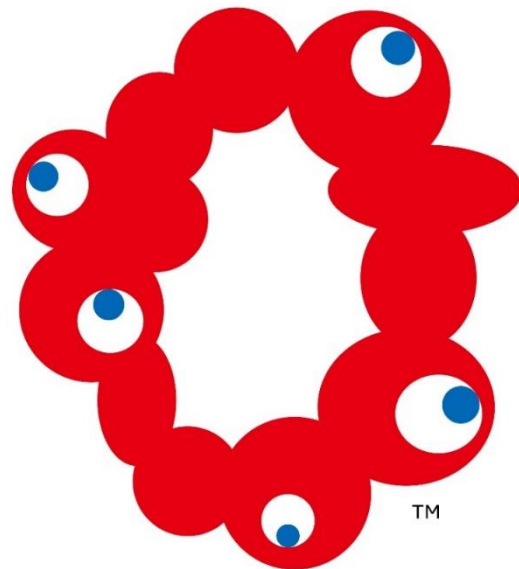


Guidelines for Use of Radio Devices in the Expo Site (Basic Policies)



OSAKA, KANSAI, JAPAN

EXPO
2025

Table of Contents

1. Introduction	6
1 - 1. Purpose of this Guideline.....	6
1 - 2. Outline of this Guideline.....	6
1 - 3. Control and Guide.....	7
1 - 4. Legal compliance	7
2. Basic management policies for the Expo.....	7
2 - 1. Basic approach	7
2 - 2. Responsible party for frequency coordination and Radio Station license.....	9
2 - 3. Radio Devices subject to frequency coordination and approval procedures.....	9
2 - 4. Approval of Radio Devices	9
3. Frequency map.....	9
3 - 1. Wireless microphones and in-ear monitors	9
3 - 2. Personal mobile radios	13
3 - 3. Talk-back systems (intercoms)	15
3 - 4. Wireless LAN and other data transmission	16
3 - 5. Ultra-high frequency equipment (RFID)	19
3 - 6. High-frequency equipment.....	20
4. Procedures for approval of use.....	20
5. Radio monitoring	20
6. Update information	21
6 - 1. Frequency-related information.....	21
6 - 2. Radio Device inspection and Tagging-related information	21
7. Supplementary guidelines	21

Definitions of abbreviations, contracted names and terms

Abbreviation / contracted name	Official name
BIE	Bureau International des Expositions
LAN	Local Area Network
Term	Definition
the Expo	The International Registered Exhibition, Expo 2025 Osaka, Kansai, Japan, which will be held in Osaka, Japan, from the 13th of April to the 13th of October, 2025.
Laws and Regulations	The Conventions, the General Regulations and Special Regulations; the laws of Japan, government ordinances, Ministry ordinances, government notifications and notices; bylaws, regulations and controls of local governments; guidelines, supplementary directives and instructions issued by the Organiser in compliance with the General Regulations and Special Regulations pertaining to administrative procedures, submission-required documents, details on Participants' and the Organiser's rights and obligations and other items.
General Regulations	The General Regulations included in Chapter 8 of the Registration Dossier approved at the 167th General Assembly of the BIE.
Special Regulations	The Special Regulations set out in Article 34 of the General Regulations.
Official Participants	The foreign governments and international organisations that have accepted the formal invitation from the Government of Japan to participate in the Expo.
Non-official Participants	Those who were authorised by the Commissioner General of the Exhibition to participate in the Expo outside the sections of the Official Participants.
Participants	Official Participants and Non-official Participants.
Organiser	The Japan Association for the 2025 World Exposition, which was designated by the Minister of Economy, Trade and Industry on the 31st of May, 2019 to carry out tasks relating to the preparation and operation of the Expo, in accordance with the 'Act on Special Measures Necessary for Preparing for and Managing of the International Exposition in 2025', and which was authorised as a public

	interest incorporated association on the 21st of October, 2019.
Pavilions	Buildings in which the Official Participants and the Non-official Participants present their exhibitions, including Self-Built Pavilions, Pavilion Modules and Shared Pavilions, as well as any space related to the buildings that are directly under their control.
Plot	The area of land allocated by the Organiser to the Official Participants and the Non-official Participants, in accordance with the Participation Contract and kept under their own control to use.
Expo Site	All areas used and administered by the Organiser as the venue for the operation of the Expo.
One-stop Shop	The staffed service points set up and operated by the Organiser for the purpose of centrally handling all submissions and applications from the Official Participants and providing advice and other support with the help of the online portal for the Official Participants, to ensure that the Official Participants are able to smoothly pursue their activities and work in relation to the Expo.
Official Participant Portal	An online portal website to enable smooth communication between the Official Participants and the Organiser.
Telecommunication Service Providers	Companies that offer Telecommunication Services as landline and mobile phone providers or internet service providers in Japan. Parties that engage in telecommunication services (telecommunication businesses) pursuant to the Telecommunications Business Act (Act No. 86 of 1984).
Telecommunication Services	Telephone, internet, dedicated lines, wide area ethernet and other telecommunication services.
Radio Devices	Equipment used for wireless communication.
Participants' Radio Devices	Radio Devices that Participants bring to the Expo Site.
Radio Stations	Collective term for radio equipment and parties that operate radio equipment pursuant to Article 2 of the Radio Regulatory Law. Note that this does not include radio stations established for receiving purposes only.
Specified Radio Equipment	Radio equipment used for small-scale Radio Stations, as defined in the respective items of Article 2, Paragraph 1 of

	<p>the Ordinance on Technical Standards Conformity Certification of Specified Radio Equipment and ordained by ordinances of the Ministry of Internal Affairs and Communications.</p>
<p>Technical Standards Conformity Certification</p>	<p>Certification verifying that radio equipment used for small-scale Radio Stations as set forth by ordinances of the Ministry of Internal Affairs and Communications (i.e., Specified Radio Equipment) meets technical standards stipulated in Section 3 of the Radio Regulatory Law. The verification is based on tests performed on each radio equipment.</p>
<p>Construction Type Certification</p>	<p>Certification verifying that radio equipment used for small-scale Radio Stations as set forth by ordinances of the Ministry of Internal Affairs and Communications (i.e., Specified Radio Equipment) meets technical standards stipulated in Section 3 of the Radio Regulatory Law in terms of quality management method (inspection method) at the design drawing (construction design) and manufacturing stages. The verification is based on screening of documents and tests performed for each type (product model form/name).</p>
<p>Technical Conformity Mark</p>	<p>A mark indicating that Radio Devices meet technical standards set forth by the radio-related laws and regulations as assessed in the Technical Standards Conformity Certification and the Construction Type Certification systems. Radio equipment labelled with the mark (conformity mark-indicated radio equipment) can benefit from measures such as simplified Radio Station licensing procedures.</p>
<p>Wireless LAN (Wi-Fi) Use Report</p>	<p>Use report that Participants shall submit to the Organiser if they install wireless LAN (Wi-Fi) access points in Pavilions.</p>
<p>Radio Device Use Report</p>	<p>Use report that Participants shall submit to the Organiser if they bring in Radio Devices other than wireless LAN (Wi-Fi) access points to the Expo Site.</p>
<p>Use Reports</p>	<p>Wireless LAN (Wi-Fi) Use Report and Radio Device Use Report.</p>

1. Introduction

This Guideline describes arrangements and other requirements pertaining to Participants' use of Radio Devices they bring to the Expo Site and basic policies on the Organiser's management of such use, which are based on radio use in past international events. Note that the Organiser plans to prepare a Guidelines for Use of Radio Devices in the Expo Site (Operations) (tentative name) around the spring of 2024, following this Guideline. The Guideline will describe how Participants should apply for Radio Devices that they bring to the Expo Site and specific procedural steps in operating such devices.

Participants are asked to limit the disclosure of this Guideline to relevant persons, such as service providers and contractors involved in the operation of respective Pavilions, and are prohibited from disclosing or publicly sharing the Guideline to third parties without reasonable cause.

1-1. Purpose of this Guideline

The purpose of this Guideline is as follows.

- To provide clear policies on how Participants' Radio Devices used at the Expo Site will be appropriately managed to ensure compliance with the Japanese Radio Regulatory Law.
- To share information necessary to coordinate the use of Radio Devices to prevent signal interference and jamming not only between Participants' Radio Devices used by Participants but also with Radio Devices used in areas surrounding the Expo Site.

The contents indicated in this Guideline accompanies those in Special Regulations No. 10.

1-2. Outline of this Guideline

The following is an outline of this Guideline.

- Chapter 1: Introduction
Indicates the background to and the purpose of this Guideline.
- Chapter 2: Basic management policies for the Expo
Indicates basic policies on how frequencies will be managed to enable smooth operation of the Expo.
- Chapter 3: Frequency map
Indicates features and terms of use of Radio Devices that will likely be used at the Expo Site.
- Chapter 4: Procedures for approval of use
Indicates the overall direction of steps from submission of Use Reports to bringing Radio Devices to the Expo Site and enabling them.
- Chapter 5: Radio monitoring
Indicates the direction of radio monitoring performed on Radio Devices used in and around the Expo Site.

- Chapter 6: Update information
Indicates how updates of information in this Guideline will be notified.

1-3. Control and Guide

In light of the fact that Official Participants will use this Guideline as reference when starting or using Radio Stations within the Expo Site, this Guideline sets forth two standards, **Control** and **Guide**. These standards will also serve as the Organiser's criteria in accepting respective documents submitted by Official Participants.

C-00 Control indicates items that need to be complied with and sets forth restrictions, requirements and restricted or prohibited items in starting or using Radio Stations.

G-00 Guide indicates items that are preferred and describes what the Organiser expects of or proposes to the Official Participants so that the start or use of Radio Stations is in line with the objectives or purposes of the Expo.

1-4. Legal compliance

When bringing Radio Devices to the Expo Site and using them, Participants should comply with relevant laws in Japan and ordinances of Osaka Prefecture and Osaka City, as well as the following relevant laws and regulations.

- Radio Regulatory Law
- Act on Electricity Business
- Telecommunications Business Act
- Act on Wire Telecommunications
- Act on Fire Service
- Basic Act on Cybersecurity
- Act on Prohibition of Unauthorised Computer Access

Participants should also comply with and refer to related laws, regulations and standards in accordance with other Guidelines, documents and other plans shared by the Organiser, including this Guideline.

2. Basic management policies for the Expo

2-1. Basic approach

The Organiser has established basic policies on how to manage frequencies that the Organiser and Participants request to use at the Expo Site based on the frequency utilisation system and laws and regulations in Japan, in order to ensure smooth operation of the Expo.

Information on the use of frequency bands in Japan is publicly available on the Ministry of Internal Affairs and Communications' website.

<https://www.tele.soumu.go.jp/e/adm/freq/search/myuse/0002/index.htm>

In accordance with international rules, frequencies are allotted to prevent adverse jamming between Radio Stations and thus ensure effective use.

C-01 Radio Devices used by Participants within the Expo Site shall be conformity mark-indicated radio equipment labelled with Technical Conformity Marks (including the Construction Type Certification number; the same will apply hereinafter) pursuant to the Japanese Radio Regulatory Law.

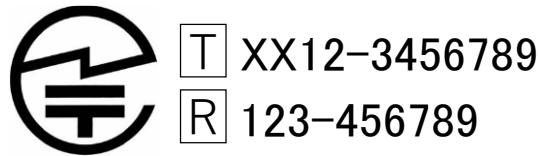


Figure 2-1 Example of Technical Conformity Mark indication

(Ensure correct indication of number as well.)

(Reference) FAQ on Technical Conformity Mark (website by the Ministry of Internal Affairs and Communications)

https://www.tele.soumu.go.jp/e/adm/monitoring/illegal/monitoring_qa/index.htm

(Reference) Leaflet to people entering Japan on the use of mobile phone devices, broadband wireless access (BWA) devices and Wi-Fi devices brought to Japan from other countries (website by the Ministry of Internal Affairs and Communications)

[Leaflet: To those entering Japan]

<https://www.tele.soumu.go.jp/resource/j/others/wifi/en.pdf>

Because Yumeshima Island, the Expo venue, is an approximately 390 ha manmade island facing the Osaka Bay, signals from coastal areas of Osaka Prefecture, Hyogo Prefecture and Tokushima Prefecture can easily travel broadly to the location, rendering the allotment of frequencies extremely challenging.

Therefore, basic policies set forth in this Guideline cannot be maintained without the understanding and cooperation of the many participants, including disaster control and social safety-related organisations.

If the Organiser determines that the Radio Devices brought to the Expo Site by Official Participants interfere with or may interfere with the functioning of the Organiser, mobile phone service providers or other Participants' equipment, the Organiser will coordinate use as necessary to resolve such interference.

C-02 Participants shall comply with arrangements that the Organiser sets forth when the use of their Radio Devices need to be coordinated with the Organiser, other Participants and mobile phone service providers in the following instances.

- When the Organiser determines, upon confirming Radio Device use applications, that prior coordination of use between Radio Devices of Official Participants and others is required.
- When the Organiser performs inspections to maintain frequency use within the Expo Site.

- When it has been confirmed that signals transmitted from Participants' Radio Devices interfere with the functioning of the Organiser and other Participants' equipment.

2-2. Responsible party for frequency coordination and Radio Station license

In Japan, Radio Station licenses are required, as a general rule, to operate Radio Devices. Therefore, the Organiser will acquire Radio Station licenses for Radio Devices that non-Japanese Official Participants will use by responsibility of the organiser to ensure compliance with the law.

The Organiser will coordinate frequencies to prevent jamming between Participants' Radio Devices used by non-Japanese Official Participants and Radio Stations operated in Japan.

2-3. Radio Devices subject to frequency coordination and approval procedures

To prevent jamming, Use Reports shall be submitted and approved by the Organiser for all Radio Devices before they are brought to the Expo Site.

Note that the use of Radio Stations defined in Article 4, Item 3 in the Radio Regulatory Law (hereinafter referred to as "Non-licensed Radio Station") at the Expo Site, as a general rule, requires prior approval by the Organiser.

However, the Organiser anticipates that some Radio Devices will not be subject to approval acquisition.

2-4. Approval of Radio Devices

As a general rule, Radio Devices, regardless of whether they are licensed as Radio Stations in or outside of Japan, require approval from the Organiser. Radio Devices cannot be used within the EXPO Site unless they are approved by the Organiser. Common such Radio Devices include wireless microphones / in-ear monitors (IEM), personal mobile radios, talk-back systems (intercoms) and wireless LAN and other data transmission ultra-high frequency (UHF) equipment (radio frequency identifications (RFID)).

Note that policies on the management of drones as Radio Devices will be separately provided for once policies on use in the Expo Site are decided.

3. Frequency map

This chapter describes the features and terms of use of Radio Devices that will likely be used at the Expo Site. Note that the terms of use are those as of the end of June 2023.

[Ministry of Internal Affairs and Communications | Radio Wave Use website | Frequency Search](#)

3-1. Wireless microphones and in-ear monitors

3-1-1. Wireless microphones and in-ear monitors

High sound quality wireless microphones and IEMs with equivalent quality will likely be used at the Expo.

The Organiser anticipates that such wireless microphones and IEMs will be used for the following purposes.

- Use in Pavilions and at events and ceremonies
- Interviews by broadcast stations

Since wireless microphones and IEMs require broad frequency bandwidths compared to other sound devices, 100 kHz to 300 kHz per channel, frequency options that can be allotted are therefore limited. Participants are thus strongly requested to use wired microphones instead of wireless microphones for communication and limit the use of radio waves only to cases where the use of wired microphones is truly difficult.

In Japan, the frequency bands in WS-1 through WS-7, 711–714 MHz band and 1.2 GHz band in Table 3-1-1 are allotted for wireless microphones. At the Expo Site as well, frequencies within these bandwidths will, as a general rule, be allotted so as to prevent mutual adverse jamming.

Participants should take into account the following points when using these bandwidths.

- Many bands are frequency bandwidths that are shared with terrestrial television broadcast.

Allotting frequencies that overlap with these frequency bandwidths to wireless microphones and IEMs will likely require extensive coordination. Note that in broadcast areas of terrestrial television broadcast key and relay stations, allotting frequencies used for such broadcast (indicated with "*" in Table 3-1-1) to wireless microphones and IEMs is extremely difficult.

However, since wireless microphone and IEM frequencies need to be secured, the Organiser will request Participants to follow the solutions below.

- First, use wired microphones as much as possible, and limit the use of wireless microphones only to cases where the use of wired microphones is truly difficult.

- Avoid the use of wireless microphones and IEMs as much as possible particularly in outdoor areas.

- Use as much as possible digital wireless microphones and IEMs, which are considered resistant to interference.

- Note that bringing to Japan wireless microphones that conform with Japanese standards will facilitate frequency coordination and allotment.

- Note that the adoption of standards indicated in Table 3-1-1 is recommended since systems compatible with such standards facilitate frequency coordination and allotment.

In Japan, frequency bandwidths other than WS-1 through WS-7, 711–714 MHz band and 1.2 GHz band in Table 3-1-1 are designated as guard bands to protect systems used nearby. When allotting frequencies, frequencies shall be shared in consideration of other Radio Stations, or adjacent frequencies shall be used.

Table 3-1-1 Terms of use of wireless microphones and IEMs

Band	Frequency [MHz]		Bandwidth [MHz]	Expo Site	Terms of use
	From	To			
WS-1*	470	488	18	×	<ul style="list-style-type: none"> - Occupied frequency bandwidth: 200 kHz or less / 300 kHz or less - Antenna power: 10 mW or less (analogue) / 50 mW or less (digital) - Co-exist with TV broadcast band (13–15 ch)
WS-2*	488	506	18	×	<ul style="list-style-type: none"> - Occupied frequency bandwidth: 200 kHz or less / 300 kHz or less - Antenna power: 10 mW or less (analogue) / 50 mW or less (digital) - Co-exist with TV broadcast band (16–18 ch)
WS-3*	506	518	12	×	<ul style="list-style-type: none"> - Occupied frequency bandwidth: 200 kHz or less / 300 kHz or less - Antenna power: 10 mW or less (analogue) / 50 mW or less (digital) - Co-exist with TV broadcast band (19–20 ch)
WS-4*	518	566	48	×	<ul style="list-style-type: none"> - Occupied frequency bandwidth: 200 kHz or less / 300 kHz or less - Antenna power: 10 mW or less (analogue) / 50 mW or less (digital) - Co-exist with TV broadcast band (21–28 ch)
WS-5*	566	590	24	×	<ul style="list-style-type: none"> - Occupied frequency bandwidth: 200 kHz or less / 300 kHz or less - Antenna power: 10 mW or less (analogue) / 50 mW or less (digital) - Co-exist with TV broadcast band (29–32 ch)

Band	Frequency [MHz]		Bandwidth [MHz]	Expo Site	Terms of use
	From	To			
WS-6*	590	662	72	×	- Occupied frequency bandwidth: 200 kHz or less / 300 kHz or less - Antenna power: 10 mW or less (analogue) / 50 mW or less (digital) - Co-exist with TV broadcast band (33–44 ch)
WS-7*	662	710	48	△	- Occupied frequency bandwidth: 200 kHz or less / 300 kHz or less - Antenna power: 10 mW or less (analogue) / 50 mW or less (digital) - Co-exist with TV broadcast band (45–52 ch)
700 MHz band	711	714	3	△	- Occupied frequency bandwidth: 200 kHz or less / 300 kHz or less - Antenna power: 10 mW or less (analogue) / 50 mW or less (digital)
1.2 GHz band	1216	1217	1	△	- Occupied frequency bandwidth: 200 kHz or less / 300 kHz or less - Antenna power: 10 mW or less (analogue) / 50 mW or less (digital)
	1240	1252	12	△	- Occupied frequency bandwidth: 200 kHz or less / 300 kHz or less - Antenna power: 10 mW or less (analogue) / 50 mW or less (digital)
	1253	1260	7	△	- Occupied frequency bandwidth: 200 kHz or less / 300 kHz or less - Antenna power: 10 mW or less (analogue) / 50 mW or less (digital)

[Note]

1. The occupied frequency bandwidth and antenna power are standard models.

2. Indications

○: Usable, △: Usable in some frequencies (depending on technical or operational conditions (currently under consideration))

×: Not usable

3-1-2. Wireless microphone and IEM Non-licensed Radio Stations

Conformity mark-indicated radio equipment that use frequencies indicated in Table 3-1-2 and conform with technical standards set forth in the Japanese Radio Regulatory Law do not require licenses. However, to avoid latent interference risks, the use of such equipment within the Expo Site will require application to and approval from the Organiser.

Provided, however, that Participants should take into account that since such equipment do not require licenses, jamming with Radio Stations outside of the Expo Site may occur.

Table 3-1-2 Terms of use of wireless microphone and IEM Non-licensed Radio Stations

Band	Frequency [MHz]		Bandwidth [MHz]	Terms of use
	From	To		
74 MHz band	74.55	74.6	0.05	- Occupied frequency bandwidth: 60 kHz - Antenna power: 10 mW or less
	74.6	74.8	0.2	- Occupied frequency bandwidth: 60 kHz - Antenna power: 10 mW or less
320 MHz band	322	322.42	0.42	- Occupied frequency bandwidth: 30 kHz - Antenna power: 1 mW or less
806 MHz band	806	810	4	- Occupied frequency bandwidth: 110 kHz / 192 kHz - Antenna power: 10 mW or less

3-2. Personal mobile radios

3-2-1. Personal mobile radios

Personal mobile radios (PMR) are means of telecommunication that are used in the operation of ceremonies, broadcast relay, press interviews and other such settings. Among sound systems, the press-to-talk system, excluding the talk-back system, will likely be used.

Very-high frequency (VHF) and UHF band frequencies suitable for such PMR are already used by a considerably large number of users in areas surrounding the Expo Site, and allotment of such bandwidths to talk-back systems at the Expo can be expected.

Additionally, digital Radio Devices are recommended to avoid the effects of jamming as much as possible and to facilitate frequency allotment.

Table 3-2-1-1 indicates specific terms of use for PMR frequency band options. Since these frequency bands are used by many public operations and broadcast stations, use of such bands will require prior coordination.

Note that although the Organiser understands that there are diverse requests concerning transmission power according to purposes of use, the use of power in large volumes is not preferred in light of effective frequency use. Therefore, after constructing the actual Pavilions, Participants are

advised to operate using the minimum necessary transmission output that will enable telecommunication.

Table 3-2-1-1 Terms of use of PMR

Frequency [MHz]		Bandwidth [MHz]	Terms of use
From	To		
138	154.44	16.44	- Frequency: requested frequency (Provided, however, that in the event the requested frequency cannot be selected, a frequency within the compatible range of the Radio Devices that the Participants plan to use will be selected.) - Occupied frequency bandwidth: 16 kHz or less (or channel width of 20 kHz) - Antenna power: 1 W or less, as a general rule
154.44	225	70.56	- Frequency: requested frequency (Provided, however, that in the event the requested frequency cannot be selected, a frequency within the compatible range of the Radio Devices that the Participants plan to use will be selected.) - Occupied frequency bandwidth: 16/8.5/5.8 kHz or less (or channel width of 25/12.5/6.25 kHz) - Antenna power: 1 W or less, as a general rule
335.4	380.2	44.8	Same as above
381.4	402	20.6	Same as above
406.1	470	63.9	Same as above

[Note] The occupied frequency bandwidth and antenna power are standard models.

3-2-2. PMR Non-licensed Radio Stations

Conformity mark-indicated radio equipment that use frequencies indicated in Table 3-2-2-1 and conform with technical standards set forth in the Japanese Radio Regulatory Law do not require licenses. Additionally, conformity mark-indicated radio equipment that use frequencies indicated in Table 3-2-2-2 and conform with technical standards set forth in the Japanese Radio Regulatory Law may be used by processing simple procedures referred to as "registration." However, to avoid latent interference risks, the use of such equipment within the Expo Site or in nearby areas will also require application to and approval from the Organiser.

Provided, however, that Participants should take into account that since such equipment do not require licenses, jamming with Radio Stations outside of the Expo Site may occur.

Table 3-2-2-1 Terms of use of PMR Non-licensed Radio Stations

Type	Frequency [MHz]		Bandwidth [kHz]	Terms of use
	From	To		
Non-licensed	422.04	422.35	310	<ul style="list-style-type: none"> - Analogue - Occupied frequency bandwidth: 8.5 kHz - Antenna power: 10 mW or less - If Japanese conformity mark-indicated radio equipment are used, licenses are not required

Table 3-2-2-2 Terms of use of PMR registered stations

Type	Frequency [MHz]		Bandwidth [kHz]	Terms of use
	From	To		
Registered (CR*)	351.03	351.63	600	<ul style="list-style-type: none"> - Digital - Occupied frequency bandwidth: 5.8 kHz - Antenna power: 5 W or less - Registration procedures are required for use - Equipment need to be Japanese conformity mark-indicated radio equipment for registration application

*Referred to as "convenience radio (CR)."

3-3. Talk-back systems (intercoms)

Talk-back systems (intercoms) will primarily be used for the operation of the Expo Site, operation in and out of Pavilions and communication.

3-3-1. Talk-back system (intercom) Non-licensed Radio Stations

Conformity mark-indicated radio equipment that use frequencies indicated in Table 3-3-1 and conform with the Technical Standards Conformity Certification set forth in the Japanese Radio Regulatory Law do not require Radio Station licenses.

However, to avoid latent interference risks, the use of such equipment will require application to and approval from the Organiser. Provided, however, that Participants should take into account that since such equipment do not require licenses, jamming may occur with Radio Stations outside of the Expo Site that the Organiser and the Ministry of Internal Affairs and Communications do not manage.

Table 3-3-1 Terms of use of Non-licensed Radio Stations that can be used for talk-back systems
(intercoms)

Type	Frequency [MHz]		Bandwidth [MHz]	Terms of use
	From	To		
Pair 1-L	421.5	421.9	0.4	- Analogue - Occupied frequency bandwidth: 5.8 kHz / 8.5 kHz - Antenna power: 10 mW or less
Pair 1-H	440.2	440.37	0.17	- Analogue - Occupied frequency bandwidth: 5.8 kHz / 8.5 kHz - Antenna power: 10 mW or less
Pair 2-L	413.6	414.2	0.6	- Analogue - Occupied frequency bandwidth: 8.5 kHz - Antenna power: 1 mW or less
Pair 2-H	454.0	454.3	0.3	- Analogue - Occupied frequency bandwidth: 8.5 kHz - Antenna power: 1 mW or less
-	1893.5	1906.1	12.6	- Digital (time division duplex (TDD)) - Occupied frequency bandwidth: 1.728 MHz - Antenna power: 240 mW or less

3-4. Wireless LAN and other data transmission

Wireless LANs are small-scale and large-volume wireless systems that do not require licenses for internet connection. Those standardized according to the Wi-Fi Alliance form are commonly used. ZigBee and Bluetooth are also used broadly. Further, there are also many data transmission systems that are based on original standards that differ from the above standards.

Some wireless LAN equipment do not require licenses internationally. In Japan as well, conformity mark-indicated radio equipment that use frequencies indicated in Table 3-4 and conform with the

Technical Standards Conformity Certification set forth in the Japanese Radio Regulatory Law do not require Radio Station licenses. Additionally, applications to and approvals from the Organiser are required for Wi-Fi access points (base stations with access points). Further, in some areas in the Expo Site, approvals from the Organiser may be required even for wireless LAN adapters.

Participants are advised to obtain approvals for the minimum necessary wireless LAN frequency so as to avoid jamming and slowed transmission speed due to use by many users.

Table 3-4 Wireless LAN frequency map

Band	Frequency [GHz]		Bandwidth [MHz]	Terms of use
	From	To		
2.4 GHz band	2.4	2.497	97	<ul style="list-style-type: none"> - Channel spacing [IEEE802.11b] 20 MHz [IEEE802.11g] 20 MHz [IEEE802.11n] 20/40 MHz [IEEE802.11ax] 20/40 MHz Channel offset in 5 MHz intervals - Occupied frequency bandwidth: 26/40 MHz - Antenna power: 10 mW/MHz or less (with bandwidth of 26 MHz or less) 5 mW/MHz or less (with bandwidth of 40 MHz or less) - Usable outdoors
5 GHz band	5.15	5.25	100	<ul style="list-style-type: none"> - Channel spacing [IEEE802.11a] 20 MHz [IEEE802.11n] 20/40 MHz [IEEE802.11ac] 80/160 MHz [IEEE802.11ax] 20/40/80/160 MHz - Occupied frequency bandwidth: 20 MHz system 20 MHz (OFDM) / 18 MHz (other than OFDM) 40 MHz system 40 MHz 80 MHz system 80 MHz 160 MHz system 160 MHz (coupling with 5.25–5.35 GHz band) - Antenna power: (OFDM) 20 MHz system 10 mW/MHz or less 40 MHz system 5 mW/MHz or less 80 MHz system 2.5 mW/MHz or less

Band	Frequency [GHz]		Band [MHz]	Terms of use
	From	To		
5 GHz band	5.25	5.35	100	<p>160 MHz system 1.25 mW/MHz or less (other than OFDM) 10 mW/MHz or less, 10 mW or less - Usable outdoors under conditions</p> <p>- Channel spacing [IEEE802.11a] 20 MHz [IEEE802.11n] 20/40 MHz [IEEE802.11ac] 80/160 MHz [IEEE802.11ax] 20/40/80/160 MHz</p> <p>- Occupied frequency bandwidth: 20 MHz system 20 MHz (OFDM) / 18 MHz (other than OFDM) 40 MHz system 40 MHz 80 MHz system 80 MHz 160 MHz system 160 MHz (coupling with 5.15–5.25 GHz band)</p> <p>- Antenna power: (OFDM) 20 MHz system 10 mW/MHz or less 40 MHz system 5 mW/MHz or less 80 MHz system 2.5 mW/MHz or less 160 MHz system 1.25 mW/MHz or less (other than OFDM) 10 mW/MHz or less, 10 mW or less - Not usable outdoors</p>
	5.47	5.725	255	<p>- Channel spacing [IEEE802.11a] 20 MHz [IEEE802.11n] 20/40 MHz [IEEE802.11ac] 80/160 MHz [IEEE802.11ax] 20/40/80/160 MHz</p> <p>- Occupied frequency bandwidth: 20 MHz system 20 MHz 40 MHz system 40 MHz 80 MHz system 80 MHz 160 MHz system 160 MHz</p> <p>- Antenna power: (OFDM) 20 MHz system 10 mW/MHz or less 40 MHz system 5 mW/MHz or less 80 MHz system 2.5 mW/MHz or less</p>

				160 MHz system 1.25 mW/MHz or less - Usable outdoors excluding overhead sky
6 GHz band	5.925	6.425	500	- Channel spacing [IEEE802.11a] 20 MHz [IEEE802.11n] 20/40 MHz [IEEE802.11ac] 80/160 MHz [IEEE802.11ax] 20/40/80/160 MHz - Occupied frequency bandwidth: 20 MHz system 20 MHz 40 MHz system 40 MHz 80 MHz system 80 MHz 160 MHz system 160 MHz - Antenna power: (OFDM) 20 MHz system 10 mW/MHz or less 40 MHz system 5 mW/MHz or less 80 MHz system 2.5 mW/MHz or less 160 MHz system 1.25 mW/MHz or less - Usable outdoors, limited to EIRP 25 mW or less VLP
Band	Frequency [GHz]		Bandwidth [MHz]	Terms of use
	From	To		
26 GHz band	24.77	25.23	460	- Channel spacing: — - Occupied frequency bandwidth: — - Antenna power: 10 mW/MHz or less, 10 mW or less
60 GHz band	57	66	9000	- Channel spacing [IEEE802.11ad] 2.16 GHz - Occupied frequency bandwidth: 9 GHz or less - Antenna power: 10 mW or less, above 10 mW up to 250 mW

3-5. Ultra-high frequency equipment (RFID)

Equipment using the UHF band (RFID) are divided into passive tag systems and active low-power systems.

When using such RFID at the Expo Site, Participants are, as a general rule, required to use Technical Conformity Mark-indicated Radio Device equipment certifying conformity to the Technical Standards Conformity Certification set forth in the Japanese Radio Regulatory Law, and to apply to and obtain approval from the Organiser to avoid latent interference risks.

3-6. High-frequency equipment

High-frequency equipment are telegraphs, telephones and other telecommunication equipment that use high frequency currents of 10 kHz or higher in electric lines, and equipment broadly used in medical care and industries that use high frequency currents of 10 kHz or higher. Such equipment contributes largely to Japanese industries. However, since radio waves that leak from high-frequency equipment may disrupt other wireless telecommunications, those who install high-frequency telecommunication equipment or high-frequency equipment that use high-frequency more than 50 W are required to obtain prior permission from the Ministry of Internal Affairs and Communications.

Provided, however, that the following equipment in models designated by the Ministry of Internal Affairs and Communications do not require such permission from the ministry: carrier intercoms, general carrier digital transmission apparatuses, special carrier digital transmission apparatuses, wide-area electric line carrier telecommunication equipment, inductive reading and writing telecommunication equipment, ultrasonic cleaning devices, ultrasonic processing devices, ultrasonic welders, document copying and printing machines using electromagnetic induction heat, electrodeless discharge lamps, contactless power transmission apparatuses for general use and contactless power transmission apparatuses for electric cars, as well as microwave ovens and electromagnetic induction heating cooking devices whose models are confirmed.

4. Procedures for approval of use

The Organiser is currently arranging with relevant organisations specific procedural methods for the overall flow from submission of Use Reports to bringing Radio Devices to the Expo Site and enabling them. Going forward, the Organiser will prepare a Guidelines for Use of Radio Devices in the Expo Site (Operations) (tentative name), which will set forth specific procedural steps in applying for and operating Radio Devices that Participants bring to the Expo Site. Note that such approvals for use should be obtained by the end of December 2024, as a general rule, and that the Organiser will apply labels (hereinafter referred to as "Tagging") on Radio Devices approved for use that are brought into the Expo Site so that their approval status can be distinguished externally.

5. Radio monitoring

With the cooperation of the Ministry of Internal Affairs and Communications, which monitors radio in Japan, the Organiser will seek to ensure an environment where radio use at the Expo complies with the Japanese Radio Regulatory Law and where radio can be reliably used without jamming or disruption.

6. Update information

6-1. Frequency-related information

When basic policies are revised or this Guideline is updated based on considerations going forward, such changes will be notified via the Official Participant Portal or otherwise, via the application portal, which the Organiser is currently considering to implement. News releases will be provided on the Organiser's official website.

6-2. Radio Device inspection and Tagging-related information

The latest information on future Radio Device inspections and Tagging will be provided in the Guidelines for Use of Radio Devices in the Expo Site (Operations) (tentative name). The Guidelines for Use of Radio Devices in the Expo Site (Operations) (tentative name) will be available around the spring of 2024 in the Expo's Official Participant Portal and the application portal that the Organiser is currently considering to implement.

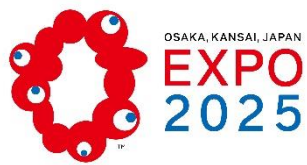
7. Supplementary guidelines

The provisions in this Guideline will also be applied to Non-official Participants and parties holding events who use Radio Devices for their operations within the Expo Site.

Contact

The Official Participants can send inquiries concerning the content of this Guide or uncertainties concerning procedures to the Organiser using the Queries function in the online portal for the Official Participants.

If you have any trouble using the online portal for the Official Participants, please contact us by email to ; participant@expo2025.or.jp



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