



**Telecommunications Regulatory Commission  
(TRC)**

**Spectrum Management Department**

**Guidelines for Type Approval of Radio Communication  
Equipment**

## A. General

### Definitions:

Wherever they appear hereafter, the following words and expressions shall have the meanings assigned to them, unless the context indicates otherwise:

**The Commission:** The Telecommunications Regulatory Commission (**TRC**) established pursuant to the provisions of Telecommunications Law No.13 of the year 1995.

**The Board:** Board of Commissioners of the Commission.

**Telecommunications:** Any conveyance, emission, reception, or transmission of signs, signals, sounds, images or intelligence of any nature by means of wire, radio, optical or other electronic systems,

**Telecom Terminal Equipment:** Telecommunications equipment employed by a User to transmit, receive, route or terminate telecommunications.

**User:** A person who makes use of telecommunications services using telecommunications means.

**Type Approval:** An approval to be used as a helpful tool in importation of certain types of telecommunications equipment (including Radio equipment or stations) and Telecom Terminal Equipment.

**Radio Station:** One or more transmitters or receivers or a combination of transmitters and receivers, including the supplemental equipment necessary at a specific location, for the purpose of offering a Radio communications, radio astronomy, or Broadcasting Service.

**Radio Frequencies or Radio Frequency Spectrum:** Frequencies or spectrum of naturally propagated electromagnetic waves in the range of 3 kilohertz to 3000 gigahertz which are utilized for the origination and/ or reception of Telecommunications signals.

**Radio communications:** The transmission by radio of writings, signs, signals, pictures, or sounds of all kinds, including all instrumentalities, facilities, apparatus, and associated services for the transmission, reception, or conveyance of communications services.

## **B. Introduction**

In accordance with The Telecommunications Law No.13 of the year 1995 and its amendments, The Telecommunication Regulatory commission has the sole roles of granting the **type approval of both Radio and Telecom equipment** as stated the following articles of the above mentioned Law:

### **ARTICLE 48**

a. The Commission set technical rules and standards specifications applicable to telecommunications and Telecom Terminal Equipment to ensure against damage to telecommunications networks or services or to public health, safety, or the environment. The Commission shall coordinate with other standards-making bodies in the Kingdom, including the Jordanian Institute for Standards and Metrology, when setting such rules; the Commission shall publish it in the Official Gazette and other media so as to make them available to interested parties.

b. No person who provides a Telecommunications Service or sells telecommunications equipment shall use, supply, or sell as the case may be, any telecommunications equipment that does not comply with technical rules and standards prescribed by the Commission.

### **ARTICLE 49**

The importer or anyone wishing to enter telecommunications equipment, of which the specifications have not been announced, shall, in coordination with the departments concerned, apply to the Commission for an advance approval for the importation of those equipment, provided that his application is supported by the manufacturing company's guide manual indicating their specifications.

### **ARTICLE 50**

The manufacturing of any telecommunications equipment designed to be marketed in the Kingdom shall be subject to the standard specifications approved by the competent departments.

The following categories of equipment should be type approved prior to be entered and/or used in the Hashemite Kingdom of Jordan:

- Radio transceivers (Radio stations such as Hand Held, Mobile, fixed, ...etc),
- Radio Receivers (Pagers, Earth stations...),
- Wireless microphones,
- Radio navigation equipment,
- Cordless telephones and system,
- Wireless Remote control equipment,
- Wireless devices for security and anti theft purposes,
- Equipment utilizing Spread Spectrum technology other than RLANs (such as Bluetooth, wireless video links...),
- Wireless equipment for Telemetry and Telecommand,

- Wireless equipment for movement detecting,
- Wireless equipment for alarm purposes,
- RLANs,
- Radio Frequency Identification Systems,
- Other not mentioned wireless equipment.

## **C. Type Approval Procedure**

### **1) Contact**

The applicant should forward a letter, fax or email to the TRC requesting a type approval for certain type/model of radio equipment to the following address:

Telecommunication Regulatory Commission (TRC),

Radio Spectrum Management Directorate.

P.O.Box:850967 Amman 11185 Jordan

Telephone: +962-6-586 2020 Fax: +962-6-586 3642

E-mail: [spectrum@trc.gov.jo](mailto:spectrum@trc.gov.jo)

### **2) Required Documents**

- For each category of Radio equipment, there is an application form to be completed, signed and stamped by the applicant.
- All requirements as indicated in the relevant application form must be attached.
- Application fees must be paid in advance (where applicable),
- If the applicant is seeking type approval for several models in the contact message, a separate application form should be filled and completed for each model.

Attachments:

1. A sample unit of the equipment & test accessories.

Equipment submitted for type approval testing must be crystallized or programmed to at least one test frequency.

2. Full technical/service documents giving detailed description of the product. This should include:

- Equipment's technical specifications, schematic diagrams, board components, Layout, and components parts list
- Colored Photographs: All views, Internal, External, Color
- Functional block diagrams with network connections (if any) and functional description of the equipment,

3. A certificate confirms that the Radio Equipments are successfully tested according to the Accredited European Telecommunications Standards Institute (ETSI), or (FCC) specialized in the Radio Equipment technology,
4. Test report from an accredited test laboratory which must at least include the following:
  - Test procedure according to specific standards.
  - The equipment that are used in the test.
  - Documents, certify that the test was conducted in a laboratories recognized by the telecommunications administration in the country where the test was conducted.
5. A completed compliance list (where applicable) of the considered Equipment filled and stamped from the manufacturer as Appropriate.
6. A written commitment by the laboratory where the test was conducted, confirming that the equipment is working according to the International safety requirements, specially that is concerned with the power emitted from the equipment

**Applicants are advised to ensure that all required documents are submitted at the time of application to avoid any delay or rejection.**

Note: All documents must be submitted in either Arabic or English Languages.

### **3. Approval Process**

- Steps those are included in the approval process:

- Completed application package is submitted for evaluation,
- Once the application package has been reviewed and determined to be acceptable, testing process will start,
- Performance testing of the product to ensure compatibility with some technical specifications,
- The applicant will be contacted for the payment of the testing and type approval certificate fees (Where applicable),
- Upon satisfactory completion of all requirements, the TRC will issue the appropriate approval certificate.

**-The approval process for modifications to an existing approved product must go through the full process**

#### **Notes:**

- i. The type approval certificate does not authorize its holder to enter the approved equipment without a special permission from TRC for each shipment. This permission is valid for three months from the issue date and for the requested shipment only.
- ii. The foreigners Applicant can apply through Technically Qualified Local Entity

### **4. Time of processing the type approval**

It usually takes 14 working days from the date of submitting the full application package and all requirements for approval of the equipment.

## **5. Fees**

The fees of type approval depend on the product to be approved, and subject to the required testing procedures.

Currently, the following fees are applied:

- Application fee: (10), (60), or (100) Jordan Dinars-(JD) depending on radio equipment category.
- Testing fee: (10), or (25) JD
- Type approval certificate: (15), (60), or (100) JD

## **6. Labeling (marking) requirements for radiocommunication equipment**

The equipment to be entered into JORDAN must be marked with labels showing the following information:

The manufacturer Name

Model, Type Number,

Serial Number,

TRC type approval's number.

Labels made of paper are not accepted.

## **7. Type Approval Certificate's Validity**

i: The approval certificate is valid for one year from the date of approval.

ii: To Renew the certificate, the applicant must follow the full process of approval.

### **1-Low-power devices (LPD):**

\* The term ( LPD) Device is intended to cover the radio transmitters which provide either unidirectional or bi-directional communication with ERP less than or equal 10 mW .

\* The LPD use either integral, dedicated or external antennas and all modes of modulation can be permitted subject to relevant standards

\* The LPD cannot claim protection from other radio services;

\* The LPD must not cause interference to other licensed radio networks, if this occurs,

there operation should be stopped immediately.

**Below, are examples of equipment relying under the LPD category:**

- 1) Remote control for garage and door openers
- 2) Wireless Local Area Networks, RLANs and HIPERLANs
- 3) Equipment for Detecting Movement and Equipment for Alert
- 4) Alarms,
- 5) Anti theft vehicle alarm systems
- 6) Radio Microphones
- 7) Walkie-Talkie
- 8) Non-specific LPD (Wireless toys, planes...),

### **1.1) Radio Remote control for garage and door opener**

<b>Frequency bands(MHz)</b>	<b>MAX. ERP (mW)</b>
25.210 – 25.550	10
26.175 – 27.500	
29.700 – 30.000	
Other ISM bands	

#### **Notes:**

1. Any applicant that is willing to obtain a Type Approval for such devices must complete the application form for the low power radio communication equipment, and submit all requirements to the TRC.
2. before issuing the type approval certificate; a test fee of 10 JD is paid per each model/type.
3. The type approval certificate does not entitle its holder to enter the approved equipment.
4. For entering the equipment into the country, a special permission indicating the model, Qty and brand will be issued by the TRC upon the applicant's request.

### **1.2) Wireless equipment using the Spread Spectrum technology.**

<b>Frequency</b>	<b>Maximum (EIRP)</b>
2400.0 – 2483.5 MHz	10 mW

#### **Notes:**

1. The relevant application form must be filled and completed along with the requirements plus the completed compliance list.
2. The application fee for type approval is (10 JD) per model,

3. The type approval certificate fees is (15 JD),
4. Operation Band: The products should be operating within one or more of the defined bands, but the use is on none-interfering basis
5. Maximum Effective Radiated Power (EIRP), as defined above, also the proper choice of antennas and radio transmit power should guarantee that the RF output power does not exceed that limit.
6. Spectrum users must take all necessary precautions not to cause any harmful interference for other users in the same band. They must also understand that they do not have the right to claim any interference protection for their equipment. Licensing fees will be evaluated with reference to the following guidelines:

### 1.3) Equipment for Detecting Movement and Equipment for Alert

Frequency	Maximum ERP
2400 – 2483.5 MHz	10 mW
10.5 – 10.6 GHz	
Other ISM bands	

The application form for low power radio equipment must be filled and completed along with the requirements mentioned therein.

### 1.4) Alarms,

- The ETSI and FCC standards (including the operating frequencies) are applied, with condition that the maximum erp is 10mW.
- The application form for low power radio equipment must be filled and completed along with the requirements mentioned therein.

### 1.5) Anti theft vehicle alarm systems

- The ETSI and FCC standards are applied, with condition that the maximum erp is 10mW.
- The application form for low power radio equipment must be filled and completed along with the requirements mentioned therein.

### 1.6) Wireless Microphones

Frequency	Power
Different Bands	ERP must not exceed 10mW
Specific bands: 173.35 – 175.02 MHz 175.50 – 177.50 MHz	The maximum effective radiated power (ERP) of the



328.60 – 335.80 MHz 401.00 – 402.00 MHz 421.90 – 421.00 MHz 470 – 866 MHz	
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**Notes:**

1. Any applicant that is willing to obtain a Type Approval for the wireless microphones must complete the application form for the low power radio communication equipment, and submit all requirements to the TRC.
2. The use of wireless microphones in Jordan is restricted to a confined building.
3. Because the frequencies assigned for wireless microphones are lying within the same band assigned to other applications, users of these equipment must take all the necessary precautions to avoid causing any harmful interference for other users, and not to claim any interference protection for their equipment.
4. the following fees are applied:
  - Application fee: (10)
  - Testing fee: (10 JD),
  - Type approval certificate: (15 JD).

**1.7) Walkie-Talkie**

- The ETSI and FCC standards are applied, with condition that the maximum ERP is less than 10mW.
- The application form for low power radio equipment must be filled and completed along with the requirements mentioned therein.
- Such equipment must not cause any type of interference to any licensed service or other equipment.

**1.8) Non-specific LPD (Wireless toys, planes...),**

In the following bands, all other low power devices (such as telemetry, telecommand...) except as mentioned above can operate in the following frequency bands and meet the specifications of either ETSI or FCC standards.

Frequency	ERP
40.660 - 40.700 MHz	10 mW
433.050 - 434.790 MHz (Audio and voice signals should be avoided in the band 433.05-434.79 MHz)	10 mW
2400 - 2483.5 MHz	10 mW
5725 - 5875 MHz	25 mW

24.00 - 24.25 GHz	100 mW
61.0 - 61.5 GHz	100 mW
122 - 123 GHz	100 mW
244 - 246 GHz	100 mW
138.2 - 138.45 MHz	10 mW

**Note 3:** To avoid interference between CT2 and LPD applications, it is recommended that LPD below 868.5 MHz should avoid using a dedicated frequency channel and instead use a technology that allows automatic channel selection of a free channel within the band.

### 1.9) Cordless Telephones

Device	Frequency band	Power
Analog telephones	1) Base Unit 49 MHz Hand held unit: 46 MHz  2) Base Unit :1.7 MHz Hand held unit:47 MHz	The maximum (ERP) of the transmitter shall not exceed 10 mW.
Digital telephones	1) 864 / 868 MHz 2) 2400 – 2450 MHz	The maximum effective radiated power (ERP) of the transmitter shall not exceed 10 mW.

Notes:

- Any applicant that is willing to obtain a Type Approval for the cordless telephones must complete the application form for the low power radio communication equipments, and submit all the needed documents.
- Analog Cordless phones utilizing 46/49 MHz bands can use either 10 or 25 channels.
- The type approval for cordless telephones in Jordan is restricted to a confined building.
- The antenna of the base unit must be fixed and not removable or changeable.
- The cordless digital telephones of frequency band 2400 – 2450 MHz must utilize the Spread Spectrum technology. A compliance list of spread spectrum devices must be completed and attached.
- In case of connection with licensed public telecommunications networks (PSTN, ISDN, GSM ...etc) or any telecommunications technology aside from the (DECT System), the equipment standards must comply with the Public networks or other telecommunications standards accredited by the TRC.

### 1.10) Digital Enhanced Cordless Telecommunications (DECT) systems

Device	Frequency	Power
DECT systems	1880 – 1900 MHz	The maximum effective radiated power (ERP) of the transmitter shall not exceed 100 mW.

1. Any applicant that is willing to obtain a Type Approval for the cordless telephones must complete the application form and the compliance list for DECT, and submit all the needed documents.
2. The type approval for DECT is restricted to use in a confined building.
3. The antenna of the base unit must be fixed and not removable or changeable.
4. The following fees will be applied:
  - The application fee is (60 JD) per model.
  - The approval certificate fee is (60 JD) per model.
  - The testing fee is (10) JD per model/type

### 1.11) Trunked Radio Handheld Equipments

Device	Frequency	Power
Handheld/portable equipment	Radio 806 - 821 MHz, 851 - 866 MHz	Max ERP of 5 Watt

1. Any applicant that is willing to obtain a Type Approval for the handheld radio transceivers must complete the application form for the Trunked Radio Handheld Equipment, and submit all the needed documents.
2. The following fees will be applied:
  - The application fee is (10 JD) per model.
  - The approval certificate fee is (15 JD) per model.
  - The testing fee is (10) JD per model/type

### 1.12) RLANS:

Devices and equipment employed in Radio LAN systems must obtain a Type Approval Certificate before being used. Please refer to Application for Type Approval Form. The

said equipment should comply with the following technical specification:

1- Frequency Ranges:

- Frequency Range (A) for indoor and outdoor coverage  
2400 – 2483.5 MHz  
5150 – 5250 MHz
- Frequency Range (B) for indoor coverage only:  
5725 – 5875 MHz

2- EIRP:

- 100 mW for the frequency range (2400 – 2483.5) MHz
- 200 mW for the frequency ranges; (5150-5250) MHz and (5725 – 5875) MHz

3- Coverage and use: The main purpose for the use of these devices is for indoor applications. Outdoor applications are permitted in frequency range (A) only as:

a) Hot Spots: is permitted within the purposes of:

- Providing public telecommunication services (for individual and class licensees).
- Private network

b) Bridging between buildings for WLANs can be permitted on case by case basis, and pursuant to the provisions of Instructions and Conditions set by TRC

4- Interference: The operation of Radio LANs is specified to be on non-interfering basis, such that:

- a) Radio LAN systems must not cause any harmful interference to licensed networks/radio-communication services.
- b) Radio LAN services must accept harmful interference which may be caused by licensed networks/radio-communication services and by other Radio LAN systems.
- c) Radio LAN administrators must take every possible measure to utilize interference mitigation techniques such as Dynamic Frequency Selection (DFS) and Transmission Power Control (TPC).

5- Security: Radio LAN equipment that do not offer any data security features are not eligible for Type Approval. Radio LAN administrators must ensure the implementation of security measures in their systems.

6- Public Applications: implementation of Radio LANs that provide services and radio access to the public must acquire TRC's approval before they are initiated.

7- Antennas: For Radio LAN systems with Indoor/outdoor coverage applications, only antennas with an isotropic gain less than 6dBi are permitted to be employed.

8- Fees: The following fees will be applied:

- The application fee is (100 JD) per model.
- The approval certificate fee is (100 JD) per model.
- The testing fee is (25) JD per model.

- For radio terminal equipment using the above frequencies same fees of LPD applied.

### **1.13) Radio Frequency Identification (RFID) systems**

- 1- RFID systems can be operated only in the frequency range (865-868) MHz.
- 2- The ERP of the transmitters should not exceed 500mW.
- 3- Equipment should comply with **“Technical Specifications for Radio Frequency Identification Equipment operating in the band 865 to 868 MHz”**
- 4- Operating RFID systems is restricted to a confined building.
- 5- the operation of RFID systems is specified to be on non-interfering basis, such that:
  - a) must not cause any harmful interference to licensed networks/radio-communication services.
  - b) could accept harmful interference which may be caused by licensed networks/radio-communication services and by other RFID systems.
- 6- The following fees will be applied:
  - The application fee is (10 JD) per model.
  - The testing fee is (10) JD per model.
  - The approval certificate fee is (15JD) per model

### **2. Other Radio equipment: example is all radio stations (portable, base, fixed, earth stations.....)**

All kinds of that equipment should go the procedure of the type approval process.

The ETSI standards apply; Test reports should be made according these standards.

Some kind of equipment that does not apply the ETSI standards in its design (For special use), can be dealt with on case by case basis.

#### **2-1 Stations operating in the land mobiles service (Hand Held, Mobile, Base, and Repeater for voice communications):**

##### **Conditions:**

- 1) Frequency Bands: 147-174 MHz (VHF) or 400-470 MHz (UHF),
- 2) Channel Spacing: 25 KHz with class of emission 16KF3E  
: 12.5 KHz with with class of emission 11KF3E
- 3) It must be programmable through PC regarding the operating frequency/channel spacing,
- 4) Other Technical Specifications should comply with ETSI standards.
- 5) The equipment should have a frequency license and tested prior to be entered and used in Jordan.

**2-2 Equipment for the use in establishing Radio and microwave links (in the land fixed service) must be type approved; they cannot enter the country prior to having frequency license.**

### **2-3 GMPCS equipment**

**It is requested that the GMPCS equipment must have the type approval certificate prior to be entered and used in Jordan. More over the type approval request can be considered for the Licensed GMPCS system operators and their Service providers.**

#### **Conditions:**

- 1) Single mode or dual mode of operation can be applied for approval; each should fill the related application form.
- 2) The related application must be completed, signed and stamped by the applicant.
- 3) All required documents must be attached to the application form,

**Fees:** The following fees are applied and the payments must be prior to each action of the type approval process:

The application fee is (10) Jordan Dinars (JD),

The testing fee is (10) JDs,

The type approval certificate is (15) JD

#### **Other information:**

- a. The TRC can go through the procedure of the type approval if GMPCS terminals having the GMPCS - MoU label.
- b. An evidence indicating the agreement of the GMPCS operator for the use of the equipment in connection with his GMPCS System; such agreement must be notified to the ITU and a copy of that notification must be attached to the related application form.
- c. the GMPCS should be Manufactured by that one, who has been authorized by ITU to use the GMPCS - MoU label.
- d. Labeling must include: the GMPCS - MoU label, the name of the manufacturer, the trade mark, the serial number, the model number and manufacturing country.

### **2-4 Cellular GSM mobile phones**

It is requested that the cellular GSM mobile or fixed phones must have the type approval certificate prior to be entered and used in Jordan.

#### **Conditions:**

- 1) The phones must meet the related standards for the operation within the GSM networks as set by ETSI, the standard numbers are indicated in the related application form.
- 2) The related application must be completed, signed and stamped by the applicant.

- 3) All required documents must be attached to the application form.

### **Annex 1**

#### Applications and forms for Radio Communications Equipment Type Approval

- Application Form for Issue Type Approval of Radio Communication Station/ Equipment
- Type Approval Application for Radio LAN Equipment
- Compliance List for Spread Spectrum System
- Type Approval Specification (Compliance List) for DECT System For use within the confined building In the frequency bands (1880-1900 MHz)
- Technical Specifications for Radio Frequency Identification Equipment operating in the band 865 to 868 MHz
- Application form for Type Approval for Hand Held/Portable Equipment operating in the 800 MHz Public Trunked Radio Dispatch Systems In the frequency ranges:809 to 814 MHz – 854 to 859 MHz
- Application form for Issue\Renew\Amendment of Type Approval for Radio Broadcast Data System (RBDS) or Radio Data System (RDS) Receivers for use with GPS and DGPS.
- Application Form for Type Approval of the Radio Pager Equipment