20th Asian Games
Aichi-Nagoya 2026

Spectrum Management Plan for the Aichi-Nagoya 2026 Asian Games

AINAGOC

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Contents

1. Introduction

1.1 About the Aichi-Nagoya 2026 Asian Games

The 20th Asian Games Aichi-Nagoya (Aichi-Nagoya 2026) (hereinafter, the Aichi-Nagoya 2026 Asian Games) will be held from 19 September to 4 October. The competitions will be held mainly in Aichi, which is the host city of the Aichi-Nagoya 2026 Asian Games, while some competition will be staged at competition venues located in vicinity prefectures of Aichi as Gifu. There will be competition venues located in Kanto area, Kinki area, and Shizuoka Prefectures. AINAGOC, with the advice of the Ministry of Internal Affairs and Communications (hereinafter MIC),which is the competent authority for spectrum assignment in Japan, will carry out spectrum coordination, radio station licence applications (including registration procedures for radio stations that do not require a licence but require registration), and authorisation of wireless spectrum use within the competition venues and other managed areas.

1.2 Objectives of this document

This document establishes the spectrum management policy for the Aichi-Nagoya 2026 Asian Games, based on the advice of MIC, the experience of spectrum use in past Olympic and other major international sport events and the status of currently assigned spectrum in Japan.

As to the spectrum assignment for the Aichi-Nagoya 2026 Asian Games, AINAGO should ensure that harmful interference is avoided not only among the radio systems operated by the stakeholders, but also between the systems operated by the stakeholders and other wireless systems already in operation

nationwide.

To avoid such harmful interference, AINAGOC should also conform to the applicable Japanese Radio Act and, with the cooperation of MIC, implement appropriate spectrum management for the Aichi-Nagoya 2026 Asian Games.

Regardless of the usage conditions for assignable frequencies indicated in this document, to ensure the smooth use of radio equipment during the Aichi-Nagoya 2026 Asian Games, the wireless systems available for use and the frequencies eligible for application will be published in the Spectrum Application Guide.

1.3 Spectrum usage status in the host city

Aichi･Nagoya, the host city, is a hub of industrial activities with high use of radio spectrum. Additionally, the Aichi-Nagoya is located in the Nobi Plain and faces Ise Bay, making it an environment where radio waves propagate over a wide area. As a result, difficulties in the spectrum assignment are envisaged. Furthermore, since the major competition venues are located within 15 km of the Mizuho Park Athletic Stadium, the re-use of spectrum will be limited.

Approximately 460,000 (as of the end of September 2024) radio stations are in operation in the Tokai region, including Aichi-Nagoya. Also, the use of radio spectrum has been accelerating with the advent of IoT and the proliferation of mobile phones.

For the above reasons, AINAGOC strongly requests stakeholders to use a wired communication system wherever possible, in particular for wireless microphones, wireless cameras, and the use of the radio spectrum should be limited to case where wired communication systems cannot be used at the Aichi-Nagoya 2026 Asian Games.

1.4 Subject of spectrum coordination and radio station licence

In Japan, in principle, a licence is necessary to operate wireless systems. For the Aichi-Nagoya 2026 Asian Games, AINAGOC will obtain the radio station licences collectively for the wireless systems used by stakeholders.

With the advice of MIC, AINAGOC will conduct spectrum coordination to avoid harmful interference between the wireless systems used by stakeholders, and those already in operation in Japan.

In addition, AINAGOC will undertake spectrum coordination to avoid harmful interference among the wireless systems used by stakeholders, and will require stakeholders to obtain authorisation from AINAGOC for the wireless systems to be used in venues and other managed areas.

Stakeholders shall, in principle, use only those wireless systems authorised by AINAGOC within areas managed by AINAGOC.

1.5 Scope of spectrum coordination and authorisation by AINAGOC

All wireless equipment must brought into area managed by AINAGOC must, in order to avoid harmful interference, undergo spectrum coordination and authorisation by AINAGOC in advance, based on the procedure of “Spectrum Application” in Chapter 3.

Under the Japanese Radio Act, certain radio stations that conform to the prescribed technical standards and use the specified spectrum that is designated by the Act are require to apply for a radio station licence (hereinafter “radio station that do not require a licence, see Section 1.5.3).” However, for the Aichi-Nagoya 2026 Asian Games, even such stations will, in

principle be required to obtain prior authorisation from AINAGOC to use them in the competition venues and its vicinity.
AINAGOC recognises that there would be wireless equipment that would be excluded from authorisation by AINAGOC.

1.5.1 Wireless equipment requiring authorisation by AINAGOC

Regardless of radio station licences obtained in Japan or outside Japan, all wireless equipment require authorisation from AINAGOC unless otherwise specified. Representative examples include wireless camera, point-to-point link, video link, wireless microphones/In-Ear Monitor (IEMs), talkback system (intercom), handheld radio, landmobile radio, telemetry/telecommand and low-capacity data transmission, digital still camera, wireless LAN and data transmission and satellite communication are subject to authorisation. All wireless equipment cannot be used within and around the venue without the authorisation of AINAGOC unless otherwise specified.

1.5.2 Wireless equipment that does not require authorisation by AINAGOC

Regardless of radio station licences obtained in Japan or outside Japan, all wireless equipment requires the relevant authorisation procedure from AINAGOC unless otherwise specified.
However, the following wireless equipment does not require authorisation.

- Mobile phones whose services are provided by Japanese telecommunication operator
- Mobile phones brought from overseas conforming to the technical standard (international standard) equivalent to the technical standard prescribed in the Japanese Radio Act and used for international roaming service or using SIM cards of Japanese telecommunications operators

1.5.3 Radio stations that do not require a radio station licence application

A licence (or registration) must be obtained from the Minister for Internal Affairs and Communications in order to establish a radio station.
However, extremely low power radio stations and specified radio stations that operate for a certain purpose and using wireless equipment under certain conditions do not require a radio station licence (or registration).
The following types of radio stations do not require a radio station licence (or registration).

(1) Radio stations operating with extremely low power of emission

Radio stations operating with extremely low power of emission as specified in the ministerial ordinance of the Ministry of Internal Affairs and Communications. These include radio communication devices to operate model toys and wireless microphones

(2) Citizen radio stations

Radio stations that operate in the frequency band of 26.9MHz and 27.2MHz with Transmission power of 0.5 watts or less as specified in the applicable ministerial ordinance of the Ministry of Internal Affairs and Communications, and have obtained the Technical Regulations Conformity Certification.

(3) Radio stations with low Transmission power

Radio stations such as cordless phones, low radio data communication systems, 5.2GHz High-Power data communication systems mobile land stations, digital cordless phones, PHS mobile land communications, electronic toll collection (ETC) mobile land stations, wireless card systems, Specified low-power radio stations that operate under certain circumstances for a specific purpose and fulfil all of the following conditions.

- Transmission power of 1 watt or less.

- Use of radio type and frequency as specified in the ministerial ordinance of the Ministry of Internal Affairs and Communications.
- Automatically sends or receives call signs or call names and does not disturb the operations of the radio stations.
- Only uses **wireless equipment with the Technical Regulations Conformity Certification**.

2. Frequency map

AINAGOC presents below the usage conditions of each wireless equipment, including available frequency bands.

2.1 Video link

2.1.1 Wireless Camera

A wireless camera is used for broadcasting purposes. RHBs (Rights-Holding Broadcasters) are expected to cover at the Aichi-Nagoya 2026 Asian Games. While not all, some broadcasters are expected to request the use of wireless cameras.

In Japan, the 1.2 GHz and 2.3 GHz bands are primarily allocated for broadcast radio stations (FPU: Field Pick-up Unit). Since no frequency bands are allocated for wireless cameras brought from overseas, the frequency arrangement for wireless camera usage will be coordinated based on advice from MIC.

The wireless camera is more susceptible to interference compared to other devices, and actual wireless cameras have a rather large side lobe level that affect adjacent channels, so it is foreseen that the actual frequency allocation will be very difficult. Therefore, AINAGOC proposes the following:

- Use wired cameras as much as possible, and limit wireless camera use only when it is not possible to use a wired camera.
- Use high performance filters.
- To reduce interference as much as possible, operate with the minimum transmission power necessary by properly arranging the transmitter/receiver of the wireless camera.
- Since mobile phone systems often use adjacent frequencies, secure proper distance from mobile base stations and spectators' seats.

Additionally, domestic RHBs are expected to request the use of licenced

equipment for broadcast radio stations (FPU).

2.1.2 Point to Point

A Point to Point link would be used to connect outdoor studios or remote cameras to the Main Media Centre, or outdoor remote cameras to a broadcast van. Though the need for P-P links has decreased over the years with the emergence of optical fibre, the optical fibre connection may not always be available.

For Point- to-Point links, AINAGOC has selected candidate frequency bands used for fixed links or for fixed wireless access (FWA), as indicated in Table 2.1.2. Stakeholders are required to apply for the use of frequencies for the Point-to-Point communication in accordance with the separately published "Spectrum Application Guide".

For Point-to-Point links, AINAGOC recommends the use of the less congested bands of 10GHz or higher to reduce coordination with wireless cameras.

Table2.1.2 Candidate frequency bands to be assigned to point-to-point links

Band	Spectrum [GHz]		Technical specification/ Operating conditions
	From	To	
18GHz (a)	17.7	18.72	Channel bandwidth and transmission power vary depending on the mode of use of each radio. Frequency allocation will be determined from the frequency range that meet the requirements of each individual application.
18GHz(b)	19.22	19.7	
80GHz(a)	71.1922	76.197	
80GHz(b)	81.38	86.385	

2.1.3 Video link (Do not require a licence)

Wireless equipment with the approval seal showing that it conforms to the technical standards stipulated in the Japanese Radio Act and operated within the spectrum in Table 2.1.3 does not require a radio station licence. However,

authorisation from AINAGOC to use these devices in/around the venues must still be obtained in order to avoid the risk of potential interference.

It should be noted that the do not require a licence could be subject to interference from other stations unrelated to the Games operation that are located outside of the Games venue which AINAGOC and MIC have no control over.

It is highly recommended to refrain from transmitting video by wireless equipment (Wi-Fi*) in the band of 2.4GHz and 5GHz because the traffic would be highly congested.

*Applications and authorisation from AINAGOC are required even for Wi-Fi equipment.

Table2.1.3 Frequency bands of video links (Do not require a licence)

Band	Spectrum [GHz]		Technical specification/ Operating conditions
	From	To	
60GHz*	57	66	・Channel spacing:[IEEE802.11ad] 2.16GHz ・Channel bandwidth: 9GHz or less ・Transmission power: 10mW or less/ above 10mW - 250mW or less

(*) e.g. IEEE 802.11ad

2.2 Wireless microphone/In-Ear Monitors (IEMs)

2.2.1 Wireless microphone/In-Ear Monitors (IEMs)

At the Aichi-Nagoya 2026 Asian Games, wireless microphones with high quality

sound and in-ear monitors (hereinafter “IEMs”) with similar audio quality will require substantial bandwidth. These wireless microphones/IEMs would be used for:

Wireless microphones/IEMs require a channel with a bandwidth of 100-300 kHz, which is wider than other sound transmission, and therefore the spectrum bands to be assigned for those purposes would be limited

The spectrum bands usually assigned for wireless microphones/IEMs in Japan are 710-714MHz, 806-810MHz, and 1.2 GHz bands as shown in Table 2.2.1, frequency bands for TV white space (WS), below. Basically, the Aichi-Nagoya 2026 Asian Games will assign these same spectrum bands for microphones/IEMs to avoid harmful interference.

The following points should be considered for usage of these bands:

- Many of the bands mentioned above are also assigned to terrestrial TV broadcast. (In Japan, a channel for terrestrial TV broadcast that can be used for other purposes without affecting terrestrial TV broadcast is often called a "white space".) In the Aichi area, the lower spectrum of UHF band is assigned to terrestrial digital TV broadcast service and millions of homes receive the signal. Therefore, it would be extremely difficult to assign frequency that actually overlap frequencies used for terrestrial digital TV broadcast services to wireless microphones/IEMs
- It is anticipated that the demand for spectrum for wireless microphones/IEMs at music concerts and theatres in and around the Aichi area will increase during the Aichi-Nagoya 2026 Asian Games

Considering the above, AINAGOC proposes the following to avoid the difficulty of assigning frequencies for wireless microphones/IEMs as much as possible.

- Use wired microphones as much as possible. Wireless microphones should be used only when wired microphones cannot be used
- Avoid using wireless microphones/IEMs where possible, especially in outdoor areas.
- Use digital wireless microphones/IEMs systems that are usually more tolerant

to interference

- Secure proper distance from mobile base stations and spectators' seats as mobile phone systems are often operated on adjacent frequencies
- Since analogue devices make efficient frequency allocation difficult due to third-order intermodulation, digital system are recommended.
- Operational coordination with users outside AINAGOC's management area will be carried out in cooperation with the applicant using the operational coordination system, with the support of the Council for TV White Space and other Utilization Systems.
- Wireless microphones using the wireless LAN band and DECT system will be restricted, as these bands are prioritized for other systems.

In the broadcast area covered by main or relay transmitting stations, the frequencies for those stations (see the note in Table 2.2.1) would be extremely difficult to assign to wireless microphones/IEMs.

Table2.2.1 Candidate Frequency bands to be assigned to wireless microphones/IEMs

Band	Spectrum [MHz]		Technical specification / Operating conditions	
	From	To	Difficulty	Condition Examples
WS※	470	710	Hard ・Coexistence with TV Broadcast Band (13-52ch) ・Available channels are designated for each venue ・Not available for Road races	[Analog] ・Channel bandwidth 250kHz or less ・Transmission power 10mW [Digital] ・Channel bandwidth 288kHz or less ・Transmission power 50mW <Others> Frequency usage will be coordinated between other domestic users and stakeholders of the Aichi-Nagoya 2026 Asian Games.

Band	Spectrum [MHz]		Technical specification / Operating conditions	
	From	To	Difficulty	Condition Examples
700MHz	710	714	Very Hard	[Analog] ・Channel bandwidth 250kHz or less ・Transmission power 10mW [Digital] ・Channel bandwidth 288kHz or less ・Transmission power 50mW <Others> Frequency usage will be coordinated between other domestic users and stakeholders of the Aichi-Nagoya 2026 Asian Games.
1.2GHz	1240	1260	Hard	[Analog] ・Channel bandwidth 250kHz or less ・Transmission power 50mW [Digital] ・Channel bandwidth 288kHz or less ・Transmission power 50mW <Others> Frequency usage will be coordinated among FPU users, other domestic users, and stakeholders of the Aichi-Nagoya 2026 Asian Games. <Others> Limited to wireless equipment that conforms to the Technical Regulations stipulated in the Japanese Radio Act.

〔NOTE〕

1. Channel bandwidth and transmission power are standard models

2.2.2 Wireless microphone/In-Ear Monitor (IEM) (Do not require a licence)

Wireless equipment with the approval seal showing that it conforms to the technical standards stipulated in the Japanese Radio Act and operated in the spectrum in Table 2.2.2 does not require a radio station licence. However, authorisation from AINAGOC to use these devices in/around the venues must still be obtained in order to avoid the risk of potential interference.
It should be noted that the do not require a licence could suffer interference from other stations unrelated to the Games operation that are located outside of the Games venue which AINAGOC and MIC have no control over.

Table2.2.2 Frequency bands of do not require a licence for wireless microphones/IEMs

Band	Spectrum [MHz]		Technical specification / Operating conditions	
	From	To	Difficulty	Condition examples
70MHz	74.58	74.76	Very Hard	・Channel bandwidth 60kHz or less ・Transmission power 10mW ・Simultaneous use: up to 3 frequencies <Others>Frequencies may be shared with other domestic users or stakeholders of the Aichi-Nagoya 2026 Asian Games.
322MHz	322.025	322.150	Very Hard	・Channel bandwidth 30kHz or less ・Transmission power 1mW ・Simultaneous use: up to 3 frequencies <Others> Frequencies may be shared with other domestic users or
	322.250	322.400		

Band	Spectrum [MHz]		Technical specification / Operating conditions	
	From	To	Difficulty	Condition examples
				stakeholders of the Aichi-Nagoya 2026 Asian Games
800MHz	806.125	809.750	Normal	[Analog] ・Channel bandwidth 110kHz or less ・Transmission power 10mW [Digital] ・Channel bandwidth 192kHz or less ・Transmission power 10mW <Others> Frequencies may be shared with other domestic users or stakeholders of the Aichi-Nagoya 2026 Asian Games

〔NOTE〕

1. The occupied frequency bandwidth and Transmission power are set as standard models.

2.3 Talk back system（intercom）

2.3.1 Talk back system （intercom）

The talk back system (intercom) is used primarily by broadcasters for communication between the director of activities and the members of the production team such as presenters, interviewers, cameramen, sound operators, lighting operators and engineers.

Talk back provides two-way simultaneous communications and as such requires spectrum for two channels as a duplex or semi-duplex pair. The voice delay is small compared with that of a one-way handheld radio.

Table 2.3.1 shows detailed information regarding possible frequency bands assigned to the talk back system (intercom) indicated in the basic spectrum plan. Some spectrum and/or bands might be shared with handheld radios or telemetry and low-capacity data transmissions.

Table 2.3.1 Candidate frequency bands to be assigned to the talk back system (intercom)

Spectrum [MHz]		Technical specification / Operating conditions
From	To	
142	144	・Limited to frequencies allocated by MIC ・Channel bandwidth 12.5kHz or less（or channel width 20KHz） ・Transmission power 1-5W <Others> Frequencies may be shared with other domestic users or stakeholders of the Aichi-Nagoya 2026 Asian Games.
146	162.0375	
360	390	
400	420	
440	470	

〔NOTE〕

1. Channel bandwidth and transmission power are standard models
2. Frequencies are limited to those allocated by MIC, and not all of the indicated frequencies may be used.

2.3.2 Talkback systems (intercoms) (Do not require a licence)

Wireless equipment with the approval seal to conform to the technical standards stipulated in the Japanese Radio Act and operated in the spectrum in Table 2.3.2 does not require a radio station licence.

However, authorisation from AINAGOC to use these devices in/around the venues must still be obtained in order to avoid the risk of potential interference. It should be noted that the do not require a licence radio could suffer a possibility of interference from other stations unrelated to the Games operation that are located outside of the Games venue which AINAGOC and MIC have no control over.

Table 2.3.2 Frequency bands of do not require a licence for the talk back system (intercom)

Type	Spectrum [MHz]		Technical specification / Operating conditions
	From	To	
Digital Cordless	1893.650	1905.950	・Channel bandwidth 288kHz ・Transmission power 10mW or less <Others> Frequencies may be shared with other domestic users or stakeholders of the Aichi-Nagoya 2026 Asian Games Limited to wireless equipment that conforms to the Technical Regulations stipulated in the Japanese Radio Act.

DECT	[Centre frequency] 1885.248、1886.976 1888.704、1890.432 1892.160、1893.888 1895.616、1897.344 1899.072、1900.800 1902.528、1904.256	・The centre frequency is automatically selected based on carrier sense (in accordance with the Technical Regulations) ・Channel bandwidth 1728MHz ・Transmission power 7mW or less <Others> Frequencies may be shared with domestic Digital Cordless users or stakeholders of the Aichi-Nagoya 2026 Asian Games. Frequencies may be shared with other domestic users or stakeholders of the Aichi-Nagoya 2026 Asian Games. Limited to wireless equipment that conforms to the Technical Regulations stipulated in the Japanese Radio Act.

2.4 Handheld Radio（Walkie-Talkies）

2.4.1 Handheld Radio（Walkie-Talkies）

Handheld Radio (Walkie-Talkies) is a mobile communication tool used for broadcast relay, news gathering, operation of competitions and ceremonies. Primarily voice-based, it is expected to use a press-to-talk system, except for talkback applications.

The VHF or UHF frequency bands suitable for such handheld radios are already heavily used by high number of users. Additionally, these bands are expected to be allocated for talkback, telemetry, telecommand, and low-capacity data transmission for the competition.

A digital system is recommended to facilitate the spectrum assignment and to avoid interference. However, the digital system generates an audio delay of about 100ms to 500ms (in rare cases, up to 1000ms), analogue frequencies may be requested when such a delay is unacceptable.

Table 2.4.1.1 shows detailed information regarding the possible frequency bands assigned to handheld radio indicated in the basic spectrum plan. AINAGOC will take appropriate measures to obtain the licence and avoid interference.

The transmission power may vary by usage, but high power should be avoided from the viewpoint of effective spectrum usage. Transmission power should be preferably no more than 1W or maximum 5W in special cases.

To avoid interference, wireless equipment requiring a radio station licence must be capable of being set to the designated specific frequency and must not be able to transmit on any other frequencies.

It is recognised that some radio equipment sold overseas, such as FRS(Family Radio Service), GMRS(General Radio Service), PMR446(Private Mobile Radio), UHF-CB(UHF-Citizen's Band Radio), and PRS(Personal Radio Service), is not suitable for obtaining a radio station licence in Japan.

Table 2.4.1.2 shows the usage conditions for Convenience Radios（Licence

Stations).

These are handheld radios for domestic use in Japan that operate on the frequencies indicated in Table 2.4.1.2 and are certified as compliant with the technical standards stipulated by the Radio Act of Japan. Such equipment requires a radio station licence. Communication is limited to other Convenience Radios (Licence Stations) belonging to the same licensee. Communication with radio stations of other companies, as well as lending or borrowing of radio stations, is prohibited. It is assumed that equipment for which a Convenience Radio (Licence Station) has already been obtained will be used.

It should be noted that Convenience Radios (Licence Stations) may experience interference from unrelated radio stations located outside the venues, which are not managed by AINAGOC or MIC.

Table 2.4.1.3 shows the usage conditions for Convenience Radios (Registered Stations).

These are handheld radios for domestic use in Japan that operate on the frequencies indicated in Table 2.4.1.3 and are certified as compliant with the technical standards stipulated by the Radio Act of Japan. While a licence is not required, usage is permitted upon completing a simple registration process.

In the case of Digital Convenience Radios (Registered Stations), usage by persons other than the registrant is permitted, and such equipment can also be used on a rental basis.

Since the procedure for obtaining a radio station licence is not required, it is recommended to use rental convenience radios (registered stations) available in Japan whenever possible.

It should be noted that licenced convenience radio stations may experience interference from unrelated radio stations outside the venues not managed by AINAGOC or MIC.

Table 2.4.1.1 Candidate frequency bands to be assigned to handheld radio

Spectrum [MHz]		Technical specification / Operating conditions
From	To	
142	144	・Limited to frequencies allocated by MIC （Excluding Table 2.4.1.2 licenced Convenience Radio Stations and Table 2.4.2.2 Registered Convenience Radio Stations） ・Channel bandwidth Analog 16kHz or less Digital 5.8kHz or less ・Transmission power 1-5W（In principle, 1w or less）
146	162.0375	
360	390	
400	420	
440	470	

〔NOTE〕The occupied frequency bandwidth and Transmission power are set as standard models.

A high demand is assumed for the spectrum bands shown in Table 2.4.1.1

Table 2.4.1.2 Outline of the Convenience Radio（Licenced）

Spectrum [MHz]		Technical specification / Operating conditions
From	To	
154.45	154.61	Analog Licenced Convenience Radio Station ・Channel bandwidth 16kHz or less（or channel width20KHz） ・Transmission power 1-5W（In principle,1W or less） <Others> Frequencies may be shared with other domestic users or stakeholders of the Aichi-Nagoya 2026 Asian Games Limited to radio equipment that conforms to the Technical Regulations stipulated in the Japanese Radio Act.

Spectrum [MHz]		Technical specification / Operating conditions
From	To	
154.44375	154.6125	Digital Licenced Convenience Radio Station ・Channel bandwidth 5.8kHz or less ・Transmission power 1-5W（In principle,1W or less） <Others> Frequencies may be shared with other domestic users or stakeholders of the Aichi-Nagoya 2026 Asian Games. Limited to radio equipment that conforms to the Technical Regulations stipulated in the Japanese Radio Act.
465.096875	465.090625	
467	467.4	

Table 2.4.1.3 Outline of the Convenience Radio（Registered）

Type	Spectrum [MHz]		Technical specification / Operating conditions
	From	To	
By registration	351.03125	351.1	・Digital ・Channel bandwidth 5.8kHz ・Transmission power 5W or less (In principle,1W or less) <Others> Frequencies may be shared with other domestic users or stakeholders of the Aichi-Nagoya 2026 Asian Games. Limited to radio equipment that conforms to the Technical Regulations stipulated in the Japanese Radio Act.
	351.2	351.63125	

Type	Spectrum [MHz]		Technical specification / Operating conditions
	From	To	
	351.10625	351.19375	・Digital ・Channel bandwidth 5.8kHz ・Transmission power 1W or less <Others> Frequencies may be shared with other domestic users or stakeholders of the Aichi-Nagoya 2026 Asian Games. Limited to radio equipment that conforms to the Technical Regulations stipulated in the Japanese Radio Act.

2.4.2 Handheld Radios (Walkie-Talkies) (Do not require a licence)

Wireless equipment that operates on the frequencies shown in Table 2.4.2.1 and is certified with the approval seal conforming to the technical standards stipulated in the Japanese Radio Act does not require a radio station licence. However, in order to avoid the risk of potential interference, applications to and authorisation from AINAGOC are required for the use of such equipment within or around the venues.

As the procedure for obtaining a radio station licence is not required, it is recommended to rent handheld Radios (Walkie-Talkies) that do not require a licence in Japan whenever possible.

It should be noted that the radios that do not require a licence could be subject to interference from other stations unrelated to the Games operation that are located outside of the Games venue which AINAGOC and MIC have no control over.

Table 2.4.2.1 Frequency band of do not require a licence handheld radio (Walkie-Talkies)

Type	Spectrum [MHz]		Technical specification / Operating conditions
	From	To	
Licence exempt	422.04	422.35	・Analog ・Channel bandwidth 8.5kHz ・Transmission power 10mWor less <Others> Frequencies may be shared with other domestic users or stakeholders of the Aichi-Nagoya 2026 Asian Games. Limited to wireless equipment that conforms to the Technical Regulations stipulated in the Japanese Radio Act.

2.5 Telemetry/telecommand and low-capacity data transmission

2.5.1 Telemetry/telecommand and low-capacity data transmission

Telemetry and telecommand are used to control equipment from a remote site and to transmit measurement results. Most of the low-capacity data transmission systems, including telemetry and telecommand, are expected to be used for such purposes as:

- to control wireless cameras, cable cameras and track cameras
- to control aerial cameras
- to measure and record competitions
- to control equipment for ceremonies

Systems for these services employ a variety of radio spectrum and bandwidths. They generally transmit low-capacity data using a narrow bandwidth. Systems that require a wide bandwidth transmit signals in a very short time using low transmission power.

Table 2.5.1 shows detailed information on the usage conditions for designated in the basic spectrum plan for telemetry, telecommand, and low-capacity data transmission.

The specific usage conditions are planned to be included in the Spectrum Application Guide. However, depending on the frequency band and propose of use, prior consultation may be required before applying for a frequency.

In addition to assignment for telemetry, telecommand, and low-capacity data transmission, it should be noted that when frequencies are assigned for transceivers, they share the same frequency bands as those for voice transmission listed in Table 2.4.1.1.

Table 2.5.1 Candidate frequency band for telemetry/telecommand

Spectrum [MHz]		Technical specification / Operating conditions
From	To	
138	144	Channel bandwidth and transmission power vary depending on the mode of use of each radio. Frequency allocation will be determined from the frequency range that meet the requirements of each individual application
146	170	
170	225	
335.4	380.2	
381.4	402	
406.1	420	
420	430	
440	470	
915	930	
2483.5	2497	

2.5.2 Telemetry, Telecommand, and Low-Capacity Data Transmission Stations (Do not require a licence)

Wireless equipment with the approval seal that shows it conforms to the technical standards stipulated in the Japanese Radio Act and operated in the spectrum in Table 2.5.2 does not require a licence. (For Wi-Fi, refer to the "Wireless LAN" chapter.)

However, authorisation from AINAGOC to use these devices in/around the venues must still be obtained in order to avoid the risk of potential interference. It should be noted that the do not require a licence could be subject to interference from other stations unrelated to the Games operation that are located outside of the Games venue which AINAGOC and MIC have no control over.

Table 2.5.2 Frequency of do not require a licence for telemetry/telecommand

Band	Spectrum [MHz]		Technical specification / Operating conditions
	From	To	
312MHz	312	315.05	・Digital ・Channel bandwidth 1MHz ・Transmission power 250μW or less (e.i.r.p)
	312.05	315.25	・Digital ・Channel bandwidth 1MHz ・Transmission power 25μW or less (e.i.r.p)
426MHz	・6.25kHz(*1) 426.028125 ・12.5kH(*1) 462.025 ・25kHz(*1) 426.0375	・6.25kHz(*1) 426.134375 ・12.5kH(*1) 426.1375 ・25kHz(*1) 426.1125	・Digital ・Channel bandwidth 5.8kHz / 8.5kHz / 16kHz ・Transmission power 100mW or less ・If the transmission power is not integrated into the same unit as the wireless equipment, the transmission power must be 1.637mW or less.
429MHz	・6.25kHz(*1) 429.178125 ・12.5kH(*1) 429.175	・6.25kHz(*1) 429.734375 ・12.5kH(*1) 429.7375	・Digital ・Channel bandwidth 5.8kHz / 8.5kHz ・Transmission power 1W or less If the transmission power is not integrated into the same unit as the wireless equipment, the transmission power must be 16.37mW or less.
	・6.25kHz(*1) 429.815625 ・12.5kH(*1) 429.8125	・6.25kHz(*1) 429.921875 ・12.5kHz(*1) 429.925	

Band	Spectrum [MHz]		Technical specification / Operating conditions
	From	To	
449MHz	・6.25kHz(*1) 449.840625 ・12.5kHz(*1) 449.8375	・6.25kHz(*1) 449.884375 ・12.5kHz(*1) 449.8875	・Digital ・Channel bandwidth 5.8kHz / 8.5kHz ・Transmission power 1W or less If the transmission power is not integrated into the same unit as the wireless equipment, the transmission power must be 16.37mW or less.
469MHz	469.4	469.5	・Digital ・Channel bandwidth 5.8kHz / 8.5kHz ・Transmission power 1W or less
920MHz	915.9	928.1	・Digital ・Channel bandwidth 100kHz or less/ 200kHzor less / 400kHzor less/ 600kHzor less/800kHzor less/1000kHzor less ・Transmission power in principle 1mW or less
	920.5	928.1	・Digital ・Channel bandwidth 100kHz or less /200kHzor less / 400kHzor less/ 600kHzor less/800kHzor less/1000kHzor less ・Transmission power in principle, 20mW or less

Band	Spectrum [MHz]		Technical specification / Operating conditions
	From	To	
	928.1	929.7	・Digital ・Channel bandwidth 100kHz or less /200kHz or less /300kHz or less / 400kHz or less / 500kHz or less ・Transmission power in principle, 1mW or less
1.2GHz(a)	・12.5kHz(*1) 1216.00625 ・25kHz(*1) 1216.0125 ・50kHz(*1) 1216	・12.5kHz(*1) 1216.99375 ・25kHz(*1) 1216.9875 ・50kHz(*1) 1217	・Digital ・Channel bandwidth 8.5kHz / 16kHz / 32kHz ・Transmission power 1W or less If the transmission power is not integrated into the same unit as the wireless equipment, the transmission power must be 16.37mW or less.
1.2GHz(b)	1252	1253	・Digital ・Channel bandwidth 8.5kHz / 16kHz / 32kHz ・Transmission power 1W or less If the transmission power is not integrated into the same unit as the wireless equipment, the transmission power must be 16.37mW or less.

(*1) Channel separation

2.6 Control and data transmission of digital still camera

A digital still camera is an equipment with a release trigger (shutter control) function or an image transmission function including a release trigger.

2.6.1 Wireless release trigger

The wireless release trigger is a device with the function of transmitting a control signal to turn on/off the release of the digital still camera (including a still camera). Setting data for the release (exposure control setting, aperture value, etc.) and the low-capacity data transmission function for control signals, including strobe synchronisation, are within the scope of control signals used to activate and deactivate the release.

Devices with data transmission functions other than control signals used to activate and deactivate the release (e.g., thumbnail and finder image) are excluded from the wireless release trigger, regardless of whether these functions are used or not, and will be treated as a wireless file transmitter as described in 2.6.2.

The use of wireless release trigger in designated areas requires an application for approval from AINAGOC.

When applying for the wireless release trigger, all frequency bands that can be transmitted from the equipment must be included. It should be noted that, even if the equipment is authorised for use, channel assignment in the venue may be coordinated by AINAGOC.

Candidate frequency bands for wireless release trigger are planned to be included in the Spectrum Application Guide.

2.6.2 Wireless file transmitter

A wireless file transmitter works with a digital still camera and transmits images and other data.
The wireless file transmitter can be a function built in to the digital still camera or it can be an accessory device. The digital still camera with a built-in wireless file transmitter should be regarded as a wireless file transmitter.
Details of Wireless file transmitter will be published in the updated version.

2.7 Wireless LAN and data transmission

Wireless LAN is a small-scale, large-capacity wireless system that does not require a licence used to access the Internet. Wireless LAN standardised by the Wi-Fi Alliance is widespread.
ZigBee and Bluetooth are widely used as well. Furthermore, there are many other data transmission systems with unique standards that are different from these standards.
Wireless LAN devices are internationally recognised as device that do not require a licence. In Japan, wireless equipment with the approval seal that shows it conforms to the technical standards stipulated in the Japanese Radio Act and operated in the spectrum in Table 2.7 is not required to have a licence. However, at the Aichi-Nagoya 2026 Asian Games, whether or not a licence is required, authorisation from AINAGOC is required for the master unit (the base station side having the access point). Even for the slave unit, authorisation from AINAGOC may be required for some specific areas such as the competition venues, broadcast-related areas, the Main Media Centre and the Athletes' Village.
It is strongly recommended that the number of approvals for frequencies of

wireless LAN bands be kept to a bare minimum in order to avoid congestion and the reduction in the speed of communication transmissions caused by too many users. The wireless LAN service offered by AINAGOC should be used as an alternative means.

For this reason, applications for wireless LAN frequencies may be rejected even when they conform to the wireless LAN channel policy. Other data transmission systems are referred to in the “video link” and the “telemetry/telecommand” sections.

Table 2.7 Frequency bands for wireless LAN

Band	Spectrum [GHz]		Technical specification / Operating conditions
	From	To	
2.4GHz	2.400	2.497	・Channel spacing [IEEE802.11b] 22MHz [IEEE802.11g] 20MHz [IEEE802.11n] 20MHz [IEEE802.11ax] 20MHz each channel offset by 5MHz ・Channel bandwidth 26MHz ・Transmission power 10mW/MHz or less Limited to wireless equipment that conforms to the Technical Regulations stipulated in the Japanese Radio Act.
5GHz	5.150	5.250	・Channel spacing [IEEE802.11a] 20MHz [IEEE802.11n] 20MHz [IEEE802.11ac] 20MHz [IEEE802.11ax] 20MHz ・Channel bandwidth 20MHzsystem19MHz（OFDM）/ 18MHz（other than OFDM） ・Transmission power （OFDM）20MHz system 10mW/MHz or less （other than OFDM）10mW/MHz or less / 10mW or less ・Indoor use only※ Limited to wireless equipment that conforms to the Technical Regulations stipulated in the Japanese Radio Act.

(*) Registered systems (access point only) can be used outdoors (EIRP 1W or less)

Band	Spectrum [GHz]		Technical specification / Operating conditions
	From	To	
5GHz	5.250	5.350	・Channel spacing [IEEE802.11a] 20MHz [IEEE802.11n] 20/40MHz [IEEE802.11ac] 820/160MHz [IEEE802.11ax] 20/40/80/160MHz ・Channel bandwidth 20MHz system19MHz（OFDM）/ 18MHz（other than OFDM） 40MHzsystem38MHz 80MHzsystem78MHz 160MHzsystem158MHz（combined with the band 5.15-5.25GHz） ・Transmission power （OFDM）20MHzsystem 10mW/MHz or less 40MHzsystem5mW/MHz or less 80MHzsystem2.5mW/MHz or less 160MHzsystem1.25mW/MHz or less （other than OFDM）10mW/MHz or less / 10mWor less ・Indoor use only ・DFS(Dynamic Frequency Selection) required Limited to wireless equipment that conforms to the Technical Regulations stipulated in the Japanese Radio Act.

Band	Spectrum [GHz]		Technical specification / Operating conditions
	From	To	
	5.470	5.730	・channel spacing [IEEE802.11a] 20MHz [IEEE802.11n] 20MHz [IEEE802.11ac] 20MHz [IEEE802.11ax] 20MHz ・Channel bandwidth 20MHzsystem 19.7MHz ・Transmission power (OFDM)20MHzsystem 10mW/MHz or less ・DFS(Dynamic Frequency Selection) required Limited to wireless equipment that conforms to the Technical Regulations specified in the Japanese Radio Act
6GHz	5945	6425	・channel spacing [IEEE802.11ax] 20MHz ・Channel bandwidth 20MHzsystem19MHz(OFDM)/ 18MHz(other than OFDM) ・Transmission power (OFDM)20MHzsystem 10mW/MHz or less (other than OFDM)10mW/MHz or less / 10mWor less Outdoor use Low Power Indoor (LPI):Not available Very Low Power (VLP):available Limited to wireless equipment that conforms to the Technical Regulations specified in the Japanese Radio Act
26GHz	24.77	25.23	・channel spacing ― ・Channel bandwidth ― ・Transmission power 10mW/MHz or less / 10mW or less

Band	Spectrum [GHz]		Technical specification / Operating conditions
	From	To	
	27.02	27.46	・channel spacing ー ・Channel bandwidth ー ・Transmission power 10mW or less / above 10mW -250mW or less
60GHz	57	66	・channel spacing [IEEE802.11ad] 2.16GHz ・Channel bandwidth 9GHz or less ・Transmission power 10mW or less / above 10mW -250mW or less

2.8 Satellite communication

AINAGOC anticipates that satellite communication would be used to transmit video, audio and data during the Aichi-Nagoya 2026 Asian Games, both domestically (between venues and MMC) and internationally. Satellite communication faces the following situations:

- Recent terrestrial communication including fibre optics and mobile phones can replace the above-mentioned satellite communication. Several competition venues for the Aichi-Nagoya 2026 Asian Games are expected to be equipped with fibre optics facilities.
- Even for international communication, fibre optics could cover part of the transmission path in case a country to which signals are to be delivered is not covered by satellite.
- Satellite operation requires international coordination. The coordination procedure of spectrum, the direction of radiated radio wave, the density of radio wave strength, the orbital slot, etc., are regulated under the International Telecommunication Union (ITU). Difficulty could be foreseen to use a satellite with specific conditions, because many satellites are in operation under the international rules in the East Asia region including Japan.

Considering the facts mentioned above, the usage of satellite communication at the Aichi-Nagoya 2026 Asian Games should be as follows:

- If there are no options other than satellite communication, the existing services provided by domestic operators should be utilised to the maximum extent for both domestic and international communication. In this case, it is recommended to accept the satellite and the frequencies in operation provided by domestic communication operators.
- AINAGOC protects downlink frequency bands (1215-1240MHz, 1559-1610MHz) for satellite navigation received on the ground because these bands would be used for measurements during the Games.

2.9 Others

The use of wireless system that not listed is planned to be include the Spectrum Application Guide.

3. Spectrum application procedure

3.1 Spectrum application

Spectrum application that each stakeholder is required to submit to AINAGO must be submitted through the Spectrum Order Portal.

Details on the application schedule, application process, and other details will be included in the Spectrum Application Guide, which is expected to be published in December 2025.

The spectrum application is scheduled to be accepted during the three application periods shown in Table 3-1: Normal application, Additional application, Extraordinary application, taking into account whether or not a radio station licence is required. Applications requiring the obtaining of a radio station licence are limited to the normal application period, considering the time required for the procedure. Furthermore, as the number of frequencies available for allocation is limited, from the viewpoint of ensuring mor reliable spectrum acquisition, it is recommended to apply during the Normal application period even for applications that do not require the obtaining of a radio station licence.

The overall flow from the frequency application until the entry of wireless equipment into the venue is shown in Figure 3-1.

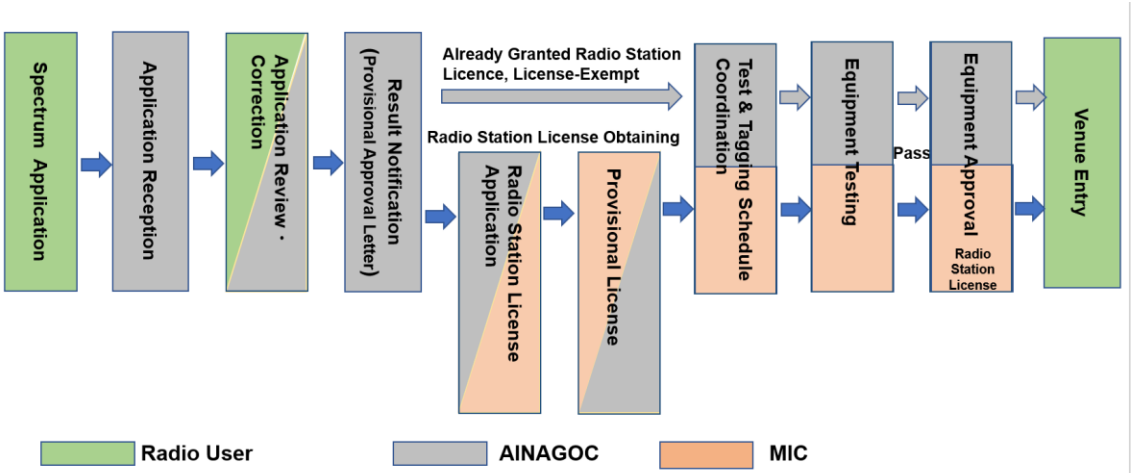

Figure 3-1 Flow from frequency application until the entry of wireless equipment into the venue

3.1.1 Application Item

Some important parameters required in spectrum applications, such as shown below, must be specified in the Spectrum Order Portal form.

- Usage periods
- Spectrum usage location
- Spectrum service
- Desired centre frequency
- Adjustable frequency band
- Channel bandwidth
- Transmit power
- Manufacturer Name
- Product Name (including option names, etc.)

3.1.2 Confirmation After Application

The applicant will be required to confirm the key parameters specified in the 3.1.1 Application Items, the necessary antennas and their characteristics

required for obtaining the radio station licence, and the system configuration. The application will be officially accepted only after their sufficiency has been confirmed by the AINAGOC through such confirmation with the applicant.

3.2 Notice of approval

After the official acceptance of the spectrum application, AINAGOC will examine the feasibility of the frequencies requested by the stakeholders, based on advice from MIC and the relevant Regional Bureau, for wireless equipment requiring a radio station licence. For equipment that does not require a license, AINAGOC will review the frequency allocation. After the evaluation, AINAGOC will notify the applicant of the approval or rejection of the requested frequencies.

Table3-1 Expected Application Schedule

Application Type	Application Period (Expected)	Applicable wireless Equipment for Application
Normal Application	Jan.-Feb. 2026	For all wireless equipment Wireless equipment that requires a radio station licence can only be applied for during this period
Additional Application	Mar. - May. 2026	Only wireless equipment with Technical conformity mark that do not require a radio station licence Licenced Wireless Equipment
Extraordinary Application	Jun 2026 -	Only wireless equipment with Technical conformity mark that do not require a radio station licence Licenced Wireless Equipment

4. Test & Tagging

4.1 Conducting the test

After obtaining notification of spectrum application approval from AINAGOC, the applicant is required to have certain wireless equipment tested before bringing it into the venue. In accordance with the Radio Act, the test is conducted to confirm whether the equipment conforms to the application items for obtaining the radio station licence

Wireless equipment that has obtained a radio station licence or does not require a license will be tested for compliance with the application items in accordance with AINAGOC's testing policy, to confirm that it conforms to the application items.

Applicants are required to make a reservation for the test, and the reservation must be strictly observed.

Details of the test will be announced in the 'Test & Tagging Guide', which will be published at the end of March 2026.

4.2 Test location/period

The location of the Spectrum Desk, its operation period, and operation hours will also be announced in the 'Test & Tagging Guide'

4.3 Tagging(attaching of the tag)

AINAGOC will visibly affix a tag issued by AINAGOC on the wireless equipment that has passed the test. Only wireless equipment with the tag will be allowed into the venue. AINAGOC will approve and manage the use of wireless equipment for each location within the venue. Details will be announced in the Test & Tagging Guide.

5. Radio spectrum monitoring

AINAGOC conducts radio spectrum monitoring with the cooperation of MIC, the competent authority responsible for radio spectrum supervision in Japan, to ensure that the radio spectrum used for the wireless systems at the Aichi-Nagoya 2026 Asian Games is free from interference and appropriately used.

AINAGOC requests all stakeholders using radio spectrum during the Games to actively cooperate with AINAGOC, MIC, and other relevant authorities to ensure that the wireless systems operated at the Games remain free from interference and disruption. If authorised wireless equipment is found to have the potential to adversely affect the Games, AINAGOC will request the stakeholder concerned to immediately cease use of the equipment, change the operating frequency, or take other necessary measures.

In cases where unauthorised wireless equipment is used, or where authorised equipment is operated on frequencies or with output levels not approved, and such use causes interference or disruption to other wireless systems, MIC may, in accordance with the relevant laws and regulations, impose administrative sanctions and may refer the matter to judicial authorities.

6. Update Information

6.1 Spectrum-related information

AINAGOC will update this document and, when additional frequencies or further details are determined in subsequent reviews, will announce the updates as appropriate via news releases and other official channels.
The news release will be published on the official website of AINAGOC.

6.2 Test & Tagging information

Further details and updated information, including Test & Tagging, will be announced in the Test & Tagging Guide, which will be published on the official website of AINAGOC.