

Communications
Regulatory Authority
State of Qatar

هيئة تنظيم
الاتصالات
دولة قطر

Spectrum Plan for FIFA Arab Cup™ QATAR 2021

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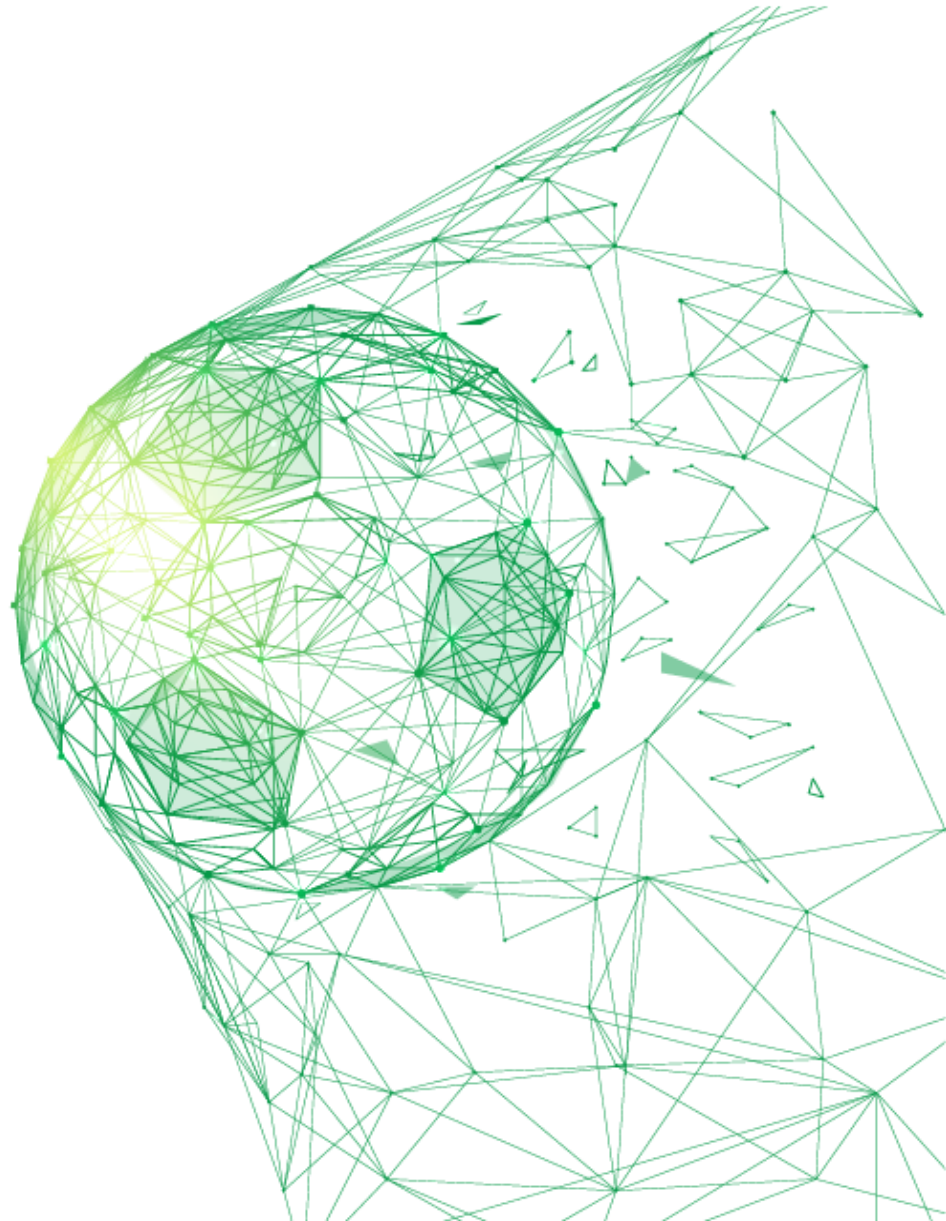


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Section 1 Summary



Section 1: Summary

The FIFA Arab Cup 2021™

The FIFA Arab Cup 2021™ (FAC 2021) will take place in the State of Qatar between 1st and 18th December 2021 as a prelude to the FIFA World Cup – Qatar 2022™. It will be staged at various locations around Qatar, concentrating on the Seven FIFA Stadiums. Wireless applications will play an important role both in the build-up to and during the Event.

CRA Role

1.2 The Communications Regulatory Authority “CRA” is the responsible authority for regulating and managing all the affairs relating to the radio spectrum use. As such, CRA is responsible for organizing a full spectrum plan for FWC 2022 in accordance with the Decree Law No. (34) of 2006 on the promulgation of the Telecommunications Law as amended by the Law No. (17) of 2017, the Executive By-Law for the Telecommunications Law and the CRA Strategy 2020 - 2024.

This responsibility must be seen in the context of the guarantee given by the Government of the State of Qatar (Government) to the Fédération Internationale de Football Association (FIFA) in support of Qatar’s proposal for conducting the FIFA World Cup – Qatar 2022™. This guarantees the allocation of spectrum required for the organization of the Event. The tournament will be delivered by FIFA, the Qatar Football Association, the Supreme Committee for Delivery and Legacy and the FIFA World Cup Qatar 2022 LLC.

Spectrum Requirements

CRA expects spectrum to be required primarily for three broad categories of applications:

- Private Mobile Radio (PMR) by Qatar 2022 Local Organizing Committee (LOC) of FAC 2021; and
- Broadcasting by Broadcasting Services (BS), the Host Broadcaster for the Event (HB), the Media Rights Licensees (MRLs), and Rights-Holding Broadcasters (RHBs) that have contracted with the FIFA to broadcast the Event.
- Short Range devices such as wireless microphones, assistive listening devices, RFID, WLAN/RLAN, etc., mainly used by the MRLs, press users, service providers and Participating Member Associations (PMAs).

Stakeholders

CRA is working closely with FIFA, Supreme Committee for Delivery and Legacy (SC) and other domestic stakeholders. CRA will continue the discussions with the other stakeholders, both in Qatar and overseas, with an interest in the use of wireless applications at FAC 2021 as appropriate.

Section 2

Introduction



Section 2: Introduction

The FIFA Arab Cup Qatar 2021™

Twenty-two teams have signed up to play in the FIFA Arab Cup 2021™, which will comprise thirty-two matches held over 18 days in December. From those participants, ten will automatically qualify for the Round of 16 Stage - qualifying will be based on the December 2021 FIFA ranking. The remaining twelve teams will play in a qualifying Group Stage; the six winning squads will move on to the Round of 16.

The sixteen teams who qualified from the Group Stage will be split into four groups of four. Each squad will play the others within the group to decide on the top two teams. The top two from each group will fight it out in the quarterfinals.

The four winning teams from the quarterfinals will go through to the semi-finals to contest a place in the final and a chance to be crowned champions of the Arab footballing world.

The 2021 tournament will see the following nations competing in seven of Qatar's 2022 World Cup stadiums (all but Lusail International Stadium are lined up to host the championship matches):

Algeria, Bahrain, Comoros, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, United Arab Emirates and Yemen will participate in the event.

Scope

This document defines the spectrum plan for the FAC 2021 based on the data from the experts from past major international sport events and the status of currently assigned spectrum in Qatar. This document sets out the current analysis of the spectrum requirements. It also explores the possibility of using spectrum more efficiently to meet those requirements.

It also aims to promote the orderly spectrum usage by notifying stakeholders the spectrum application procedure, test and tagging implementation and the implementation of radio spectrum monitoring.

High-Level Service Requirements

The FAC 2021 is considered as the prelude towards the preparation of the mega event, FWC 2022 just a year ahead. The following statements specify the minimum requirements to be satisfied by the Spectrum Management services provided for the events:

- The LOC shall ensure that the Government (and/or relevant state, regional or municipal governmental authorities, as applicable) obtains all radio frequencies necessary for the successful delivery of the FAC 2021 and the FWC 2022.

- A spectrum plan shall be published by the Spectrum Management service provider listing all licensed and license-exempt radio frequencies available in the host country and identifying the current category of use for each frequency or band of frequencies, including permitted transmitted power levels.
- Frequency bands containing frequencies which are allocatable to approved users through a license application process shall be clearly marked. Frequency bands which shall not be allocatable for use by approved stakeholders of the event shall be identified with a reason for non-allocation (e.g., 'reserved for military use').
- An online ordering tool shall be provided by the Spectrum Management service provider for stakeholders approved by FIFA to submit applications for the following:
 - An application for use of a specific frequency or band of frequencies within a licensed frequency band in the host country
 - An application for use of a specific channel within a license-exempt frequency band in the host country
- Applications for radio frequencies or channels shall be venue-specific such that an applicant may apply for the use of a radio frequency or channel only within a single FAC 2021 venue.
- This online spectrum application process shall be operational for stakeholder applications no less than Six months prior to the start of the FAC 2021.
- Priority in the selection and allocation of licensed and license-exempt spectrum shall be given to FIFA and the host broadcaster.
- Applications for licensed and license-exempt spectrum shall be assessed by the Spectrum Management service provider and the applicant notified of the assigned frequency or channel, including any restrictions for its use such as transmission power levels, operating locations and/or operating dates. Where the requested frequency or channel is unavailable an alternative frequency or channel shall be proposed to the applicant.
- The online process for stakeholders to apply for use of licensed and license-exempt spectrum shall close no later than three months prior to the start of the FAC 2021. An emergency application process shall be established by the Spectrum Management service provider in conjunction with FIFA and Q22 for spectrum applications received after the closure of the application period.
- In accordance with these requirements, CRA is responsible for organizing a full spectrum plan for the event and for arranging all the spectrum licenses in good time in support of the plan.

Spectrum Management

Spectrum is a fundamental, finite, and valuable national resource which belongs to the State of Qatar, and which the CRA is charged with managing on behalf of the State.

Spectrum is important to all sectors of the communications services industry and other strategic industries. There are international regulatory frameworks for the management of spectrum and regulators world-wide are continually reviewing the way in which spectrum policy, allocation and assignments are determined. This helps to ensure that the resource can be distributed and used to optimum national and economic benefit.

Qatar Radio Spectrum Outlook 2022 was set out for consultation in the beginning of 2020 and then approved and published to provide stakeholders with an overview of CRA's overall approach and planned activities related to meeting the expected demand for commercial mobile services, satellite services, broadcasting service, and program making and special events applications over the years 2020 - 2022. It outlines CRA's plans to address issues related to access to spectrum and enabling new technologies, and to make resources available to support telecommunications services and applications that are expected to require new or additional spectrum in the coming years, especially during the hosting of the big event, FWC 2022.

Radio Spectrum License/Authorization

No person shall operate any radio equipment or make any use of radio frequencies, without obtaining a radio spectrum license or a radio frequency authorization from the CRA.

The Licensee is obliged to use radio spectrum in accordance with the terms and conditions specified in the radio spectrum license or in the radio frequency authorization.

Spectrum Fees Considerations

The spectrum fee is currently calculated as per spectrum fee policy and fee schedule that was levied as per Decision of the Minister of Information and Communication Technology No. (15) of 2015 in place since July 8, 2015.

The schedule is used to calculate fees for different frequency bands according to the technical parameters such as transmit power, area size and bandwidth per channel etc. for each authorized user / licensee.

The per MHz spectrum fee for terrestrial radio frequency services as per this decision in various bands is shown in the table in Annex 1.

The schedule for calculating the satellite-based services in various bands as per the technical perimeters authorized for each user/ licensee is shown in Annex 2.

Section 3

CRA Approach and Assumptions



Section 3: CRA Approach and Assumptions

Approach

CRA approach to spectrum planning for the FAC 2021 and WC 2022 takes into consideration the following regulatory instruments, now in force, which are already published and available on the CRA website:

- Qatar Radio Spectrum Policy
- Qatar National Frequency Allocation Plan
- Qatar Radio Spectrum Outlook 2022
- Spectrum Licensing Regulatory Framework
- Class License for Short Range Devices

Different applications will require different amounts of spectrum and operate at different frequencies with different requirements to prevent interference. This will affect the ability to share spectrum in the same location with other applications.

Assumptions

CRA assumes to spectrum planning for the FAC 2021 the following:

- All spectrum requirements for Host Broadcaster (HB) will be sent to CRA on July 2021 for FAC 2021 and other requirements will be sent not later than three months prior to the start of the Event (September 2021) for evaluation and necessary action.
- Any requests received after September 2021 prior to the event or during the event would be processed on an emergency basis through an expediated workflow. However, the priority to spectrum would be given to the requests received earlier than three months period. Hence it is encouraged that all spectrum requirements are submitted as early as possible to ensure their assignment.
- All broadcasters will require spectrum for reporting both within and outside venues. Spectrum will be required for partners and venue setup ahead the Event.
- A satellite-dish farm will be deployed at a fixed location adjacent to the International Broadcast Center (IBC). RHBs might also use satellites to link competition venues back to their facilities in the IBC or at other locations. News-gathering organizations will also use satellites.
- Wireless equipment will be re-exported or retuned outside the country, to some extent, after the end of the Event. Equipment retained in the county must be authorized before the use as per the Applicable Regulatory Framework. More information is available on CRA website (www.cra.gov.qa).

Section 4

Spectrum for Wireless Applications



Section 4: Spectrum for Wireless Applications

Minimum requirements for operation

The minimum requirements are made for reasons related to the effective and appropriate use of the radio spectrum maximizing spectrum utilization.

For the following wireless applications, a high-level description of how the spectrum is used for event is given. This, therefore, stipulates the necessary equipment parameters for the licensing of the Event.

The technical parameters specified in below are applied to achieve the desired level of compatibility within the Event services and with other radiocommunications services, whilst promoting enterprise, innovation, and competition.

Necessary technical information is provided to facilitate access to the Event spectrum by making clear the assumptions that are made in planning the use of the Event spectrum.

In each table below, the mentioned "Reference Standard" is for guidance purposes and is assumed to be fulfilled in frequency planning and defining the equipment type. Hence, full compliance with which is not mandatory.

The term "Available" in the Notes in the below tables refers to the channel availability, while the frequency assignment will be on first come first serve basis.

The term "Limited Availability" in the Noted in the below tables refers to the channel availability with stringent constraints.

Private Mobile Radio

Private Mobile Radio (PMR) expected to be used to cover all activities needed to organize a successful Event. This includes private security services, sport services, transport, and the management of the venues, ceremonies, catering, spectator services and ticketing. Other PMR users will include partners, broadcasters, and LOC's suppliers.

To date, handheld radios have used analogue technologies. However, digital mobile radio (DMR) is also allowed and is available in the market.

Users are likely to bring their own wireless equipment into Qatar. For such equipment, we anticipate a duplex split of 10 MHz, with the majority of radios using 6.25 kHz and 12.5 kHz channels and the rest 25 kHz channels.

Overall, CRA believes that a TETRA trunk system, some analogue PMR base stations and a mix of DMR and analogue PMR systems will be used at the event.

Encryption of the mobile radio is subject to approval from security agencies.

Minimum Requirements for PMR

Frequency Band	Duplex Spacing	Channel Bandwidth	Remarks
360 – 380 MHz	10 MHz	DMR 6.25 kHz PMR 12.5 kHz	Available
406.100 – 410.000	10 MHz	DMR 6.25 kHz PMR 12.5 kHz	Available
450 – 470 MHz	10 MHz	DMR 6.25 kHz PMR 12.5 kHz	Limited Availability
418 – 420 MHz 428 – 430 MHz	10 MHz	DMR 6.25 kHz PMR 12.5 kHz TETRA 25 kHz	Limited Assignments
PMR446			Not Allowed

Wireless Microphones

Wireless microphones are mainly used by broadcasters or event’s organizers to capture interviews, music or sounds. They can be handheld, or body worn, with integrated or body-worn transmitters. Wireless microphones are generally low power (50100- mW), though some require 1 W. They are currently analogue because of the audio lag incurred when using digital technology. The bandwidth required is 200 kHz per channel.

Minimum Requirements for Wireless microphones

Frequencies or Frequency Band Edges (MHz)	Maximum Radiated Level	Typical Channel Bandwidth	Notes	Reference Standard
174.000 - 216.000	50 mW ERP	200 kHz	Use of the bands is on a tuning range basis.	EN 300 422
470.000 - 694.000	50 mW ERP	200 kHz	Use of the bands is on a tuning range basis.	
823.000 - 826.000	20 mW EIRP	200 kHz		
823.000 - 826.000	100 mW EIRP	200 kHz	Restricted to body worn microphones	
826.000 - 832.000	100 mW EIRP	200 kHz		

Audio Links

Audio links include wireless radio equipment designed or adapted for telephony, for the purpose of carrying monophonic or stereophonic music and speech broadcasting signals or for carrying multiple talkback signals and audio distribution systems (ADS).

Minimum Requirements for Audio Links

Frequencies or Frequency Band Edges (MHz)	Maximum Radiated Level	Typical Channel Bandwidth	Notes	Reference Standard
174.000 - 216.000	5 W ERP	12.5 kHz	For on-site use	EN 300 454
470.000 - 694.000	5 W ERP	12.5 kHz	For on-site use	

Talkback

Talkback is an intercom system mainly used by broadcasters to give directions of the director instantly to all those concerned in making the program and production-team members such as camera operators, reporters, interviewers, presenters, sound operators, lighting operators and engineers.

It uses PMR-like technology but because high-quality sound is required, typically uses 200 kHz channels. However, 12.5 kHz channels can suffice, and older equipment tends to use smaller bandwidths anyway.

Minimum Requirements for Talkback

Frequencies or Frequency Band Edges (MHz)	Maximum Radiated Level	Typical Channel Bandwidth	Notes	Reference Standard
29.700 - 47.000	5 W ERP	12.5 kHz	For on-site use.	EN 300 086
146.000 - 153.000	5 W ERP	12.5 kHz	For on-site use.	
360.000 - 380.000	5 W ERP	12.5 kHz	For on-site use.	
406.100 - 410.000	5 W ERP	12.5 kHz	For on-site use.	
450.000 - 470.000	5 W ERP	12.5 kHz	For on-site use with Limited Availability	
470.000 - 694.000	5 W ERP	12.5 kHz	For on-site use.	

Video Links

Wireless radio equipment designed or adapted for carrying video broadcast together with music and/or speech signals.

Minimum Requirements for Video Links

Frequencies or Frequency Band Edges (GHz)	Maximum Radiated Level	Typical Channel Bandwidth	Notes	Reference Standard
1.990 - 2.110	5 W ERP	10 MHz	Limited to HBS within the perimeter fence of the venues	EN 302 064
2.200 - 2.290	1 W ERP	10 MHz	For low-power wireless cameras only. Limited to HBS within the perimeter fence of the venues	
2.290 - 2.300	1 W ERP	10 MHz	For low-power wireless cameras only. Limited to HBS within the perimeter fence of the venues	
2.400 - 2.500	5 W ERP	20 MHz	Non-Interference Non-Protection basis	
5.470 - 5.725 5.725 - 5.875	33 dBm ERP	20 MHz	Non-Interference Non-Protection basis	
7.110 - 7.250	20 dBW ERP	Varies	Limited Availability	
7.300 - 7.410	20 dBW ERP	Varies	Limited Availability	
7.410 - 7.425	20 dBW ERP	Varies	Limited Availability	
8.460 - 8.500	20 dBW ERP	Varies	Limited Availability	
10.000 - 10.680	20 dBW ERP	Varies	Available	
11.700 - 12.500	20 dBW ERP	Varies	Available	
12.200 - 12.475	20 dBW ERP	Varies	Available	
48.000 - 48.400	30 dBW ERP	100 MHz	Available	

Telemetry and Telecommand Links

Wireless radio equipment designed or adapted for the remote control of cameras and other program making equipment and for signaling.

Minimum Requirements for Telemetry and Telecommand Links

Frequency or Frequency Band (MHz)	Maximum Radiated level	Typical Channel Bandwidth	Notes	Reference Standard
360.000 - 380.000	1 W ERP	12.5 kHz	Available	EN 300 113
403.000 - 406.000	1 W ERP	6.25 kHz 12.5 kHz	Limited Availability	
450.000 - 470.000	1 W ERP	12.5 kHz	Limited Availability	
470.000 - 694.000	1 W ERP	12.5 kHz 25 kHz	Available. Some specific channels within this range (Center Frequencies of 490 MHz and 506 MHz, with channel bandwidth of 8 MHz each) are exclusively used for Digital Terrestrial TV Broadcast, and they are on-air and shall not be considered for assignment for any application.	

Point-to-Point links

Point-to-point links might be required to connect venues or to provide video signals back to an outside-broadcasting truck, for example.

Minimum Requirements for Point-to-Point Links

Frequencies or Frequency Band (GHz)	Maximum Radiated level	Typical Channel Bandwidth	Notes	Reference Standard
6.425 – 7.125	varies	varies	Link by link basis	EN 301126
7.145 – 7.425	varies	varies		
7.425 – 7.725	varies	varies		
22.000 – 23.600	varies	varies		
71.000 – 76.000	varies	varies		
81.000 – 86.000	varies	varies		

DECT

Digital Enhanced Cordless Telecommunications, usually known by the acronym DECT, is a standard primarily used for creating cordless telephone systems.

Minimum Requirements for DECT

Frequencies or Frequency Band (MHz)	Maximum Radiated level	Typical Channel Bandwidth	Notes	Reference Standard
1880.00 – 1900.00	10 mW	1.728 MHz	Available	EN 300 175
1900.00 – 1918.00	10 mW	1.728 MHz	Available	

Section 5
Emergency
Applications



Section 5: Emergency Applications

Introduction

Any requests received after September 2021 prior to the Event or during the Event would be processed on an emergency basis through an expediated workflow.

Priority to access spectrum would be given to the requests received earlier than three months period. Hence it is encouraged that all spectrum requirements are submitted as early as possible to ensure their assignment.

Certain parts of unassigned spectrum in each category of use as mentioned in section 4 would be reserved for such applications. This would avoid delays in conducting the coverage and interference analysis for such cases.

Section 6

License-Exempt Spectrum and Applications



Section 6: License-Exempt Spectrum and Applications

Introduction

Radio equipment that complies with the technical limits covered under the Class License for Short Range Devices is exempted from obtaining a separate frequency license.

However, authorization from CRA is required for such equipment (and their accessories) before being used at FAC 2021 venues.

Some license-exempt equipment will require specific frequency assignment from CRA (for example, but not limited to, the wireless microphones) in advance.

All license-exempt equipment (and accessories) are subject to the applicable Test and Tagging process.

Minimum requirements for License-Exempt equipment:

Frequencies or Frequency Band Edges (MHz)	Maximum Radiated Level	Typical Channel Bandwidth	Notes	Reference Standard
13.553 - 13.567	60 dB μ A/m at 10m		RFID	EN 300 330 EN 302 291
174.000 - 216.000	50 mW ERP	200 kHz	Use of the bands is on a tuning range basis.	EN 300 422
433.050 - 434.790	10 mW ERP	200 kHz		EN 300 440
470.000 - 694.000	50 mW ERP	200 kHz	Use of the bands is on a tuning range basis.	EN 300 422
823.000 - 826.000	20 mW EIRP	200 kHz		EN 300 422
823.000 - 826.000	100 mW EIRP	200 kHz	Restricted to body worn microphones	EN 300 422
826.000 - 832.000	25 mW ERP	200 kHz		EN 300 422
865.000 - 870.000	100 mW EIRP		Duty cycle \leq 0.1% or LBT	EN 300 220
1880.00 - 1900.00	10 mW EIRP		DECT	EN 300 175
2400.00 - 2483.50	10 mW EIRP			EN 300 440
2400.00 - 2483.50	100 mW EIRP	20 MHz	RLAN Applications	EN 300 328
5150.00 - 5250.50	200 mW EIRP	20 MHz	RLAN Applications	EN 301 893
5250.00 - 5350.50	200 mW EIRP	20 MHz	RLAN Applications	EN 301 893
5470.00 - 5725.50	100 mW EIRP	20 MHz	RLAN Applications	EN 301 893
5725.00 - 5875.50	100 mW EIRP	20 MHz	RLAN Applications	EN 302 502
24050.00 - 24250.00	100 mW EIRP			EN 302 372

Section 7
Excluded /
Restricted Bands



Section 7: Excluded / Restricted Bands

Introduction

The below table shows the list of frequency bands that are not permitted for use at FAC 2021 venues since these bands are assigned exclusively for existing users in Qatar. However, some bands listed in the table are with limited availability as they are already allocated for other services.

No.	Frequency Range (MHz)	Allocation Purpose in Qatar	Assignment Availability
1.	26.965 – 27.405	Citizen Band	Limited Availability
2.	87.5 – 108	FM Plan	Unavailable
3.	118 – 136	Aeronautical	Unavailable
4.	144 – 146	Amateur	Unavailable
5.	156 – 163	Maritime	Unavailable
6.	380 – 400	Public TETRA Network	Unavailable
7.	410 – 430	Public TETRA Network	Limited Availability
8.	430 – 440	Amateur	Limited Availability on Non-Protection, Non-Interference and Non-Exclusive basis
9.	440 – 450	Public Network	Unavailable
10.	694 – 790	Public Network	Unavailable
11.	790 – 862	Public Network	Unavailable
12.	863 – 865	Assigned exclusively to SC in all stadiums for Assistive Listening System	Unavailable
13.	876 – 925	Public Network	Unavailable
14.	880 – 960	Public Network	Unavailable
15.	960 – 1215	Aeronautical	Unavailable

No.	Frequency Range (MHz)	Allocation Purpose in Qatar	Assignment Availability
16.	1427 – 1518	IMT System	This band maybe considered for wireless/ video links.
17.	1710 – 1880	Public Network	Unavailable
18.	1920 – 2170	Public Network	Unavailable
19.	2300 – 2400	Public Network	Unavailable
20.	2500 – 2690	Public Network	Unavailable
21.	3350 – 3400	Public Network	Unavailable
22.	3400 – 3600	Public Network	Unavailable
23.	3600 – 3800	Public Network	Unavailable
24.	7900 – 8400	Fixed Applications	Limited Availability
25.	10700 – 11700	Fixed Applications	Unavailable
26.	12835 – 12947	Fixed Applications	Unavailable
27.	13101 – 13213	Fixed Applications	Unavailable
28.	14400 – 15350	Fixed Applications	Unavailable
29.	17700 – 19700	Fixed Applications	Unavailable
30.	24250 – 27500	IMT System	Unavailable
31.	37000 – 43500	IMT System	This band maybe considered for assignment
32.	66000 – 71000	IMT System	This band maybe considered for assignment

Section 8
E-Spectrum
Portal



Section 8: E-Spectrum Portal

Introduction

e-spectrum portal is an Automated Spectrum Management System which allows applicants to register and then submit applications for different types of spectrum uses. All applicants are required to register into the e-spectrum portal before applying for any type of license category.

The portal is currently going through a major upgrade that would fulfill the spectrum management requirements of FIFA world cup 2022 as well. The upgrade is planned to be completed by September 2021 for the FAC 2021.

All details on how to submit application through the e-spectrum portal is explained in Annex 3 including the processes and sub-processes.

Section 9
Testing and
Tagging



Section 9: Testing and Tagging

Introduction

The Test and Tagging (T&T) procedure consists of the testing of user's equipment for compliance within the technical parameters in the frequency license granted by the CRA, and their identification using tags that allow the right to use of the equipment regarding its area of operation during the event.

This procedure allows advance information of the equipment and the radio frequencies to be utilized by the various stakeholders that participate in the Event, in addition to help in planning of the monitoring and surveillance actions during the performance of the Event, avoiding any entry of equipment that has not been inspected and/or authorized at the FAC 2021 facilities.

High level Service Requirements from FIFA

Applicants granted use of a licensed frequency or license-exempt channel by the CRA, shall be required to bring their RF equipment for testing and tagging, prior to that equipment's authorized use in any venue.

CRA Procedures

CRA will establish its Spectrum Desk Offices at all Stadiums/venues and at a central warehouse location, where T&T facilities shall be provided, prior to the event and during the event as per the Table 1 - Test and Tagging Schedule for FAC 2021.

CRA will coordinate to conduct T&T at the centralized venue(s) for efficient testing and to ease at the venues. Roaming T&T teams will also be deployed at the license holders' offices/warehouse so that equipment could be T&T prior to it being transported to the venue as per requirements raised by the licensee during the licensing procedure. The roaming T&T will be available from 20 October 2021 until 18 December 2021.

Radio equipment (in good condition) shall be tested at these venues for conformance to license conditions (e.g., frequency, bandwidth, power level) and marked with a clearly visible tag indicating their conformance or non-conformance with a distinct color associated with each venue cluster, where the equipment is permitted to be used. Any radio equipment with physical damages in the transmitter and receiver path should be rectified prior to its T&T inspections, to ensure that the equipment is not tagged as non-compliant.

Tag issued by CRA and affixed to the equipment must not be transferred from equipment to another equipment.

Any radio equipment which does not conform to the required license conditions and without appropriate tags shall be denied entry to the venues until the non-conformance has been rectified by the applicant and re-verified for compliance by Testing. Non-compliant equipment will also be tagged in distinctive manner, to prohibit it from being used. Security staff will inspect devices at the entrance of all venues to ensure only authorized/ tagged radio equipment is permitted to enter inside the venue. Spot checks on radio equipment will be carried out in the venues to ensure that all radio equipment have the correct Tag affixed to the device and are operating on the correct licensed/authorized frequency. Unauthorized equipment will be removed and confiscated by the security. Confiscated equipment will be returned to the users when they leave the country.

CRA will exclude personal devices from the above procedure, such as mobile phones, key chains, and devices that use Bluetooth technology such as wireless keyboards, mouse, and earphones.

CRA will carry out random checks on equipment on the venue to make sure that the equipment is tagged for use in that venue and check the frequency the equipment is on.

CRA's preliminary schedule is explained in Table 1 - Test and Tagging Schedule for FAC 2021, A detailed schedule for T&T at each venue shall be provided accordingly.

Activity	T&T team	Venue	Duration	Description
Before Event	Inspection	Central warehouse	20 Oct 2021 - 23 Nov 2021	<ul style="list-style-type: none"> CRA shall facilitate T&T appointment via scheduler during the duration Licensee shall choose available time slots at least 2 days in advance. 30 slots will be available daily
	Roaming	Licensee premises	1 Nov 2021 - 30 Nov 2021	<ul style="list-style-type: none"> Licensee shall request this T&T feature in their application. T&T time slots will be allocated as per the team availability.
During the Event	Emergency	ITCC	1 Dec 2021 - 18 Dec 2021	<ul style="list-style-type: none"> Emergency T&T will be conducted for radio equipment at Central HQ/ ITCC
	Roaming	Competition Stadium	1 Dec 2021 - 18 Dec 2021	<ul style="list-style-type: none"> T&T will be conducted at venues only for replacement of faulty equipment and for the repeater systems installed on venues

Table 1 - Test and Tagging Schedule for FAC 2021

Section 10

Spectrum Interference Monitoring



Section 10: Spectrum Interference Monitoring

Introduction

During the event a variety of radio applications and a substantial number of radio equipment will be present and aggregated within a limited area, which pose a real challenge to meet all spectrum demands and ensure that communications can go ahead without interference.

Spectrum monitoring will be carried out in planned phases providing necessary audit for managing the spectrum before, during and after the event.

High Level Service Requirements

Spectrum monitoring support staff shall be present in the venues immediately prior to and during the matches to perform monitoring, identification and resolution of any radio frequency interference detected or reported.

CRA Procedures

Each venue shall be monitored for evidence of radio frequency interference or unauthorized use of radio frequencies by CRA. Any interference detected shall be geo-located to locate the source. All interfering sources shall be removed from the venue or switched off by CRA until such interference has been resolved.

CRA will have 22 Fixed monitoring stations and 4 mobile monitoring stations for spectrum monitoring and interference investigation during the event, in addition, dedicated Field teams with portable monitoring & direction-finding equipment will be present in each stadium during all matches. The primary venues will be monitored 24/7 from the stations as well as through extensive routine monitoring planned during the events.

CRA will execute spectrum usage monitoring and enforcement actions in the areas where related activities will be held, to identify in advance possible cases of harmful interference with systems whose use is expected during the event and take preventive action. CRA with the competent public security entities shall curb and eliminate the improper use of frequency and possible harmful interference with systems identified during the event. Enforcement teams will be available at the venues to provide a rapid response if needed.

CRA has in place guidelines to its interference management procedures by which it manages spectrum interferences for all its licensees. The following will be the reporting procedures for any interference cases:

- Before the Event, any Spectrum Harmful interference complaints can be raised in the prescribed format available on CRA's website which guides the complainant to provide necessary information and relevant data for submission of the interference complaint. The complaint needs to be emailed to (interference@cra.gov.qa) for recording and resolution.

CRA will implement the Spectrum Monitoring activities prior and during the event. The below plan depicts the phases and planned activities for all three phases:

Activity	Schedule	Monitoring Activity
Pre-Event Monitoring & Testing	June 2021 – Nov 2021	<ul style="list-style-type: none"> Monitoring of all spectrum to verify availability of frequencies assigned for Event Extensive monitoring at Stadiums for stadium specific frequencies and any EMC issues Testing of local spectrum users, local organizers, and agencies at all venues for conformance to licensed conditions. Resolution for interference / replacement of assignments Monitoring of satellite bands, specific to broadcast services and frequencies to be used during the event.
	Sept 2021 – 30 Nov 2021	<ul style="list-style-type: none"> Testing & Rehearsal of all wireless communication / spectrum usage at primary venues identify any non-conformity to the regulatory requirements Resolution of any potential interference scenarios and EMC issues Enforcement actions for unauthorized / interfering sources Technical Inspection surveys inside the Stadium, IBC, Media Center
Monitoring During Events	1 Dec 2021 – 18 Dec 2021	<ul style="list-style-type: none"> Efficiently Identification and removal of any unauthorized use of spectrum Interference investigation and resolution through well-coordinated procedures and actions.

Table 2 - Spectrum Monitoring Schedule for FAC 2021

Annex 1

Annual Radio Spectrum License Fees for Terrestrial Radiocommunication Services



Spectrum Fee

Annual Radio Spectrum License Fee for Terrestrial Radio Services (QAR per MHz per year) ^{9,11}						
		Mobile services, point to multipoint fixed links, scanning telemetry/SCADA systems, broadband wireless access and broadcast transmitters			Any frequency license with exclusive nationwide use ⁷	Individual fixed links, radars, beacons and navigation equipment ^{4,6}
Coverage	Small Area	Local Area	Large Area	National		
Coverage Area ^{1,2}	$A \leq 5 \text{ sqkm}$	$5 < A \leq 500 \text{ sqkm}$	$500 < A \leq 2,000 \text{ sqkm}$	$A > 2,000 \text{ sqkm}$		
Max Coverage Radius ^{1,3}	$R \leq 1 \text{ km}$	$1 < R \leq 12.5 \text{ km}$	$12.5 < R \leq 25 \text{ km}$	$R > 25 \text{ km}$		
Transmitter, ERP ⁴	$ERP \leq 1 \text{ W}$	$1 < ERP \leq 5 \text{ W}$	$5 < ERP \leq 25 \text{ W}$	$ERP > 25 \text{ W}$		
Frequency equal to or less than 87.5 MHz	8,320	16,640	24,960	49,920	8,320	
Frequency higher than 87.5 and equal to or less than 108 MHz	16,666 (8,320)	33,333 (16,640)	50,000 (24,960)	100,000 (49,920)	16,666 (8,320)	
Frequency higher than 108 and equal to or less than 470 MHz	8,320	16,640	24,960	49,920	8,320	
Frequency higher than 470 and equal to or less than 694 MHz	4,160	8,320	12,480	24,960	4,160	
Frequency higher than 694 and equal to or less than 960 MHz	16,666 (4,160)	33,333 (8,320)	50,000 (12,480)	100,000 (24,960)	16,666 (4,160)	
Frequency higher than 960 and equal to or less than 1710 MHz	2,080	4,160	6,240	12,480	2,080	
Frequency higher than 1710 and equal to or less than 2025 MHz	12,500 (2,080)	25,000 (4,160)	37,500 (6,240)	75,000 (12,480)	12,500 (2,080)	
Frequency higher than 2025 and equal to or less than 2110 MHz	2,080	4,160	6,240	12,480	2,080	
Frequency higher than 2110 and equal to or less than 2200 MHz	12,500 (2,080)	25,000 (4,160)	37,500 (6,240)	75,000 (12,480)	12,500 (2,080)	
Frequency higher than 2200 and equal to or less than 2400 MHz	1,040	2,080	3,120	6,240	1,040	
Frequency higher than 2400 and equal to or less than 2500 MHz ¹⁰	130	260	390	780	130	
Frequency higher than 2500 and equal to or less than 2690 MHz	6,667 (1,040)	13,333 (2,080)	20,000 (3,120)	40,000 (6,240)	6,667 (1,040)	
Frequency higher than 2690 and equal to or less than 3130 MHz	1,040	2,080	3,120	6,240	1,040	
Frequency higher than 3130 and equal to or less than 3350 MHz ¹⁰	130	260	390	780	130/1,040 ⁸	
Frequency higher than 3350 and equal to or less than 3470 MHz	1,040	2,080	3,120	6,240	1,040	
Frequency higher than 3470 and equal or less than 3875 MHz ¹⁰	130	260	390	780	130/1,040 ⁸	
Frequency higher than 3875 and equal to or less than 10000 MHz	520	1,040	1,560	3,120	520	
Frequency higher than 10 and equal to or less than 19.7 GHz	260	520	780	1,560	260	
Frequency higher than 19.7 and equal to or less than 40 GHz	130	260	390	780	130	
Frequency higher than 40	500	500	500	500	500	

Rules of Application of the above Table

A1.1 The table shall be applied by taking into account the references (11 - 1) mentioned therein, as follows:

1. Applies to area and band-based licenses for PMR/TMR networks, cellular and FM broadcasting.
2. Applies to licenses where coverage is defined as a geographic area.
3. Applies to licenses where coverage is defined as a radius from a central point.
4. Applies to individually licensed aeronautical, maritime or PMR base stations.
5. For bidirectional fixed links, fees will take the bandwidth in both directions into account, i.e. a bidirectional fixed link with a 7 MHz assigned bandwidth will consist of two radio transmitters operating on different frequencies and both with a 7 MHz assigned bandwidth, thus the fee will be based on the combined assigned bandwidth of 14 MHz.
6. For fixed links, where two links are deployed along the same path using the same frequencies but with orthogonal polarization, the fee for the second link will be reduced by 50%.
7. Fees for point-to-point link block allocations will be set at the national coverage level.
8. The lower fee per MHz applies to non-protected fixed links operating in this frequency range.

9. Table 2 is not a statement of assignment policy, i.e. the presence of a fee in each cell does not indicate that a Radio Spectrum License can be obtained to operate any radio service in any frequency band.
10. All assignments in this band are granted on a shared and non-protected protected basis, this includes nation-wide assignments (i.e. nation-wide assignments are not exclusive to the licensee).
11. Numbers in brackets refer to annual spectrum fees per MHz that will apply in the event that the spectrum was awarded following an auction or similar competitive award process where the licensee has paid a market-based fee for the radio spectrum.

Annex 2

Annual Radio Spectrum License Fees for transmitting earth stations of the Fixed Satellite Service



Spectrum Fee

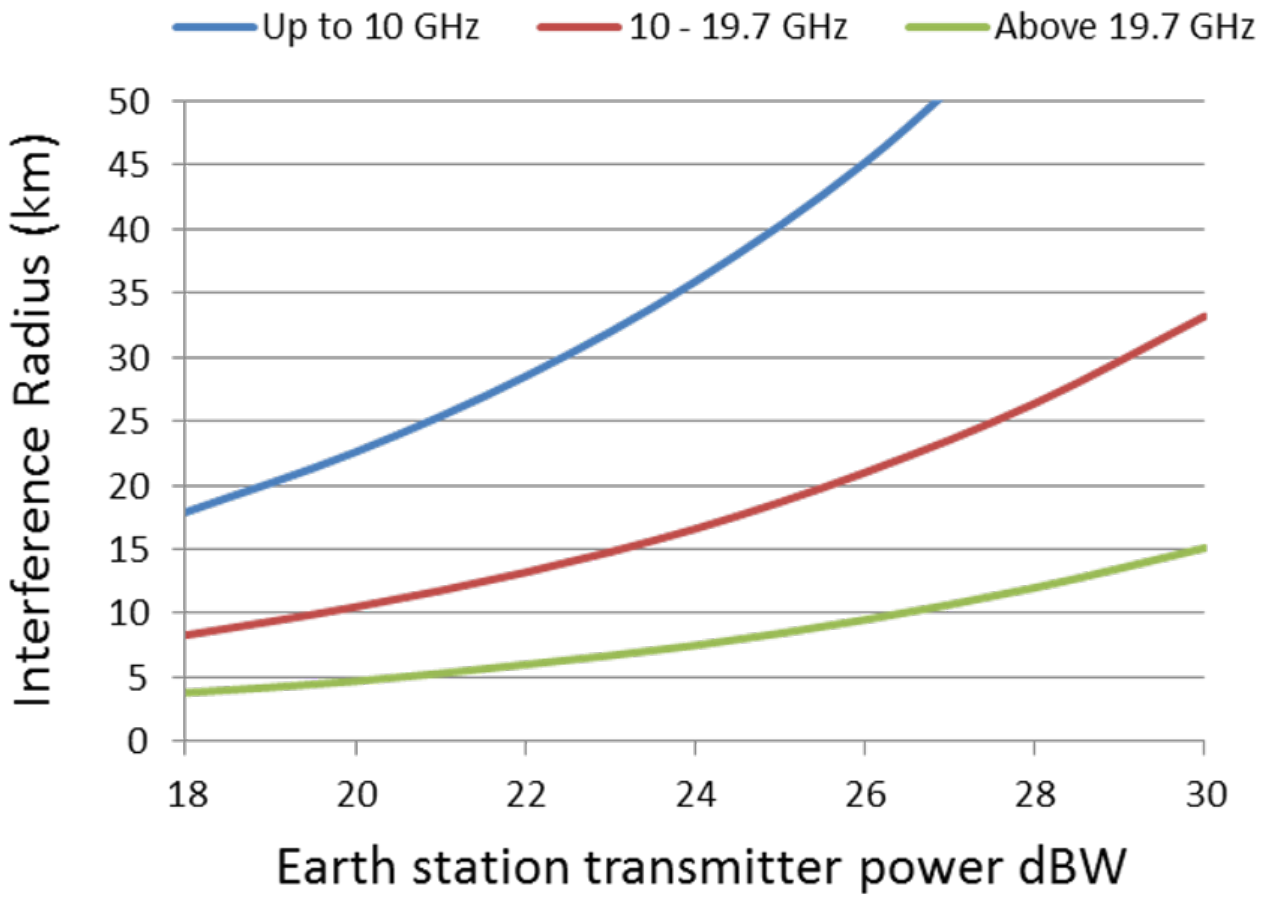
		Annual Radio Spectrum License Fee (QAR per MHz per year)				
Satellite elevation angle (ϵ)		$\epsilon \geq 36^\circ$				$\epsilon < 36^\circ$
Interference Radius (R)		R \leq 20 km	20 < R \leq 30 km	30 < R \leq 40 km	R > 40 km	N/A
Frequency Range	Frequency higher than 5,2725 and less than or equal to 10 GHz	520	1,040	1,560	3,120	3,120
	Frequency higher than 10 and less than or equal to 12,5 GHz	260	520	780	1,560	1,560
	Frequency higher than 12,5 and less than or equal to 12,75 GHz	8	8	8	8	8
	Frequency higher than 12,75 and less than or equal to 17,3 GHz	260	520	780	1,560	1,560
	Frequency higher than 17,3 and less than or equal to 17,7 GHz	8	8	8	8	8
	Frequency higher than 17,7 and less than or equal to 19,7 GHz	260	520	780	1,560	1,560
	Frequency higher than 19,7 and less than or equal to 29,5 GHz	130	260	390	780	780
	Frequency higher than 29,5 and less than or equal to 29,9 GHz	4	4	4	4	4
	Frequency higher than 29,9 and less than or equal to 40 GHz	130	260	390	780	780

Rules of Application of the Table:

- Where two or more co-frequency earth stations operated by the same licensee are co-located (i.e., within 1 km of each other) and point to satellites at 36 degrees elevation or greater, these will be subject to a single fee based on the interference radius resulting from the aggregate transmitter power of the co-located stations. Where such earth stations are located more than 1 km apart, the applicable fee will be based on the interference radius corresponding to the aggregate transmitter power of the earth stations plus the maximum separation distance between the individual earth stations.

In all cases the fee per operator will not exceed that associated with an interference radius of R < 40 km.

- However, if the sum of the costs of all assignments is less than QAR 500, then a minimum fee of QAR 500 is applied as the annual Radio Spectrum License Fee
- In order to derive the interference radius and coverage factor as a function of frequency band and earth station transmitter power, the chart hereunder shall be used.
- Receive only devices and radio transmitters that are covered by Class Licenses will not be subject to Radio Spectrum Fees.



Annex 3

E-Spectrum Portal Process



Registration

In order to register in e-spectrum portal applicants are first directed to register in the National Authentication System (TAWTHEEQ).

STEP 1: Click on registration button

In order to register in e-spectrum portal applicants after clicking the "Registration" button are first directed to register in the National Authentication System (TAWTHEEQ).

Communications Regulatory Authority
State of Qatar

هيئة تنظيم الاتصالات
دولة قطر

العربية | A A

Home Download

Login

Registration

Welcome to e-Spectrum Services Portal

CRA is the responsible authority for regulating and managing all the affairs relating to the use of the radio spectrum in the State of Qatar. CRA has launched e-Spectrum Services Portal to help customers and radio spectrum users to submit their spectrum applications online.



Through e-Spectrum Portal, you will be able to submit requests for new, modification or cancellation of frequency licenses. Also you can view and track your applications as well as your granted frequency licenses. Moreover, payment of applicable spectrum fees is now made online!

In order to use e-Spectrum Portal, please login using your credentials or create a new account if you are a new user. (Note: Each Spectrum Licensee is entitled to have one e-Spectrum account only).

STEP 2: Select one of the two registration options

Registration for Individuals in TAWTHEEQ differs based on the Type of users as listed below:

- Qatari citizens and residents (Identified by the QID): This option is for those who are citizens and residents of Qatar having Qatari IDs.
- Visitors and business representatives: This option is for those are visitors and do not have the Qatari IDs. Since, for special events most of the broadcasters and event organizers travel to the country during the event, they fall into this category.



Choose Account Type

Account type ⓘ *

- Qatari citizens and residents
- Visitors and business representatives

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After selecting one of the two options the account and personal information must be entered to finish registration in the National Authentication System (TAWTHEEQ).



Choose Account Type


Account type ⓘ *

- Qatari citizens and residents
- Visitors and business representatives

E-mail ⓘ *
Email is mandatory

Re-enter E-mail *
Re-entered email is mandatory

Mobile Number *

Captcha * I'm not a robot 
reCAPTCHA Privacy · Terms

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STEP 3: Creating New e-Spectrum Account under the National Authentication System (TAWTHEEQ) Account

After completing the registration in National Authentication System (TAWTHEEQ) Account and after the login the following window would appear to allow creating an account in e-spectrum portal.

Add e-Spectrum Profile

To add a new e-Spectrum profile under your TAWTHEEQ account, click on

Add e-Spectrum Profile

Notes:

- To be able to add an e-Spectrum profile under your TAWTHEEQ account you should be an authorized person
- Entities having an existing account in the CRA e-Spectrum portal should use this "Add e-Spectrum Profile" Option and select "Existing Licensee" at the last stage of the application

Request Access to an e-Spectrum Profile

To get access to an active e-spectrum profile, click on

Request Access to an e-Spectrum Profile

For More details about e-Spectrum profiles management please refer to the " **USER REGISTRATION AND E-SPECTRUM PROFILES MANAGEMENT** " quick guide

After clicking the "Add e-Spectrum Profile" button following window would appear to specify the type of account to be created:

Applicant/Service Category x

Applicant Type * Qatari Registered Company

Service Category * Please select...

Spectrum Licensing

Equipment Type Approval

Submit

If you want to just apply for type approval of any radio equipment you can select the "Equipment Type Approval" option while if you want to apply for applying for a radio spectrum license "Spectrum Licensing" option must be selected. If you require both types of services, then both options must be selected.

After selecting the desired options click the submit button and then follow the steps to complete the Applicant Registration details. After that the following window would appear:

Existing Licensee ×

If you have already an existing Licensee in the system, enable the checkbox below and specify the needed parameters.

Existing Licensee

CancelNext

Simply click next while keeping the “Existing Licensee” tab closed as this option is only for those who already had an e-spectrum account.

After clicking next you would be required to attach the required documents that include:

1. Copy of the company’s commercial registration certificate (e.g. trade license)
2. Copy of the Accreditation Letter from the FIFA/ LOC
3. Letter from the company authorizing the company’s account holder (the person who created the account and e-Spectrum Profile)

Final step is to submit the form for CRA approval and once approved the applicant would be able to access the e-Spectrum account through the given login and password.

Submitting the Application Forms

There are following categories of licenses that are usually used by applicants during special events each covering specific type of radio equipment.

Mobile PMSE Area: All the mobile or portable equipment fall in this category. The applicant is required to specify the area within which the spectrum access is required specifying the exact radio frequency channels. All mobile and portable devices are then required to be registered in this specified area.

Fixed PMSE Area: The structure of this licenses is the same as Mobile PMSE Area license. The only exception is that it covers the deployment of Fixed Point-to-Point or Point-to-Multipoint radio equipment.

Transportable Earth Station: The category covers the licensing of Satellite News Gathering Equipment mostly used to uplink the broadcast signals.

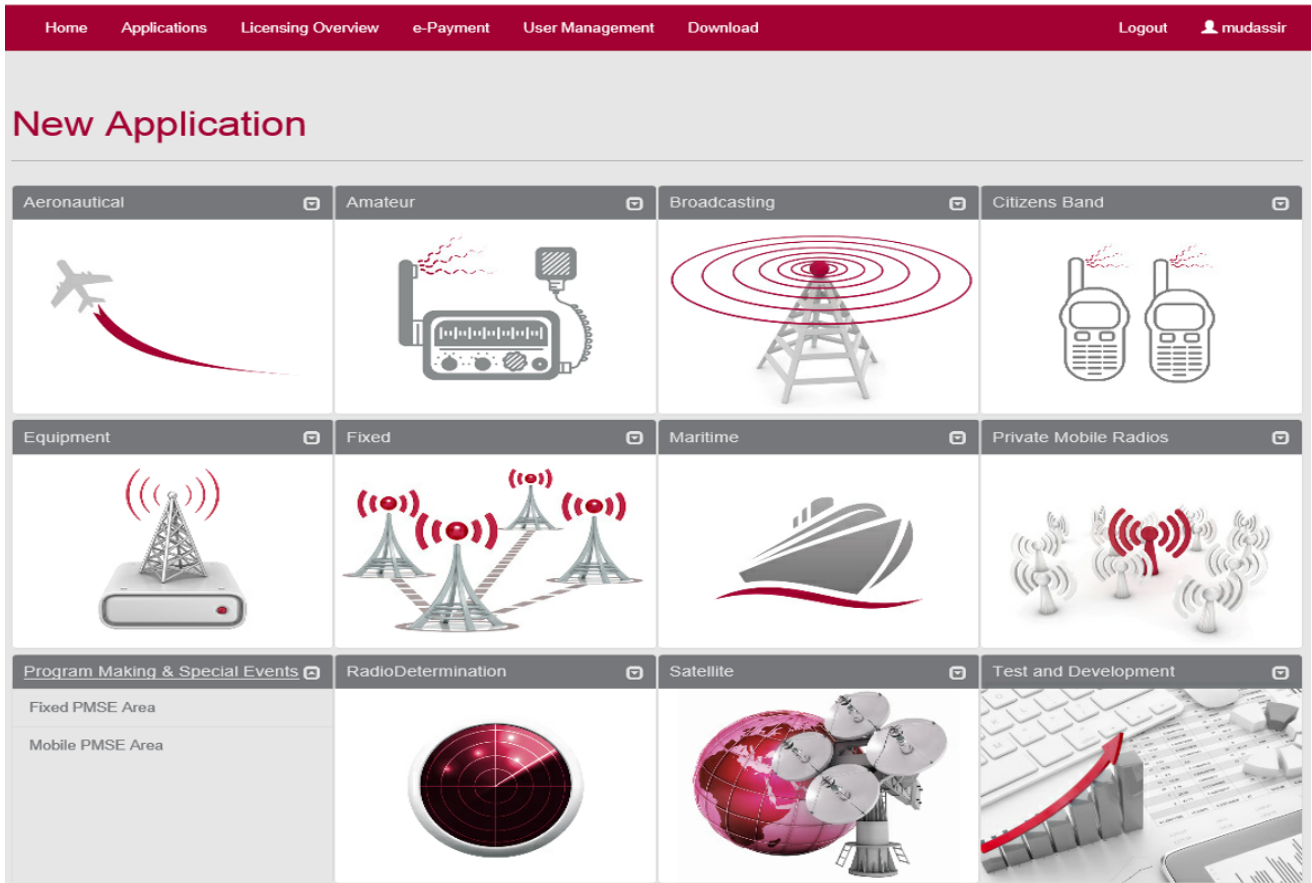
The sections below give step by step guides to launch these applications in e-spectrum portal:

Mobile PMSE Area/ Fixed PMSE Area Spectrum Licenses

STEP 1: Selecting the Particular License Category and Subcategory

After login to the e-spectrum portal the first step is to select the desired license category for submitting the respective application form. The following windows show how to start a new application and then select the particular category and subcategory under program making special events license category.

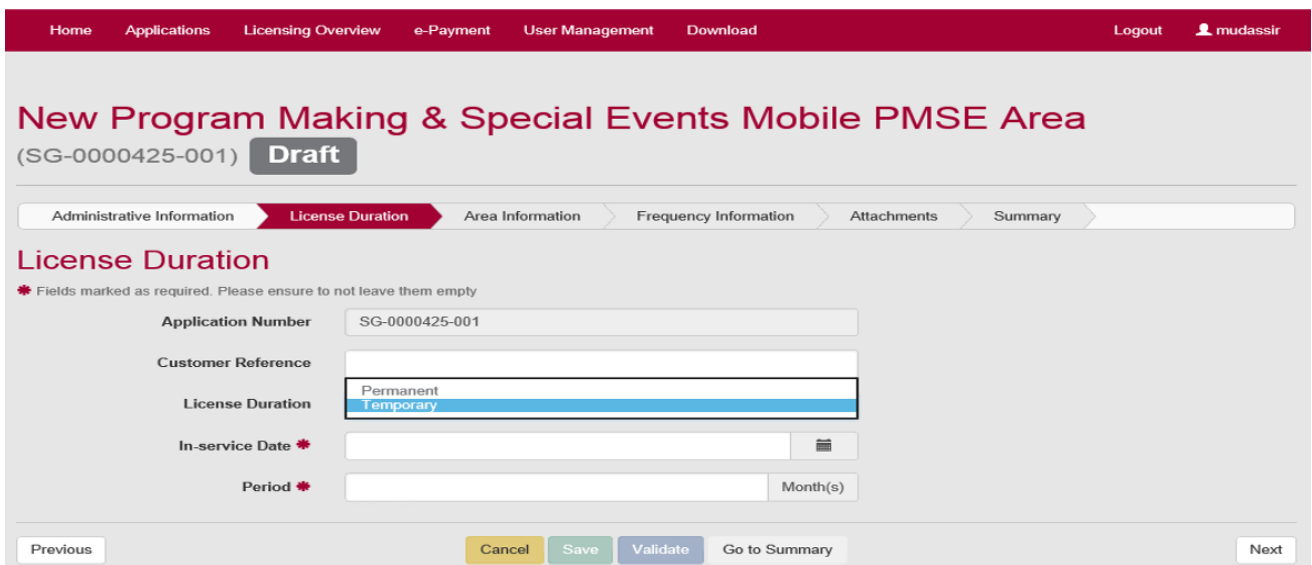
The screenshot displays the e-spectrum portal interface. At the top, a navigation bar includes 'Home', 'Applications', 'Licensing Overview', 'e-Payment', 'User Management', and 'Download'. A user profile 'mudassir' is logged in. A dropdown menu under 'Applications' is open, listing options like 'My Drafts', 'My Applications', 'All Applications', 'Assignable Applications', and 'Assigned Applications'. The main content area is titled 'New Application' for 'Making & Special Events Mobile PMSE Area'. A breadcrumb trail shows 'Duration' > 'Area Information' > 'Frequency Information' > 'Attachments' > 'Summary'. Below this, there are sections for 'Licensee Information' with a 'Search Licensee' button and input fields for 'CRA Customer Number' and 'Licensee Name'. The 'Licensee Contacts' section includes dropdown menus for 'Authorized Person', 'Technical Contact', and 'Financial Contact'. At the bottom, there are buttons for 'Cancel', 'Save', 'Validate', 'Go to Summary', and 'Next'.



The steps elaborated below are for Mobile PMSE Area subcategory, but the same steps are applicable for Fixed PMSE Area subcategory as well.

STEP 2: Specifying the License Duration

After starting an application an application number is automatically assigned to the applicant. The first step afterwards is to specify the license duration. Since in case of special events the license is only required on temporary basis during a certain time period. This section allows to specify the license duration type i.e. Permanent or temporary and then start date and the duration in months.



STEP 3: Specify the Area of Operation

The next step is to specify the area under which the spectrum access is required. The area could be specified in two ways. Either by giving the coordinates of a central point and the radius of the circle which allows the formation of a circular area or by specifying coordinates of Upper left and lower right corners in case of a rectangular shaped area.

Home Applications Licensing Overview e-Payment User Management Download
Logout mudassir

New Program Making & Special Events Mobile PMSE Area

(SG-0000425-001) Draft

Administrative Information
License Duration
Area Information
Frequency Information
Attachments
Summary

Area Information

* Fields marked as required. Please ensure to not leave them empty

Type of Area Circular

Center Longitude * * * "

Center Latitude * * * "

Radius * km

Previous
Cancel Save Validate Go to Summary
Next



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New Program Making & Special Events Mobile PMSE Area

(SG-0000425-001) Draft

Administrative Information
License Duration
Area Information
Frequency Information
Attachments
Summary

Area Information

* Fields marked as required. Please ensure to not leave them empty

Type of Area Rectangular

Upper Left Longitude * * * "

Upper Left Latitude * * * "

Lower Right Longitude * * * "

Lower Right Latitude * * * "

Previous
Cancel Save Validate Go to Summary
Next



After the system upgrade referred earlier, there would be an option to select the preconfigured venue areas. This would simplify the application process further in this regard.

STEP 4: Specify the Radio Frequency Channels to be used within the specified Area

After specifying the area next step is to specify the particular radio spectrum to whom the access is required to.

The screenshot shows a web application interface for the Communications Regulatory Authority. At the top, there is a navigation bar with links: Home, Applications, Licensing Overview, e-Payment, User Management, Download, Logout, and a user profile icon labeled 'mudassir'. Below the navigation bar, the main heading is 'New Program Making & Special Events Mobile PMSE Area (SG-0000425-001)' with a 'Draft' status button. A progress bar indicates the current step is 'Frequency Information', with other steps being 'Administrative Information', 'License Duration', 'Area Information', 'Attachments', and 'Summary'. The 'Frequency Information' section has a sub-heading and a note: '* Fields marked as required. Please ensure to not leave them empty'. There is an 'Add Channels' button. At the bottom of the form, there are buttons for 'Previous', 'Cancel', 'Save', 'Validate', 'Go to Summary', and 'Next'.

This would be done in further two steps. The first step is to select the particular spectrum band. The section allows to search for the particular spectrum band by specifying the range of frequencies, bandwidth per channel i.e. 12.5 or 25 kHz e.g. and the type of frequency channels i.e. simplex or duplex.

This screenshot shows the same application form as above, but with the 'Frequency Information' section expanded to show input fields. The 'Select Allocation' button is now active. The input fields are: 'Allocation Name' (text input), 'Frequency From' (text input with 'MHz' unit), 'Frequency To' (text input with 'MHz' unit), 'Operation Mode' (text input), and 'Bandwidth' (text input with 'kHz' unit). A 'Cancel' button is located at the bottom of the form.

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New Program Making & Special Events Mobile PMSE Area

(SG-0000425-001) **Draft**

Administrative Information License Duration Area Information **Frequency Information** Attachments Summary

Frequency Information

Search for Allocation

Search for Allocation

* Fields marked as required. Please ensure to not leave them empty

Search parameters

Frequency From: 450.0 MHz

Frequency To: 470.0 MHz

Bandwidth: kHz

Operation Mode: Any, Simplex, Duplex, Semi-Duplex

Search

Search results

Allocation Name	Frequency From [MHz]	Frequency To [MHz]	Bandwidth [KHz]	Operation Mode
LMS_QAT_400_700_M_TEMP	400.0	700.0	0.0	
LMS_QAT_450_470_M_CS_12.5K_D	449.99375	469.99375	12.5	Duplex
LMS_QAT_450_470_M_CS_12.5K_S	449.99375	469.99375	12.5	Simplex

Number of Records: 3

Cancel

After selecting the particular spectrum plan the next step is to identify multiple specific frequency channels within this band. There is also a possibility to add channels from multiple band plans in the same application. The steps are elaborated below:

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New Program Making & Special Events Mobile PMSE Area

(SG-0000425-001) **Draft**

Administrative Information License Duration Area Information **Frequency Information** Attachments Summary

Frequency Information

* Fields marked as required. Please ensure to not leave them empty

Select Allocation

Allocation Name: LMS_QAT_450_470_M_CS_12.5K_S

Frequency From: 449.99375 MHz

Frequency To: 469.99375 MHz

Operation Mode: Simplex

Bandwidth: 12.5 kHz

1,600 predefined channels found in selected allocation

Select Channels

Cancel

Home Applications Licensing Overview e-Payment User Management Download Logout mudassir

New Program Making & Special Events Mobile PMSE Area

(SG-0000425-001) **Draft**

Administrative Information License Duration Area Information **Frequency Information** Attachments Summary

Frequency Information

Search for Channels

Search for Channels

* Fields marked as required. Please ensure to not leave them empty

List of Channels

selected	Channels	Frequency [MHz]	Channel Bandwidth [KHz]
<input type="checkbox"/>	CH13	450.15	12.5
<input type="checkbox"/>	CH14	450.1625	12.5
<input checked="" type="checkbox"/>	CH15	450.175	12.5
<input type="checkbox"/>	CH16	450.1875	12.5
<input type="checkbox"/>	CH17	450.2	12.5
<input checked="" type="checkbox"/>	CH18	450.2125	12.5
<input type="checkbox"/>	CH19	450.225	12.5
<input checked="" type="checkbox"/>	CH20	450.2375	12.5
<input type="checkbox"/>	CH21	450.25	12.5
<input type="checkbox"/>	CH22	450.2625	12.5
<input type="checkbox"/>	CH23	450.275	12.5

Number of Records: 1,600

Cancel Add Selected Channels

Home Applications Licensing Overview e-Payment User Management Download Logout mudassir

New Program Making & Special Events Mobile PMSE Area

(SG-0000425-001) **Draft**

Administrative Information License Duration Area Information **Frequency Information** Attachments Summary

Frequency Information

* Fields marked as required. Please ensure to not leave them empty

Add Channels

Assigned simplex channel(s)

	Allocation Name	Channel(s)	Frequency [MHz]	Channel Bandwidth [KHz]	Band Information / Frequency From	Band Information / Frequency To	Band Information / Operation Mode
	LMS_QAT_450_470_M_CS_12.5K_S	CH15	450.175	12.5	449.99375	469.99375	Simplex
	LMS_QAT_450_470_M_CS_12.5K_S	CH18	450.2125	12.5	449.99375	469.99375	Simplex
	LMS_QAT_450_470_M_CS_12.5K_S	CH20	450.2375	12.5	449.99375	469.99375	Simplex

Number of Records: 3

Previous Cancel Save Validate Go to Summary Next

STEP 5: Attach required Documents

After adding the area and spectrum details the next step is to attach the associated required documents which are:

- **Network Diagram:** The diagram must give a detailed layout of the whole radio network including the base stations, fixed stations or portable mobile stations.
- **Authorization from the Local Sponsor:** In case of special events the applicant is required to add the authorization letter issued by the local sponsor which could be a even organizaer committee. e.g. For FWC 2022, LOC may issue letters for the visiting HBs, MRLS, media personnels etc.
- **Authorized Person other than authroized signatory:** Usually the e-spectrum profiles are owned by the authroized signatories of the Qatari Registered companies. These account owners however could also create subaccounts for their employees to handle the portal. In this case the subaccount managers must print the application form and get is signed form the authroized signatory and then attach it along with other documents.
- **Equipment Data Sheet:** Data sheets for all types of equipment to be deployed in the network must also be attached with the application.

Home Applications Licensing Overview e-Payment User Management Download
Logout mudassir

New Program Making & Special Events Mobile PMSE Area

(SG-0000425-001) Draft

Administrative Information
License Duration
Area Information
Frequency Information
Attachments
Summary

Attachments

* Fields marked as required. Please ensure to not leave them empty

Required Documents

1. Network Diagram
2. Auhtorization from the Local Sponsor
3. In case the authorized person in your account is different than the authorized signatory then a copy of this application signed and stamped by the authorized signatory is required.
4. Equipment data sheet

To print a copy of the filled application form click on: Print Application

Add Attachment

Manage Attachments

No Attachments

I have read and agree to the General Guidelines for Radio Spectrum Licensing and the specific terms and conditions for my type of application

Previous
Cancel
Save
Validate
Go to Summary
Next

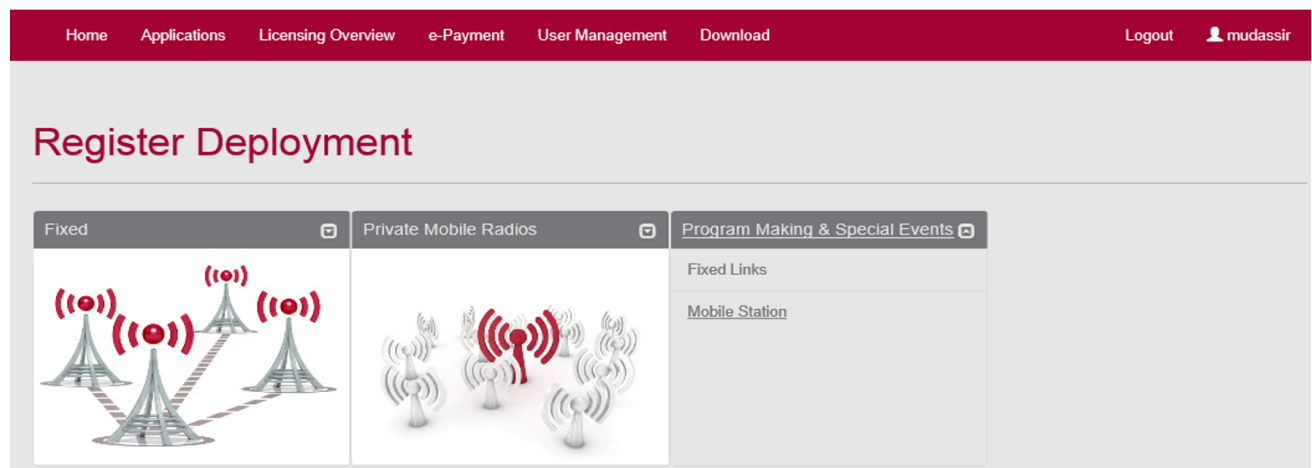
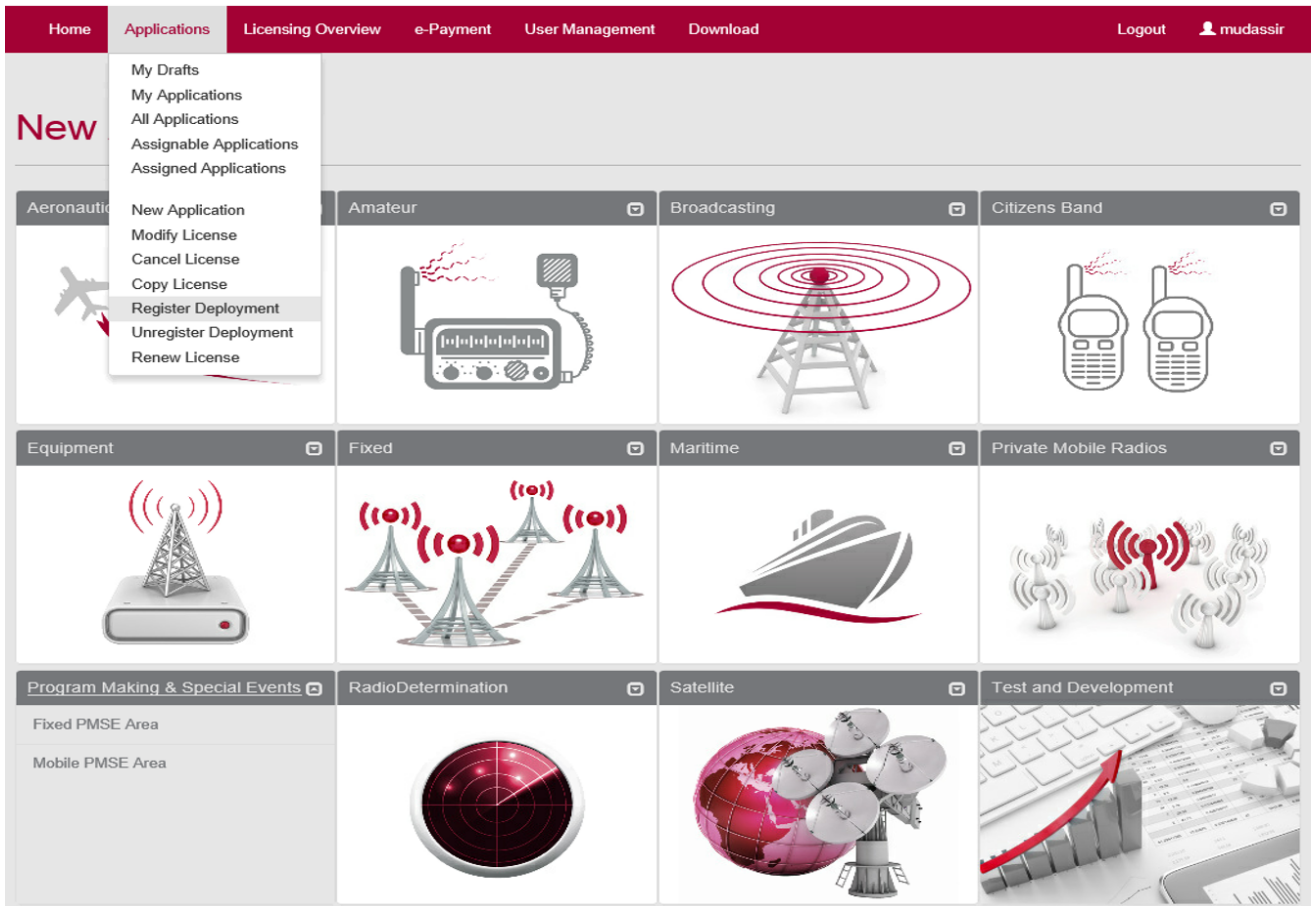
STEP 6: Submit the Application

After attaching all the desired documents applicants are required to read and agree the General guidelines for Radio Spectrum Licensing and the terms and conditions of the particular category and sub category of the spectrum license available on CRA website at below link and then submit the application for approval by clicking the "Submit to SP" tab. <https://cra.gov.qa/en/Document?q=guidelines&fa=0>

The screenshot displays the CRA web application interface for a new program. The top navigation bar includes links for Home, Applications, Licensing Overview, e-Payment, User Management, and Download, along with a Logout button and a user profile icon for 'mudassir'. The main heading is 'New Program Making & Special Events Mobile PMSE Area' with the identifier '(SG-0000425-001)' and a 'Draft' status badge. A breadcrumb trail shows the following steps: Administrative Information, License Duration, Area Information, Frequency Information, Attachments, and Summary (the current step). The 'Summary' section contains a note: '* Fields marked as required. Please ensure to not leave them empty'. Below this is an 'Expand All' button and a 'Download Draft as PDF' button. The summary is organized into five expandable sections, each with an 'Edit' button: Administrative Information, License Duration, Area Information, Frequency Information, and Attachments. At the bottom, there is a 'Back To List' button and a row of action buttons: Save, Cancel, Validate, Submit, and Submit to SP.

Registration of the equipment and stations under Mobile and Fixed PMSE Area Licenses

After issuance of both the Mobile and Fixed PMSE Licenses the next step is to register all the equipment of the network under respective licenses. The equipment must be selected from the equipment library hence if the equipment is not registered already the first step is to get it registered by providing details to the CRA staff. All other details such as station coordinates and antenna specifications for fixed base stations and fixed links and number of mobile terminals must be entered under this process. The process could be started as follows:

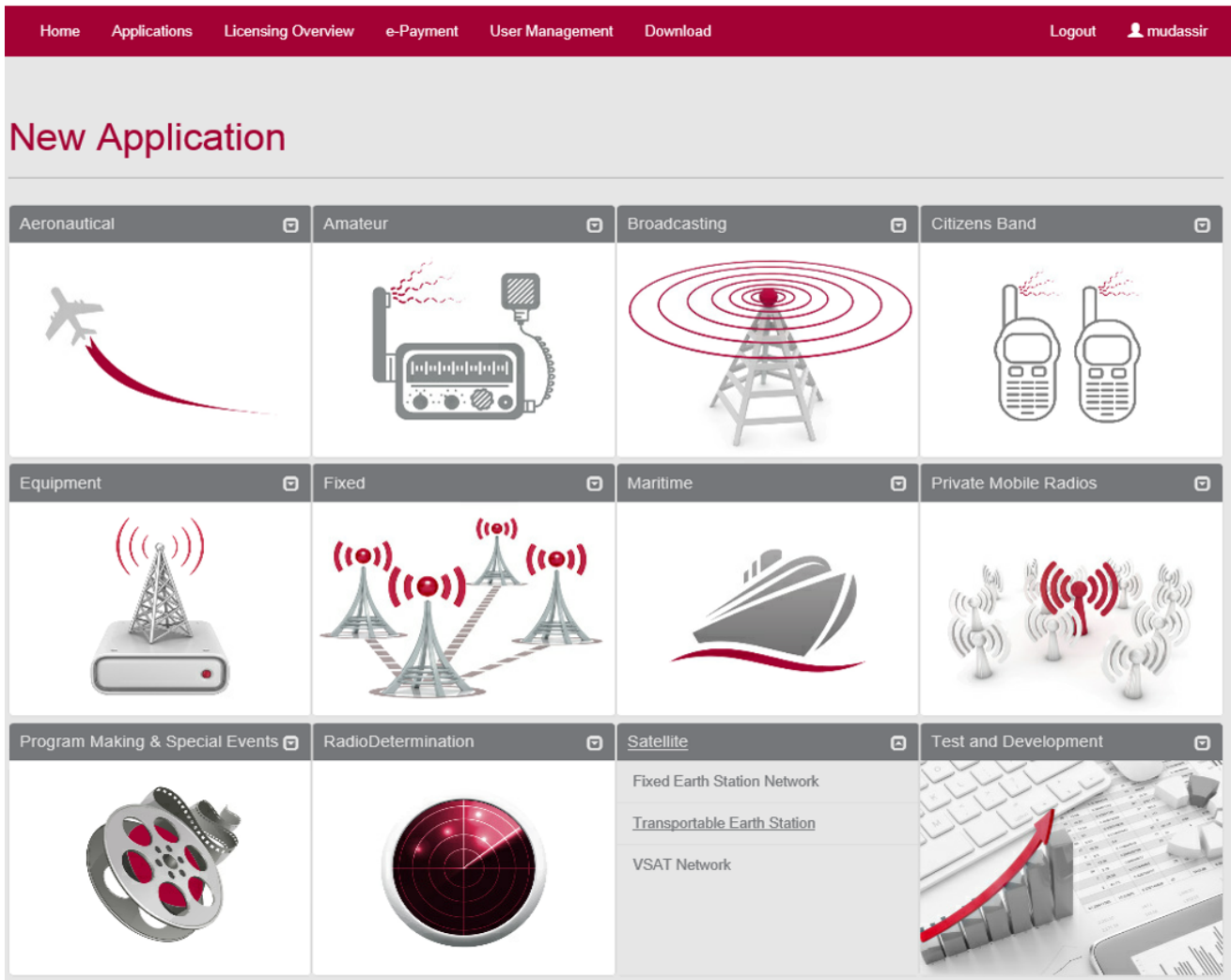


After the system upgrade referred earlier, there would be an option to register all short range devices that use shared spectrum as well, this will help the applicants to get their radio equipment (whether subject to frequency license or license-exempt) being registered under their profile at the portal as well as generating their corresponding tags before being tested and tagged later.

Submitting Application for Transportable Earth Station (SNG) License

STEP 1: Selecting the Particular License Category and Subcategory

After login to the e-spectrum portal the first step is to select the desired license category for submitting the respective application form. The following window shows the subcategories under satellite category. The subcategory applicable for SNG terminals is Transportable Earth Station License category.



STEP 2: Specifying the License Duration

After starting an application an application number is automatically assigned to the applicant. The first step afterwards as mentioned before is to specify the license duration. Since in case of special events the license is only required on temporary basis during a certain time period. This section allows to specify the license duration type i.e. Permanent or temporary and then start date and the duration in months.

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New Satellite Transportable Earth Station (SE-0000318-001) **Draft**

Administrative Information **License Duration** Satellite Information Tx/Rx Beams Vehicle Information Purpose of Operation
 Equipment Information Antenna Information Equipment Re-use Attachments Summary

License Duration

* Fields marked as required. Please ensure to not leave them empty

Application Number

Customer Reference

License Duration

In-service Date *

Period *

Previous

STEP 3: Provide the Satellite information

The next step is to provide the details of the satellite network over which the communication is to be carried including the operating frequency range.

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Satellite Information

* Fields marked as required. Please ensure to not leave them empty

Geostationary / Non-Geostationary *

Satellite Network/Satellite Name *

Satellite Operator

Operating Frequency Range *

Previous

STEP 4: Specify the Transmit and Receive beams

After specifying the satellite network next step is to provide details of the transmit and receive beams of this network to be used for communication.

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Tx Beams

Beam Frequency(ies)

Beam Frequency(ies)

* Fields marked as required. Please ensure to not leave them empty

Frequency Range [GHz] *	Please select...	
Centre Frequency of Accessible Bandwidth *	Centre Frequency of Accessible Bandwidth	GHz
Necessary Bandwidth *	Necessary Bandwidth	MHz
Designation of Emission *	0H00	Set
Maximum Peak Envelope Power [dBw] *	Maximum Peak Envelope Power [dBw]	dBW

Cancel Add Frequency

Under each beam the frequency, transmit power and similar details are to be entered under this subsection.

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Tx Beams

Beam Frequency(ies)

Beam Frequency(ies)

* Fields marked as required. Please ensure to not leave them empty

Frequency Range [GHz] *	Please select...	
Centre Frequency of Accessible Bandwidth *	Centre Frequency of Accessible Bandwidth	GHz
Necessary Bandwidth *	Necessary Bandwidth	MHz
Designation of Emission *	0H00	Set
Maximum Peak Envelope Power [dBw] *	Maximum Peak Envelope Power [dBw]	dBW

Cancel Add Frequency

STEP 5: Specify Vehicle information in case the SNG is mounted on an OB Van:

The next step is to specify the details of the vehicle such as the OB Van on which the SNG is mounted:

The screenshot shows a web application interface for a 'New Satellite Transportable Earth Station' (SE-0000318-001) in 'Draft' status. The navigation bar includes 'Home', 'Applications', 'Licensing Overview', 'e-Payment', 'User Management', 'Download', 'Logout', and 'mudassir'. The breadcrumb trail shows: Administrative Information > License Duration > Satellite Information > Tx/Rx Beams > **Vehicle Information** > Purpose of Operation. Below the breadcrumb, there are two rows of tabs: 'Equipment Information', 'Antenna Information', 'Equipment Re-use', 'Attachments', and 'Summary'. The main heading is 'Vehicle Information' with a note: '* Fields marked as required. Please ensure to not leave them empty'. Under 'Vehicle Details', there are two required fields: 'Registration Number *' and 'Vehicle Make And Model *', both with empty text input boxes. At the bottom, there are buttons for 'Previous', 'Cancel', 'Save', 'Validate', 'Go to Summary', and 'Next'.

STEP 6: Specify Purpose of Operation

The next step is to specify the purpose of operation e.g. by giving details of the event for which it is required.

The screenshot shows the same web application interface, now at Step 6: Purpose of Operation. The breadcrumb trail is: Administrative Information > License Duration > Satellite Information > Tx/Rx Beams > Vehicle Information > **Purpose of Operation**. The main heading is 'Purpose of Operation' with a note: '* Fields marked as required. Please ensure to not leave them empty'. There is one required field: 'Purpose of Operation *' with an empty text input box. At the bottom, there are buttons for 'Previous', 'Cancel', 'Save', 'Validate', 'Go to Summary', and 'Next'.

STEP 7: Select the Equipment Type and Model to be used

Next step is to select the equipment type and model from equipment library and the specify the antenna details. Please note that if the equipment is not in the library you need to give the details of the equipment separately to be entered into the library. In some cases, you might also be required to apply for type approval of the equipment. Hence, CRA staff must be contacted for further details.

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- Administrative Information
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- Satellite Information
- Tx/Rx Beams
- Vehicle Information
- Purpose of Operation
- Equipment Information**
- Antenna Information
- Equipment Re-use
- Attachments
- Summary

Equipment Information

* Fields marked as required. Please ensure to not leave them empty

Equipment

Select Equipment

Model

Manufacturer

Type

Frequency Range Minimum MHz

Frequency Range Maximum MHz

Standby Equipment

Standby Equipment

New Satellite Transportable Earth Station (SE-0000318-001) **Draft**

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- Purpose of Operation
- Equipment Information
- Antenna Information**
- Equipment Re-use
- Attachments
- Summary

Antenna Information

* Fields marked as required. Please ensure to not leave them empty

Manufacturer

ITU Antenna Reference Pattern *

Antenna Height AGL * m

Antenna Diameter * m

Antenna Beamwidth * deg

Tx Antenna Isotropic Gain * dBi

STEP 8: Attach required Documents

After adding all the technical details and identifying the purpose the next step is to attach the associated required documents which are:

- **Authorization from the Local Sponsor:** In case of special events the applicant is required to add the authorization letter issued by the local sponsor which could be an Event organizing committee. e.g. For FWC 2022, LOC may issue letters for the visiting HBs, MRLS, media personnels etc.
- **Detailed Technical Specification or any other supporting document:** all the technical information regarding satellite, its beams, equipment and antenna must be provided as attachments.
- **Authorized Person other than authroized signatory:** Usually the e-spectrum profiles are owned by the authroized signatories of the Qatari Registered companies. These account owners however could also create subaccounts for their employees to handle the portal. In this case the subaccount managers must print the application form and get is signed form the authroized signatory and then attach it along with other documents.

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Administrative Information	License Duration	Satellite Information	Tx/Rx Beams	Vehicle Information	Purpose of Operation
Equipment Information	Antenna Information	Equipment Re-use	Attachments	Summary	

Attachments

* Fields marked as required. Please ensure to not leave them empty

Required Documents

1. Auhtorization from the Local Sponsor
2. Detailed Technical Specifications or any other supporting document
3. In case the authorized person in your account is different than the authorized signatory then a copy of this application signed and stamped by the authorized signatory is required.

To print a copy of the filled application form click on: Print Application

Add Attachment

Manage Attachments

No Attachments

I have read and agree to the **General Guidelines for Radio Spectrum Licensing** and the **specific terms and conditions for my type of application**

Previous
Cancel
Save
Validate
Go to Summary
Next

STEP 9: Submit the Application

After attaching all the desired documents applicants are required to read and agree the General guidelines for Radio Spectrum Licensing and the terms and conditions of the particular category and sub category of the spectrum license available on CRA website at below link and then submit the application for approval by clicking the "Submit to SP" tab (<https://cra.gov.qa/en/Document?q=guidelines&fa=0>).

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Vehicle Information
Purpose of Operation

Equipment Information
Antenna Information
Equipment Re-use
Attachments
Summary

Summary

* Fields marked as required. Please ensure to not leave them empty

Expand All
Download Draft as PDF

🔍 Administrative Information
Edit

🔍 License Duration
Edit

🔍 Satellite Information
Edit

🔍 Tx/Rx Beams
Edit

🔍 Vehicle Information
Edit

🔍 Purpose of Operation
Edit

🔍 Equipment Information
Edit

🔍 Antenna Information
Edit

🔍 Equipment Re-use
Edit

🔍 Attachments
Edit

Back To List

Save
Cancel
Validate
Submit
Submit to SP

Annex 3
Customs Clearance
Process



The below figure shows the followed process for the customs clearance of all imported radio equipment into the State of Qatar that are intended for use in the 2021 FIFA Arab Cup (FAC) event and at the authorized venues as per the issued relevant frequency licenses/authorizations.

The applicant should specify (if applicable) during the submission of the requirements for frequency licensing/ authorization on the e-Spectrum Portal whether the radio equipment and accessories are going to be shipped into the country or accompanied by passengers.

CRA will ensure following efficient process to clear the shipments and hand-carry equipment at the earliest provided that they are compliant with the requirements. In other words, they should be registered on the e-Spectrum Portal regardless they are subject to frequency license or license-exempt.

To avoid any delay in clearing the shipments, applicants are advised to inform CRA team about all details of their equipment import so CRA can advise them with any further requirements or with the prior approval in case all requirements are met.

CRA will also coordinate with the FAC Organizing Committee to ensure the alignment and tracking of registered equipment on the e-Spectrum portal with the shipment records (prior to dispatch from the country of origin). This will help fast track and timely customs clearance of temporary shipments.

Customs clearance process will be granted on temporary basis only, i.e., CRA will make sure each shipment relevant documents prove that it is temporary import with an obligation on the equipment owner/ operator to ship them out of Qatar after the FAC 2021 event is over. While for the hand-carry equipment, the passenger carrying the equipment shall provide declaration form of the equipment accompanied by him with copy of passport and flight ticket that shows the date of returning the equipment to outside the country.

Process Customs Clearance Application

