



北京 2022 年冬奥会和冬残奥会组织委员会  
Beijing Organising Committee for the 2022 Olympic and Paralympic Winter Games



# Frequency Application Process for the Beijing 2022 Olympic and Paralympic Winter Games

Beijing Organizing Committee for the Beijing 2022 Olympic  
and Paralympic Winter Games

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## **1. Introduction**

The Beijing 2022 Olympic and Paralympic Winter Games ("the Beijing 2022 Games") will be held in Beijing and Zhangjiakou from 4 February to 20 February and from 4 March to 13 March in 2022, respectively. This is the first time in Chinese history to hold the Olympic and Paralympics Winter Games.

This document is mainly used to guide the frequency application of the Beijing 2022 Games.

### **1.1 Purpose**

The purpose of this document is to provide guidance for users who need to use radio transmitting equipment in venues and special control areas<sup>1</sup> in Beijing, Yanqing, or Zhangjiakou during the Beijing 2022 Games to apply and obtain the radio frequency license .

### **1.2 Requirements of Radio Transmission Equipment**

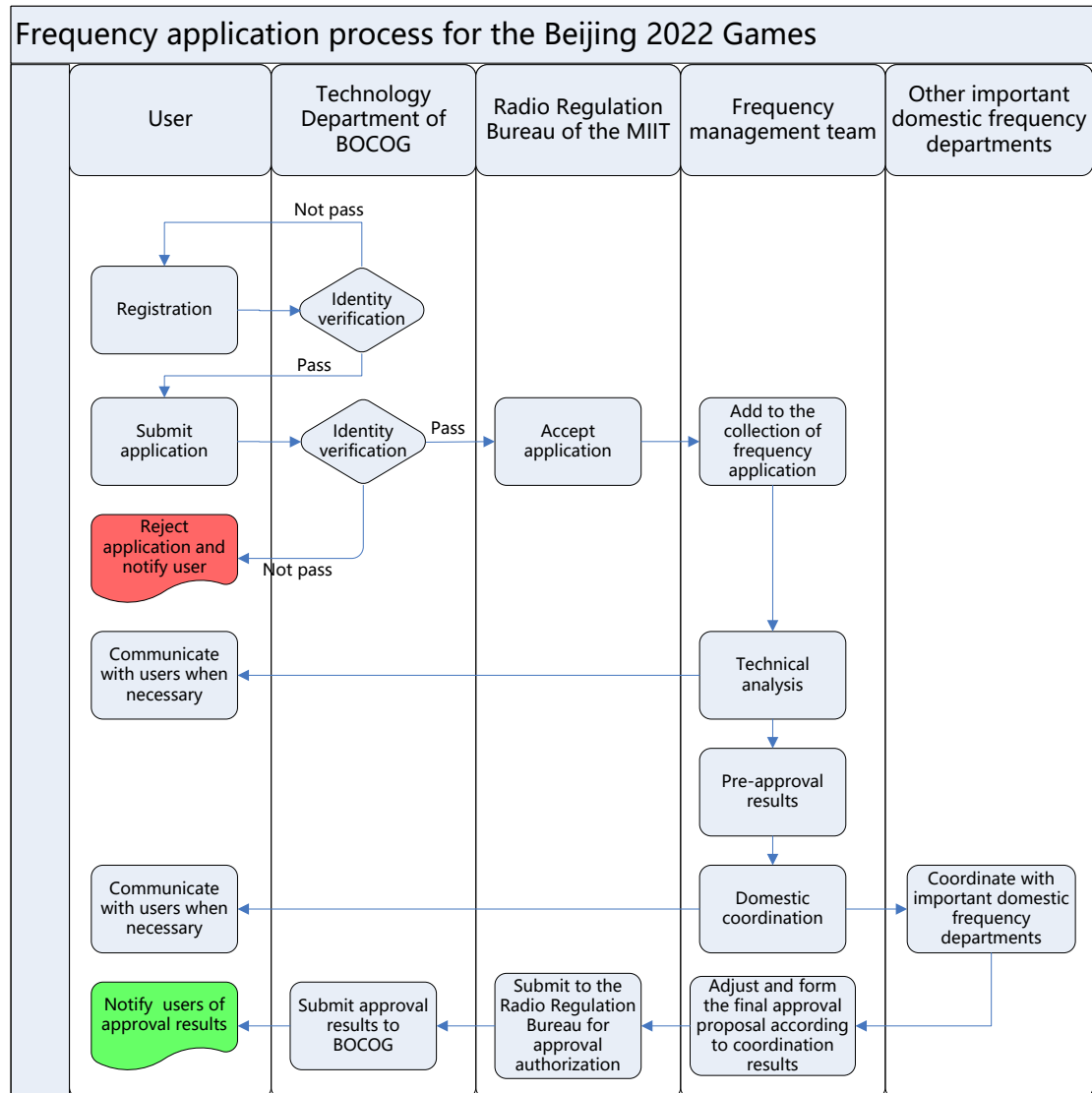
In large-scale sports events, a large number of various radio stations and radio equipment will be used at the same time and in the same place, which will lead to the scarcity of radio spectrum and the complexity of electromagnetic environment. During the Beijing 2022 Games, in order to use radio spectrum efficiently and ensure various types of radio stations and radio transmission equipment work normally, users (including mainland China, Hong Kong, Macao, Taiwan and overseas users) who need to use radio transmission equipment in venues and special control areas during the Beijing 2022 Games need to comply with the relevant Chinese laws and regulations, such as Regulations of the People's Republic of China on Radio Administration, unless otherwise specified. Users need to submit the application to the Radio Regulation Bureau of MIIT<sup>2</sup> and obtain the radio frequency license. Equipment testing & tagging are required before using the radio transmission equipment in venues and special control areas.

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<sup>1</sup> Special control areas will be determined by department of security of the Beijing Organising Committee for the 2022 Olympic and Paralympic Winter Games.

<sup>2</sup> MIIT: the Ministry of Industry and Information Technology of the People's Republic of China.

### 1.3 Frequency Application Flowchart



## 2. Frequency Application Procedures

### 2.1 Application Schedule

There are three stages in the frequency application schedule of the Beijing 2022 Games.

#### 2.1.1 Normal Application Period (The First Stage)

The normal application period (first stage of the frequency application) is from 1 Jan.2021 to 15 Jun.2021. In this stage, the frequency management team will consider comprehensively national radio frequency allocation, status of frequency usage, the collected frequency application and the results of electromagnetic compatibility analysis. They will conduct overall

analysis, coordination and necessary adjustments. The priority of application and the probability of obtaining approval are very high.

It is strongly recommended that users complete the frequency application as early as possible in the first stage.

From 16 Jun.2021 to 30 Jun.2021, the database system will be organized, and the frequency applications won't be accepted during this period.

Approval for frequency application in the first stage will be issued before October 15, 2021.

#### 2.1.2 Late Application Period (The Second Stage)

The late application period (second stage of the frequency application) is from 1 Jul.2021 to 30 Nov.2021. Applications received in this stage will be approved on a first-come and first-served basis when frequency resources are available. The priority of the frequency application is lower than in the first stage. If the frequency resource in the applied band is limited, the probability to obtain the approval is very low.

From 1 Dec.2021 to 31 Dec.2021, the database system will be organized, and the frequency applications won't be accepted during this period.

Approval for frequency application in the second stage will be issued before January 15, 2022.

#### 2.1.3 Extraordinary Application Period (The Games-Time Stage)

The extraordinary application period (games-time stage of the frequency application) is from 1 Jan.2022 to 13 Mar.2022. This stage is only used for emergency applications for important frequency requirements during the game. Since most of the frequency resources have been approved before this stage, it is quite difficult to meet the demand for frequency directly. Therefore, it is not recommended to submit an application at this stage except in cases which an emergency application must be made to ensure the normal progress of the game and broadcast.

Approval for frequency application in the games-time stage will be issued as soon as possible, which is depended on the spectrum resources, technical analysis and the complexity of

necessary adjustments.

## **2.2 Frequency Application Procedures**

### **2.2.1 Application and Acceptance**

Overseas and domestic users who need to use radio stations or radio transmission equipment in venues and special control areas in Beijing, Yanqing, or Zhangjiakou during the Beijing 2022 Games, according to the schedule in "2.1 Application Schedule", should submit the frequency application on the spectrum order portal (frequency application website, <https://spectrum.beijing2022.cn>). The spectrum order portal (frequency application website) is expected to be online in January 2021. Once again, it is strongly recommended that users apply for frequency as early as possible in the first stage. After the frequency application being sent to the technical department of the Beijing Organising Committee for the 2022 Olympic and Paralympic Winter Games ("Beijing 2022") through the spectrum order portal website, the technical department of the Beijing 2022 will identify the users to confirm whether they belong to an organization or institution that must use the frequency in venues and special control areas during the game. If the frequency application has nothing to do with the game, the application will be rejected.

After confirmation by the Beijing 2022, the application data will be sent to the Radio Regulation Bureau of MIIT for processing.

### **2.2.2 Technical Analysis and Pre-approval**

After the Radio Administration Bureau of MIIT accepts the application, the relevant application data will be sent to the frequency management team, which will carry out relevant technical analysis work. It needs to be emphasized that a large number of various radio stations and radio equipment will be used at the same time and in the same place during the game, which will lead to the scarcity of radio spectrum. Therefore, the applications received in the first stage will be analyzed and processed as a whole after June 15, rather than being processed immediately after receiving the applications.

After June 15, 2021, the frequency management team will conduct an overall technical analysis

of frequency applications that have been collected in the first stage, taking into account national radio frequency allocation, status of frequency usage, the frequency application and the results of electromagnetic compatibility analysis.

Based on the analysis results, the frequency management team will pre-approve each user's frequency application and make preliminary approving suggestions.

After the frequency management team receiving the frequency applications of the second and game-time stages, they will analyze and approve applications sequentially according to the application time. However, given the application time, the remaining frequency resources and the work schedule, the priority of these frequency applications in technical analysis will be affected.

In the process of technical analysis and coordination, if necessary, the frequency management team will communicate and coordinate with the applicant through the Beijing 2022, using the email address or telephone number submitted by the user at the time of application.

### 2.2.3 Coordination

In the process of technical analysis, the frequency management team will coordinate with important domestic frequency departments in China (such as TV broadcasting, Civil Aviation, meteorology, etc.), and revise the pre-approval results according to the coordination results, and form the final approval suggestions.

In this period, if necessary, the frequency management team will communicate with the users through the Beijing 2022 using the e-mail address or phone number submitted at the time of application.

### 2.2.4 Approval Authorization

The frequency management team will submit the final approval suggestions to the Radio Regulation Bureau of MIIT through the spectrum order portal (frequency application website) system. The Radio Regulation Bureau of MIIT will approve frequency application on behalf of the Radio Administration of China. If the frequency application is approved, the users will obtain the electronic version of the "Radio Equipment Frequency License for the Beijing 2022

Olympics and Paralympic Winter Games" on the Beijing 2022 Games spectrum order portal (frequency application website) and by email. License for frequency application in different stages will be issued before the corresponding deadline according to the time schedule above.

## **2.3 Application Essentials**

Overseas and domestic users who need to use radio stations and radio transmission equipment in venues and special control areas during the Beijing 2022 Games should submit the frequency application on the spectrum order portal (frequency application website, <https://spectrum.beijing2022.cn>) according to the schedule in "2.1 Application Schedule". The essentials of application information to be filled in the website are as follows.

### **2.3.1 User Information**

In order to determine the nature of the user's organization and facilitate communication with users during the processing of frequency application, users need to fill in their own information.

Domestic users need to fill in the organization name, organization code, operator's organization name, ID card number of the operator, code issued by the Beijing 2022 (the Beijing 2022 will send the initial user name and password to the important domestic frequency application users in advance), the operator's name, email address, telephone number, and upload the scanned copy of official application letter.

Overseas users need to fill in the country name(users from Hong Kong, Macao and Taiwan need to fill in the region name), the organization name, code issued by the Beijing 2022 (the Beijing 2022 will send the initial user name and password to the important overseas frequency application users in advance), the operator's name, email address and telephone number.

### **2.3.2 Type of Radio Transmitting Equipment**

According to the Report of ITU-R SM.2257-3, previous Olympic Games management experience and national radio management practice, the radio transmitting equipment is distinguished into the following types. When applying for frequencies, the type of equipment should be selected first, and the technical parameters to be filled in for different types of equipment are different.



### 1. Land Mobile Radio

Land mobile radio (LM) refers to the mobile communication equipment and its relay equipment (repeater/basestation) with multiple users for terrestrial data or voice communication, but does not include the handheld walkie-talkie without repeater/basestation. LM also includes wireless intercom systems used in broadcast or sports presentation.

### 2. Handheld Radios (walkie-talkie)

Handheld Radios (HR) refer to the handheld walkie-talkie that is not used in repeater/basestation mode, or other point-to-point voice (simplex) communication equipment with the same working mode as the handheld walkie-talkie.

### 3. Wireless Camera

Wireless camera refers to a camera that uses wireless technology to transmit the captured image to a fixed receiving point, excluding the wireless remote control device for the shutter of the camera (Pocket wizards used by photographers).

### 4. Wireless Microphone

Wireless Microphone (WM) refers to the microphone that uses wireless technology to transmit sound to acquisition device or loudspeaker, including handheld microphone, wearable microphone or microphone attached to other devices.

### 5. Telemetry & Telecommand

Telemetry & Telecommand (TC) refers to the equipment that uses wireless technology to measure or control, such as remote control equipment for controlling wireless camera or mechanical lifting device, timing and scoring equipment, etc.

### 6. In-Ear Monitor System

In-ear monitor (IEM) system includes transmitting equipment and receiving equipment, which is used for staff's one-way receiving of live broadcast or command and dispatch, or for entertainers to listen to on-site sounds. It usually uses broadcast transmission mode, and is received by the wireless headset worn in the ear.

## 7. Wireless LAN & Bluetooth

Wireless LAN & Bluetooth (WLAN&BT) refers to WLAN access point and data transmission equipment using WLAN technology or Bluetooth technology. In particular, public mobile communication terminal and the embedded network card of notebook computer do not need special application for radio frequency, but they are not allowed to be used as hot spots of WLAN in venues and special control areas.

## 8. Microwave Fixed Link

Microwave Fixed Link (FL) refers to the equipment that uses microwave link to transmit video, audio or other data between two fixed points.

## 9. Microwave Mobile Link

Microwave Mobile Link (ML) refers to the equipment that uses microwave link to transmit video, audio or other data between mobile point and fixed point.

## 10. Fixed Earth Station

Fixed Earth Station (FES) refers to a satellite earth station that works at a fixed position and communicates through a satellite.

## 11. Mobile Earth Station

Mobile Earth Station (MES) refers to a satellite earth station that works on a mobile basis and communicates through a satellite, including carborne, airborne, portable and handheld earth station.

## 12. Others

Wireless devices not included in the above equipment types.

### 2.3.3 Technical Information

Users should provide the following technical information so that the frequency management team can perform frequency availability analysis.

In the column of device type, users should select one device type described in section 2.3.2;

In the column of usage area, users should fill in the location of the equipment. Where it is necessary to use the equipment in multiple locations or move within a certain area, each location or area should be indicated;

In the column of usage local location, users should choose from three options: indoor, outdoor, or aircraft;

In the columns of tunable frequency range of the system (start), tunable frequency range of the system (end) and tuning step, users should fill in the upper and lower limits of the frequency range that the whole system(including combiner, duplexer, antenna, etc.) can work within, and the minimum tuning step of the whole system;

In the columns of preferred center frequency, bandwidth and modulation, users should fill in the expected center frequency of transmitting and receiving, bandwidth and modulation, separately. If the same model of equipment works on different parameters (center frequency, bandwidth or modulation), all parameters should be listed in different columns of this equipment (Up to 10 different parameters can be filled in for each equipment);

If user has requirements for the frequency interval of a duplex system, please fill in the "Extra Requirements" column;

In the column of number of devices, users should fill in the number of devices working with this parameter;

In the column of the maximum transmitting power, users should fill in the equivalent isotropic radiated power (EIRP) of the device in dBm, and the antenna gain should be included in EIRP;

In the column of typical coverage distance, users should fill in the device's typical coverage radius in meters;

In the columns of the satellite name and antenna aperture for satellite earth stations, users should fill in the name of the satellite and antenna aperture of the earth station;

In the columns of the manufacturer and model type, users should fill in the manufacturer and model type of the equipment, for similar devices with the same parameters, multiple model type names can be filled in one application;

In the columns of the start and end dates, users should fill in the dates when the equipment begin and end to work.

In the column of whether it affects the progress of the event or the broadcast, users should choose truthfully;

In the column of purpose description, users should briefly describe the purpose and usage scenarios of the equipment;

In the column of the device picture, users should paste the device photo, if possible.

#### 2.3.4 Related Commitments

All overseas and domestic users, who apply for using radio stations and radio transmitting equipment in venues and special control areas in Beijing, Yanqing, or Zhangjiakou during the Beijing 2022 Games, are deemed to have made the following commitments:

1. The user information and technical information must be true;
2. When using the approved radio frequency, the equipment must work in accordance with the parameters stated in the radio frequency license, and the frequency, bandwidth, power, equipment model, usage area, usage time, business purpose and other content cannot be changed without authorization;
3. The approved radio frequency shall not be transferred;
4. Users should take the initiative to handle radio equipment testing and tagging before using the radio equipment. Radio equipment without the special tag mentioned in "2.4 Equipment Testing and Tagging" should not be brought into venues and special control areas, nor be used;
5. Users should consciously abide by the relevant laws and regulations of radio management in China, and actively cooperate with the supervision and inspection of the radio administration authorities. Those who violate the relevant regulations of radio management will be punished according to related law.

#### **2.4 Equipment Testing and Tagging**

Users who have obtained the radio frequency license should take the equipment to a designated

location for testing and tagging before it is operated. The radio frequency parameters of the equipment will be tested, and the equipment that passes the tests will be affixed with a special tag. For the equipment that is inconvenient to move for the test, users can also contact the radio administration authorities for on-site testing and tagging.

Users should use radio equipment according to the time and area indicated on the special tag. Unless otherwise specified, radio equipment without the special tag will not be allowed into venues and special control areas.

The time and locations of the testing & tagging will be announced on the Beijing 2022 Games spectrum order portal (frequency application website). Due to the large number of users and radio equipment during the Beijing 2022 Games, it is recommended that users contact the radio administration authorities as early as possible to allow sufficient time to complete the testing and tagging work.

## **2.5 Equipment Entry**

Overseas users, who need to bring radio transmission equipment into China, shall present the printed copies of "Radio Equipment Frequency License for the Beijing 2022 Olympics and Paralympic Winter Games" of the equipment to the Customs of the People's Republic of China when they go through the customs clearance procedures on arrival.

Radio transmission equipment approved for temporary entry shall be re-shipped out on time in accordance with the relevant customs regulations.

Foreign leaders, embassies and consulates of various countries in China, and other overseas users with diplomatic privileges, who need to use radio frequencies and equipment during the Beijing 2022 Games, should report in advance for approval through diplomatic channels to the Radio Regulation Bureau of MIIT.

## **2.6 Contact Information**

If there are questions about the frequency application process, users can consult the Beijing 2022 in the following ways.

Overseas users can consult via email [spectrum@beijing2022.cn](mailto:spectrum@beijing2022.cn);

Domestic users can consult via email [spectrum@beijing2022.cn](mailto:spectrum@beijing2022.cn), or call 010-66681278.

### **3. Miscellaneous**

For the frequency application and approval of the test events of the Beijing 2022 Games, users can follow the information on official website of each test event. The relevant requirements and forms for frequency application will also be sent with the invitation letter of each test event.