lower half of the band:	$f_n = f_0 - 161 + (7 \text{ or } 14 \text{ or } 28) n \text{ MHz}$	For channel bandwidth 7MHz, $n = 2, 3, 4, 5 \dots 21$; For channel bandwidth 14MHz, $n = 1, 2, 3, 4 \dots 10$; For channel bandwidth 28MHz, $n = 1, 2, 3, 4, 5$
upper half of the band:	$f'_n = f_0 + (7 \text{ or } 14 \text{ or } 28) n \text{ MHz}$	

For Tx/Rx separation of 154 MHz and channel spacing of 35 MHz:

lower half of the band:	$f_n = f_0 - 168 + 35 n$ MHz	For channel bandwidth 35MHz, $n = 1, 2, 3,$ and 4
upper half of the band:	$f'_n = f_0 - 14 + 35 n$ MHz	

- 5.5 The channel arrangement is shown in **Figure 1** and **Tables 1 to 4** of **APPENDIX A** of this SRSP.
- 5.6 Up to nine (9) go and nine (9) return channels for 28 MHz systems may be used through the combined application of main and interleaved radio frequency channels, subject to technical justification. A complete channelling arrangement for multi-hop radio-relay systems using both main and interleaved channels is shown in **Figure 2** of **Appendix A**.

6. REQUIREMENTS FOR USAGE OF SPECTRUM

- 6.1 This SRSP covers the minimum requirements to be followed by the assignment holders to ensure efficient use of the said band.
- 6.2 The allocation of spectrum and services within the said band is described in the Spectrum Plan.
- 6.3 The minimum path length requirement for FWS in the said band **shall be 20 km²**.
- 6.4 The channel arrangements and the usage of the transmit and receive channels shall comply with **section 5** of this SRSP.

² Use of path length less than as specified in section 6.3 may be considered on a case by-case basis by MCMC.

6.5 The FSS³ at the designated hub stations are given priority over FWS in the said band, with the additional sharing condition as stipulated in **Table 5**:

Frequency Band (MHz)	Sharing conditions
7250 – 7425	<ul style="list-style-type: none"> • Priority to the FSS at the designated hub stations only. • No new FWS is allowed within a 10 km radius from the designated hub stations only.

Table 5: Sharing Conditions for FS in the 7250 MHz to 7425 MHz band

6.6 MCMC may review this priority, considering the market and technological developments.

6.7 The FWS of FS shall not interfere with the hub stations of FSS in the said band and shall comply with **Article 21** of the ITU RR, **Recommendations ITU-R SF.765** and **ITU-R SM.1540**.

6.8 Special care shall be taken by FWS service providers during the network planning stage and installation of their communications equipment to avoid any interference to and from other primary services. The FWS service providers shall take full advantage of interference mitigation techniques such as antenna discrimination, antenna tilting, antenna polarisation, frequency discrimination, shielding/blocking (introduction of diffraction loss), site selection, and/or power control to facilitate coordination of the relevant systems.

6.9 FWS receiving stations operating in the said band should avoid directing their antennas towards the geostationary satellite orbit and earth stations. It is recommended to maintain a geographical separation between earth stations and terrestrial stations as indicated in **Article 21** of the ITU RR.

³ **MLA58B** of the Spectrum Plan - Priority to Fixed Satellite Service, Earth Exploration Satellite Service, and Meteorological Satellite Service at designated hub stations only.

7. PRINCIPLES OF ASSIGNMENT

- 7.1 Authorisation of the use of the said band for the FWS station shall be by way of an AA.
- 7.2 The eligibility criteria of applicants for the submission of AA applications are as follows:
 - 7.2.1 NFP(I) licence holder, which owns or provides radiocommunications transmitters and links; or
 - 7.2.2 private network facility (Government and private corporations or companies) for private use only.
- 7.3 For the use by private network facility other than offshore, the applicant shall provide proof that the existing NFP(I) licence holders are not able to provide FWS station to the said applicant.
- 7.4 Applicants are required to submit:
 - 7.4.1 AA application for the apparatus by using the prescribed AA form in accordance with the Act, relevant subsidiary legislations including Spectrum Regulations, Spectrum Plan and any relevant instruments issued by MCMC, including any amendments made to the same; and
 - 7.4.2 Any other additional document and/or information that may be requested by MCMC.
- 7.5 The issuance of an AA shall be subject to all conditions as specified in **regulations 9, 10 and 22** of the Spectrum Regulations and any further assignment conditions as may be imposed by MCMC from time to time.
- 7.6 The issuance of an AA will also be subject to technical analysis and evaluation by MCMC. If necessary, operator-to-operator coordination at defined geographic boundaries may be required to reduce interference.

7.7 An applicant is encouraged to coordinate among existing operators of FWS stations in the same frequency band prior to the submission of the AA application.

7.8 The AA shall be assigned based on a first-come, first-served basis.

8. COORDINATION REQUIREMENT

8.1 The use of the said band shall require coordination with the relevant neighbouring countries within the following coordination distances and shall be subject to the following agreed operational limit:

Border Agreement	Maximum EIRP (dBW)	Coordination Distance
FACSMAB	< 52 dBW	30 km
	> 52 dBW	50 km
JCC	< 52 dBW	30 km
	> 52 dBW	50 km
JTC	NA	35 km
TRILATERAL	< 52 dBW	30 km
	> 52 dBW	50 km

Table 6: Operational limit for coordination parameters

8.2 In the event there is no agreement on the coordination distance, a distance within 50 km from the border of the neighbouring countries will be applied.

8.3 It shall be noted that the coordination distance and parameters are continuously being reviewed with relevant Malaysia's neighbouring countries and may be updated from time to time.

- 8.4 Issuance of an AA is also subject to successful coordination with the above neighbouring countries, where applicable.
- 8.5 The technical mitigation guide, as mentioned in **sections 6.8 to 6.9** above, shall be applied if operator-to-operator coordination is required.
- 8.6 In the event of any interference, the affected assignment holder shall carry out an operator-to-operator coordination and frequency scanning. If the interference remains unresolved after 24 hours, the affected parties may escalate the matter to MCMC for a resolution. MCMC will decide on the necessary modifications and schedule of modifications to resolve the interference dispute. MCMC will be guided by the interference resolution process as shown in **APPENDIX B** of this SRSP.
- 8.7 For avoidance of doubt, MCMC shall not be responsible for any cost incurred as a result of the coordination requirement as stipulated in this **section 8**. The cost in respect of the coordination requirement shall be fully borne by the assignment holders.

9. IMPLEMENTATION

- 9.1 This SRSP shall take effect from the date of its issuance.
- 9.2 Any new FWS installations carried out after the issuance date of this SRSP shall adhere to the requirements stipulated herein.
- 9.3 Additionally, the assignment holders shall ensure that **sections 1.4 and 1.5** are duly considered in the planning of their FWS systems.

10. REVOCATION

- 10.1 The MCMC SRSP-514 FS Issue 3 dated 15 October 2009 is hereby revoked.

11. REFERENCES

- i. **Spectrum Plan**
- ii. **ITU Radio Regulations Article 21** Terrestrial and space services sharing frequency bands above 1 GHz
- iii. **Recommendation ITU-R F.385** Radio-frequency channel arrangements for high-capacity fixed wireless systems operating in the 7110 – 7900 MHz band
- iv. **Recommendation ITU-R F.592** Vocabulary of terms for the fixed service
- v. **Recommendation ITU-R F.746** Radio-frequency arrangements for fixed service systems
- vi. **Recommendation ITU-R SF.765** Intersection of radio-relay antenna beams with orbits used by space stations in the fixed-satellite service
- vii. **Recommendation ITU-R SM.1540** Unwanted emissions in the out-of-band domain falling into adjacent allocated bands

APPENDIX A: CHANNEL ARRANGEMENT

RF channel arrangements for FWS operating in the 7111 MHz to 7425 MHz frequency band:

Figure 1
Alternated channel arrangement
(All frequencies in MHz)

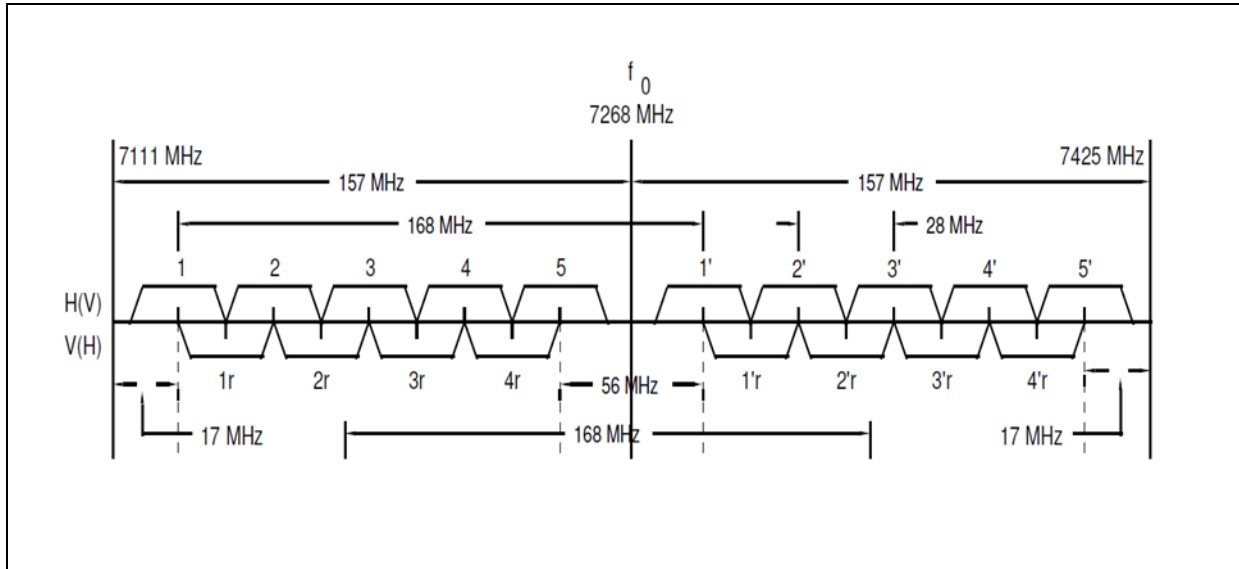


Figure 2
Radio Frequency Channel Arrangement for Multi-hop System
(Bandwidth greater than **14 MHz** and equal or less than **28 MHz**)

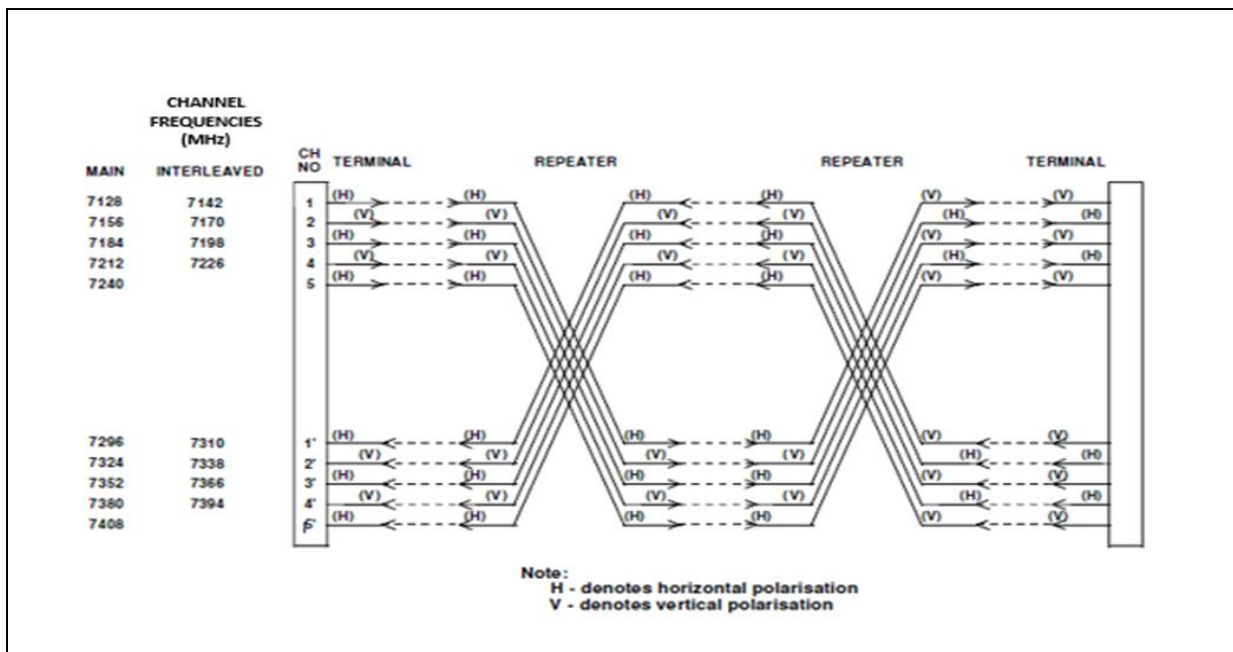
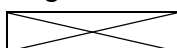


Table 1
 RF Carrier Centre Frequencies
 (bandwidth = **7 MHz**, **14MHz** and **28 MHz**)
 Tx/Rx separation of **168 MHz**

Channel No.	Bandwidth = 7MHz		Bandwidth = 14MHz		Bandwidth = 28MHz	
	Frequency (MHz)		Frequency (MHz)		Frequency (MHz)	
	Transmit (f_n)	Received (f'_n)	Transmit (f_n)	Received (f'_n)	Transmit (f_n)	Received (f'_n)
1	7114	7282	7128	7296	7128	7296
2	7121	7289	7142	7310	7156	7324
3	7128	7296	7156	7324	7184	7352
4	7135	7303	7170	7338	7212	7380
5	7142	7310	7184	7352	7240	7408
6	7149	7317	7198	7366		
7	7156	7324	7212	7380		
8	7163	7331	7226	7394		
9	7170	7338	7240	7408		
10	7177	7345	7254	7422		
11	7184	7352				
12	7191	7359				
13	7198	7366				
14	7205	7373				
15	7212	7380				
16	7219	7387				
17	7226	7394				
18	7233	7401				
19	7240	7408				
20	7247	7415				
21	7254	7422				

Legend:

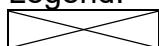


Shall not be used by new FWS installation after the issuance of this SRSP

Table 2
 RF Carrier Centre Frequencies
 (bandwidth = **7 MHz**, **14MHz** and **28 MHz**)
 Tx/Rx separation of **161 MHz**

Channel No.	Bandwidth = 7MHz		Bandwidth = 14MHz		Bandwidth = 28MHz	
	Frequency (MHz)		Frequency (MHz)		Frequency (MHz)	
	Transmit (f_n)	Received (f'_n)	Transmit (f_n)	Received (f'_n)	Transmit (f_n)	Received (f'_n)
1	7114	7275	7121	7282	7135	7296
2	7121	7282	7135	7296	7163	7324
3	7128	7289	7149	7310	7191	7352
4	7135	7296	7163	7324	7219	7380
5	7142	7303	7177	7338	7247	7408
6	7149	7310	7191	7352		
7	7156	7317	7205	7366		
8	7163	7324	7219	7380		
9	7170	7331	7233	7394		
10	7177	7338	7247	7408		
11	7184	7345				
12	7191	7352				
13	7198	7359				
14	7205	7366				
15	7212	7373				
16	7219	7380				
17	7226	7387				
18	7233	7394				
19	7240	7401				
20	7247	7408				
21	7254	7415				

Legend:

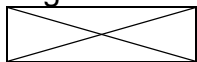


Shall not be used by new FWS installation after the issuance of this SRSP

Table 3
 RF Carrier Centre Frequencies
 (bandwidth = **35 MHz**)
 Tx/Rx separation of **154 MHz**

Transmit		Receive	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
1	7135	1'	7289
2	7170	2'	7324
3	7205	3'	7359
4	7240	4'	7394

Legend:



Shall not be used by new FWS installation after the issuance of this SRSP

Table 4
 Channel Polarisation Arrangement

Polarization	Frequency				Correspond Frequency			
H(V)	1	3	5	7	1'	3'	5'	7'
V(H)	2	4	6	8	2'	4'	6'	8'

APPENDIX B: INTERFERENCE RESOLUTION PROCESS

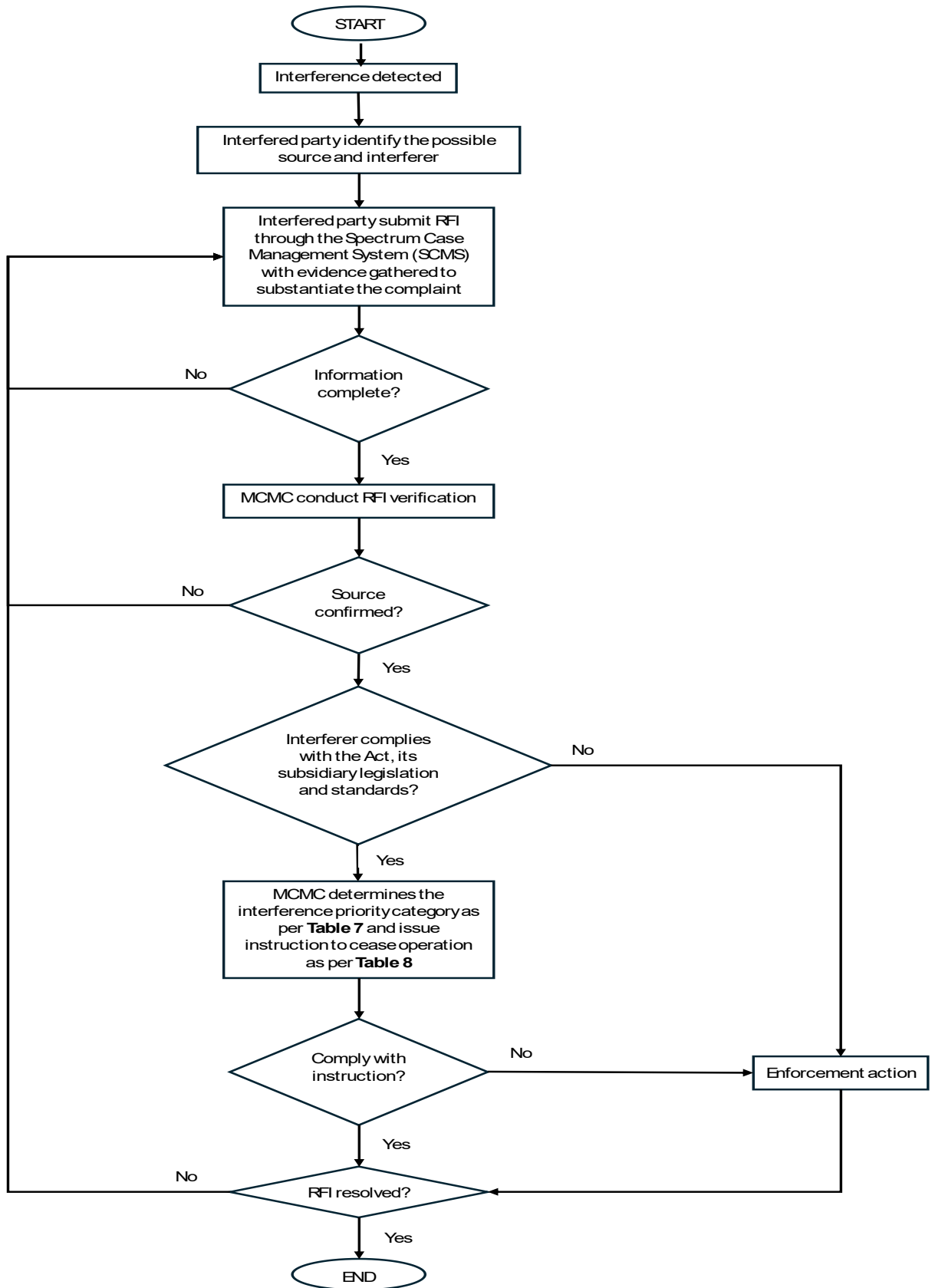


TABLE 7 : INTERFERENCE RESOLUTION PRIORITY

No.	Resolution Type of Priority	Description
1.	Service Priority	Primary services have priority over secondary services. Among co- primary or co-secondary services, the stated priority is accorded as provided in the Spectrum Plan.
2.	Assignment Type Priority	SA and AA have equal priority but are of higher priority than CA.
3.	Service Type Priority	In the event where service priority and assignment type priority are equal for affected parties, the following list will determine the priority level for the interference case (the earlier in the list is given higher priority): <ul style="list-style-type: none"> i. safety or radionavigation service; and ii. based on the date of the AA - Priority is given to the earliest/first installation.

TABLE 8 : INTERFERENCE RESOLUTION TIMELINE TO PARTIES

No.	Types of interference	Description	Resolution Timeline
1.	Harmful	Interference which endangers or seriously degrades, obstructs or repeatedly interrupts the functioning of a radionavigation service or one or more safety services operating in accordance with the Spectrum Regulations.	To cease* operation immediately within 24 hours or earlier as specified in the notice issued by MCMC.
2.	Major	Electromagnetic interference rendering any apparatus or service unsuitable for its purpose or which degrades or obstructs, or repeatedly interrupts any other radiocommunications service operating, in accordance with the Spectrum Regulations.	To cease* operation within 3 days or earlier as specified in the notice issued by MCMC if interference cannot be resolved.
3.	Minor	Electromagnetic interference which does not affect the overall operation of any radiocommunications transmission.	To cease* operation within 7 days or earlier as specified in the notice issued by MCMC if interference cannot be resolved.

*Note:

Resumption of operation of the apparatus is not allowed unless the assignment holder submits an interference resolution or a mitigation plan and has completed the implementation of the mitigation plan to remove/avoid the interference to the satisfaction of MCMC.