

## **MINISTRY FOR THE ECONOMY**

### **ICP – Autoridade Nacional de Comunicações**

#### **NOTICE**

##### **Radioelectric licenses**

In compliance with no. 2 of article 8, with no. 2 of article 9, with no. 3 of article 12 and with no. 2 of article 18, all of them part of the Decree-Law no. 151-A/2000, of 20 July, it is hereby made public, by determination of the Board of Directors of ICP - Autoridade Nacional de Comunicações, of 10 July 2003, that the Notice published in *Diário da República* (Government's Official Gazette), 3rd series, no. 40, of 14 February 2003 is replaced, and the following shall apply regarding radioelectric licenses:

##### **Stations needing licenses**

- 1 Pursuant to paragraph no. 2 of article 8, the following radiocommunication stations need licenses:
  - 1.1 In the Fixed Service:

The Fixed Stations of Short Wave connections (FS/SWC)<sup>1</sup>;
  - 1.2 In the Satellite Fixed Service:
    - 1.2.1 The Earth Stations (FSS/ES)<sup>2</sup>, excluding VSAT stations operating in frequency bands exclusively attributed for that effect;
    - 1.2.2 The Earth Stations for "Satellite News Gathering" (FSS/SNG)<sup>3</sup>.

- 1.3 In the Mobile Air Communications (MAC)<sup>4</sup>: Air Communication Stations.
- 1.4 In the Mobile Sea Communications (MSC)<sup>5</sup>: The Coastal Stations and the Harbour Stations.
- 1.5 In the Broadcasting Service: the Analogical Television (BS/ATV)<sup>6</sup> Broadcasting and/or retransmitters stations, the Analogical Sound Broadcasting(BS/ASB)<sup>7</sup> and the Sound Broadcasting of the “Digital Radio Mondiale” system (BS/DRM)<sup>8</sup>.
- 1.6 In the Radiodetermination Service: The Radiodetermination Stations (RDTs)<sup>9</sup>.

**Exemption of network licence**

- 2 Pursuant to paragraph a) of no. 1 and no. 2 of the article 9, are exempt from licensing:
  - 2.1 The networks in which are included all the stations referred to in no. 1;
  - 2.2 The following radiocommunication networks:
    - 2.2.1 Privative Networks of the LMS for Private Radio Paging (CSPP), with the following characteristics:

<b>Characterization of the stations</b>			
<b>Frequency Bands</b>	<b>Maximum power range</b>	<b>Antenna Type</b>	<b>Carrier frequency spacing</b>
40,680 MHz	5 W e.r.p.	external – Base station Integrated - portable	20 kHz
169,175 MHz	5 W e.r.p.	external - Base station Integrated - portable	25 kHz
468,1125 MHz	2 W e.r.p.	external - Base station Integrated - portable	12,5 kHz
468,1250 MHz	2 W e.r.p.	external - Base station Integrated - portable	
469,275 MHz	5 W e.r.p.	external - Base station Integrated - portable	25 kHz

2.2.2 Wireless telephones (CTs), with the following characteristics:

<b>Characterization of the stations</b>				
<b>System Technology</b>	<b>Frequency Bands</b>	<b>Maximum power range</b>	<b>Antenna Type</b>	<b>Carrier frequency spacing</b>
CT0 (analogical)	27,5375 - 27,8375 MHz	Transmitter output power: 10 mW	Integrated or dedicated	25 kHz
	36,9875 - 37,2875 MHz			
CT1 (analogical) <sup>1</sup>	914 - 915 MHz	Transmitter output power: 10 mW	integrated	25 kHz
	959 - 960 MHz			
DECT (digital)	1880 -1900 MHz	Transmitter output power: 250 mW	Integrated or dedicated	1,728 MHz

### **Exemption of station licence**

3 Pursuant to paragraph b) of no. 1 and no. 2 of the article 9, are exempt from licensing:

3.1 The Station with low power and short range (“SRD-*Short Range Devices*”)

These stations should operate in a non interference and non protection basis relatively to licensed radiocommunication stations and networks

<sup>1</sup> In compliance with the Decision ECC/DEC/(01)01, adopted by the Portuguese Administration, these frequency bands are no longer identified for this type of equipment; meanwhile the necessary measures will be taken allowing gradually the reduction of its utilization, with the objective of freeing the frequency bands until end of 2008 .

Characterization of the stations							
Usage	Frequency Bands	Maximum power range or field strength	Antenna Type	Carrier frequency spacing	"Duty Cycle"		
General Usage <sup>2</sup>	6,765 - 6,795 MHz	42 dB $\mu$ A/m a 10 m	Integrated or dedicated	Occupation of the whole band	< 10%		
	13,553 - 13,567 MHz						
	26,957 - 27,283 MHz						
	26,957 - 27,283 MHz	10 mW e.r.p.					
	40,660 - 40,700 MHz						
	433,050 - 434,790 MHz <sup>3,4</sup>						
	688,000 - 688,600 MHz	25 mW e.r.p.				25 kHz	< 1%
	688,700 - 689,200 MHz	500 mW e.r.p.					< 0,1%
	869,400 - 869,650 MHz	5 mW e.r.p.				Occupation of the whole band	< 10%
	869,700 - 870,000 MHz	10 mW e.i.r.p.					Up to 100%
	2400 - 2483,5 MHz	25 mW e.i.r.p.					
	5725 - 5875 MHz	100 mW e.i.r.p.					
	24,00 - 24,25 GHz						
	61,00 - 61,50 GHz						
122 - 123 GHz							
244 - 246 GHz							
Radio Local Area Network (RLANs)	2400 - 2483,5 MHz	100 mW e.i.r.p. <sup>5</sup>	Integrated or dedicated	Occupation of the whole band Binary rhythm>250 kbps			
High Performance Radio Local Network (HIPERLANs)	5150 - 5350 MHz <sup>6,7</sup>	200 mW e.i.r.p. <sup>8</sup>	dedicated	Occupation of the whole band			
	5470 - 5725 MHz <sup>6</sup>	1 W e.i.r.p. <sup>8</sup>					
	17,1 - 17,3 GHz	100 mW e.i.r.p.					
Railways - Eurobalise	27,095 MHz	See picture 1		See picture 1			
Telemetry Systems for Road Transportation – Toll system	5797,5 MHz +/- 2,5 MHz	2 W e.i.r.p.	Integrated or dedicated	5 MHz			
	5800 MHz +/- 5 MHz			10 MHz			
	5802,5 MHz +/- 2,5 MHz			5 MHz			

<sup>2</sup> Video Applications are only allowed above 2,4 GHz

<sup>3</sup> In this band, applications of audio and voice signals, are not allowed

<sup>4</sup> In the 433, 05 - 434,790 MHz band are also allowed the utilizations with 100% of ducty cycle limited to 1 mW de e.r.p.  
In the 434, 04 - 434,790 MHz sub-band is allowed utilizations with 100% of ducty cycle limited to 10 mW de e.r.p.

<sup>5</sup> For systems using techniques of spectral scattering by direct sequence, the value of the spectral density of maximum power must be limited to -20 dBW/1 MHz; for systems using techniques of spectral scattering by frequency jump, the value of the spectral density of maximum power must be limited to -10 dBW/100 kHz.

<sup>6</sup> The following conditions, should be observed :

1) In the 5150 - 5350 MHz band are only allowed utilizations "indoor"

2) Control of transmitted power to guarantee a factor of attenuation of at least 3 dB;

3) Dynamic selection of frequencies associated with the channel selection mechanism in such a way to allow a uniform scattering of a minimum of 330 MHz in the 5150 - 5350 MHz bands and of 255 MHz in the 5470 - 5725 MHz bands.

<sup>7</sup> As intermediate solution and for a limited period of time, applications without dynamic selection of limited frequencies are allowed to the frequency bands of 5150 - 5250 MHz, with a maximum power limit of 60 mW of e.i.r.p. for applications with automatic power control and a maximum power limit of 30 mW of e.i.r.p. for applications without automatic power control. This situation will be reevaluated opportunely.

<sup>8</sup> Maximum value of average e.i.r.p.

Usage	Frequency Bands	Maximum power range or field strength	Antenna Type	Carrier frequency spacing	Duty Cycle
Detection of movement and alert	2400 - 2483,5 MHz	25 mW e.i.r.p.	Integrated or dedicated	Occupation of the whole band	
	9200 - 9500 MHz				
	9500 - 9975 MHz				
	13,4 - 14,0 GHz				
	24,05 - 24,25 GHz	100 mW e.i.r.p.			
Alarms in general	868,600 - 868,700 MHz	10 mW e.r.p.	Integrated or dedicated	25 kHz <sup>9</sup>	< 0,1%
	869,250 - 869,300 MHz	25 mW e.r.p.			< 10%
	869,650 - 869,700 MHz				< 0,1%
Social Alarms	869,200 - 869,250 MHz	10 mW e.r.p.			
Model Control	26,995 MHz	100 mW e.r.p.	dedicated	10 kHz	
	27,045 MHz				
	27,095 MHz				
	27,145 MHz				
	27,195 MHz				
	34,995 - 35,225 MHz <sup>10</sup>				
	40,665 MHz				
	40,675 MHz				
	40,685 MHz				
	40,695 MHz				
Inductive Systems	9 - 59,750 kHz	72 dB $\mu$ A/m at 10 m (a 30 kHz decrease of 3 dB/octave) <sup>11</sup>	Integrated dedicated or external	Occupation of the whole band	
	59,750 - 60,250 kHz	42 dB $\mu$ A/m at 10 m			
	60,250 - 70 kHz	72 dB $\mu$ A/m at 10 m (a 30 kHz decrease of 3 dB/octave) <sup>11</sup>			
	70 - 119 kHz	42 dB $\mu$ A/m at 10 m			
	119 - 135 kHz	72 dB $\mu$ A/m at 10 m (a 30 kHz decrease of 3 dB/octave) <sup>11</sup>			
	6,765 - 6,795 MHz	See picture 2	Integrated or dedicated		
	7,400 – 8,800 MHz	9 dB $\mu$ A/m at 10 m			
	13,553 - 13,567 MHz	See picture 2			
	26,957 - 27,283 MHz	42 dB $\mu$ A/m at 10 m			
Active medical implantations	402 - 405 MHz	25 $\mu$ W e.r.p.		25 kHz	
	9 - 135 kHz	30 dB $\mu$ A/m at 10 m		Occupation of the whole band	< 10%
Wireless Audio systems	863 - 865 MHz	10 mW e.r.p.	Integrated	300 kHz	Up to 100%
	864,8 - 865 MHz			50 kHz	
Emitting Microphones	863 - 865 MHz	10 mW e.r.p.	Integrated	200 kHz	

<sup>9</sup> The 868, 6 - 868, 7 MHz frequency band can also be used entirely as a channel of high debit data transmission

<sup>10</sup> Exclusive frequencies for model aircraft

<sup>11</sup> In the case of "loop" antennas type 1 and 2 with an area between 0, 05 m<sup>2</sup> and 0, 16 m<sup>2</sup> the field intensity is reduced to 10 x log (area/0, 16 m<sup>2</sup>). For an antenna with an area inferior to 0, 05 m<sup>2</sup> the field intensity is reduced in 10 dB.

Usage	Frequency Bands	Maximum power range or field strength	Antenna Type	Carrier frequency spacing	Duty Cycle
Remote control, telemetry, Remote control alarms and Data transmission Systems	29,980 MHz	100 mW e.r.p.		10 kHz	
	29,990 MHz				
	30,000 MHz				
	30,100 MHz				
	150,9375 MHz	500 mW e.r.p.		12,5 kHz	
	150,9500 MHz				
	155,5375 MHz				
	155,5500 MHz				
	458,1125 MHz				
	458,1250 MHz				
	458,1375 MHz				
	458,1500 MHz				

### 3.2 Transportable earth stations of the Satellite Fixed Service (FSS).

These stations should operate in a non interference and non protection basis relatively to licensed radiocommunication stations and networks

The utilization of this kind of earth stations are only allowed for distances greater than 500 meters from the airports limit area.

The utilization of the earth stations with permanent fixed location is not covered by this exemption regime.

Characterization of the stations			
Earth Station	Frequency Bands	Maximum power range	Antenna Type
"Satellite Interactive Terminal (SIT)"	10,70 - 12,75 GHz (space-Earth) 29,50 - 30,00 GHz (Earth -space)	Broadcasting power < 2 W e.i.r.p. < 50 dBW	Antenna with diameter < 1,2m
"Satellite User Terminal (SUT)"	19,70 - 20,20 GHz (space-Earth) 29,50 - 30,00 GHz (Earth -space)		Antenna with diameter < 1,8 m
"Very Small Aperture Terminal (VSAT)"	12,50 - 12,75 GHz (space-Earth) 14,00 - 14,25 GHz (Earth -space)		Antenna with diameter < 3,8 m
"Arcanet Suitcase Terminal"	11,45 - 11,70 GHz (space-Earth) 12,50 - 12,75 GHz (space-Earth) 14,00 - 14,25 GHz (Earth -space)		Antenna with diameter < 1,2 m

### 3.3 The Earth Stations of the Satellite Mobile Services.

<b>Characterization of the stations</b>	
<b>Earth Station</b>	<b>Frequency Bands</b>
Inmarsat-B	1525 - 1544 MHz (space-Earth) <sup>12</sup> 1545 - 1559 MHz (space-Earth) <sup>13</sup> 1626,5 - 1645,5 MHz (Earth -space) <sup>12</sup> 1646,5 - 1660,5 MHz (Earth -space) <sup>13, 14</sup>
Inmarsat-C	
Inmarsat-D	
Inmarsat-M	
Inmarsat-M4	
Inmarsat-phone (mini M)	
EMS-PRODAT	
EMS-MSSAT	
Thuraya	
SpaceCheckers-SMS	
Omnitracs-Eutelsat	10,70 - 11,70 GHz (space-Earth) <sup>15</sup> 12,50 - 12,75 GHz (space-Earth) <sup>15</sup> 14,00 - 14,25 GHz (Earth -space)
GMPCS <sup>16</sup>	1610 – 1626,5 MHz (Earth -space) 1980 – 2010 MHz (Earth -space) 2483,5 – 2500 MHz (space-Earth) 2170 – 2200 MHz (space-Earth)
Mobile Earth Stations (MES) ORBCOMM <sup>17</sup>	137 – 138 MHz (space-Earth) 148 – 150,05 MHz (Earth -space)

<sup>12</sup> In the 1530 - 1544 MHz and 1626, 5 - 1645, 5 MHz frequency bands, the aid, urgency and security communications have priority in the scope of GMDSS system.

<sup>13</sup> In the 1545 - 1555 MHz and 1646, 5 - 1656, 5 MHz bands, the aid and urgency communications as well as the communications relative to security and regularity of the flights and meteorology, have priority in the scope of Satellite Mobile Air Communications Service.

<sup>14</sup> In the 1660 - 1660, 5 MHz band the operation of these land stations must not cause harmful interferences to the stations of the radioastronomy service.

<sup>15</sup> In the 10,70 - 11,70 GHz and 12,50 - 12,75 GHz bands the operation of the land stations "Omnitracs-Eutelsat" shall not cause interferences to the stations of the Fixed Services and Satellite Fixed Services.

<sup>16</sup> These stations must have placed on them the marking described on picture 3.

<sup>17</sup> These stations should neither cause interferences nor require protection of stations of the Fixed, Mobile and Space Operations Services in the 148 - 149, 9 MHz frequency band or stations of Satellite Radionavigation Service in the 149, 9 - 150, 05 MHz frequency band.

### 3.4 The Land Mobile Service stations

#### Stations PMR446

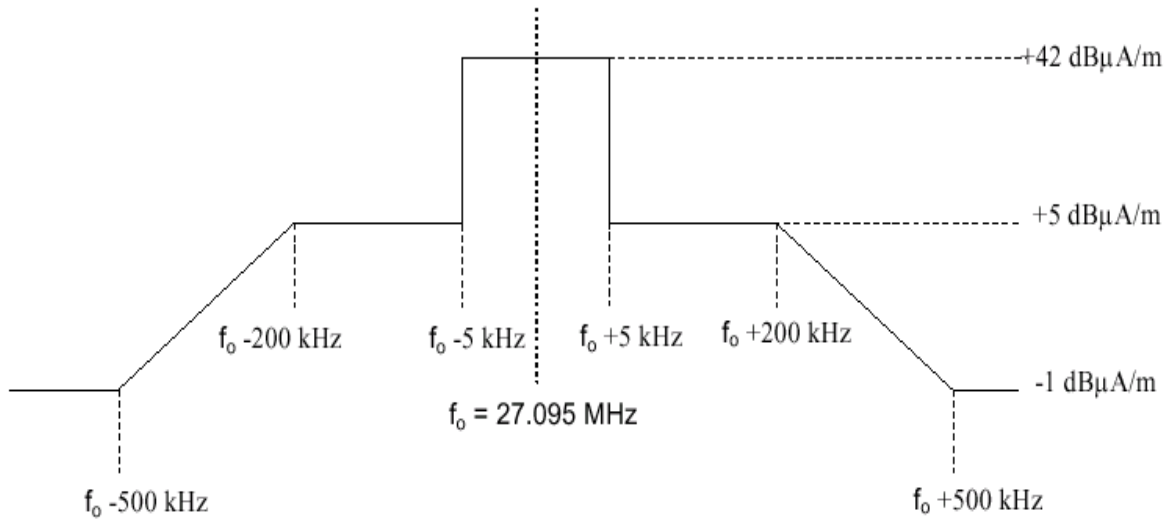
<b>Characterization of the stations</b>			
<b>Frequency Bands</b>	<b>Maximum power range</b>	<b>Antenna Type</b>	<b>Carrier frequency spacing</b>
446,00625 MHz	500 mW e.r.p.	Integrated	12,5 kHz
446,01875 MHz			
446,03125 MHz			
446,04375 MHz			
446,05625 MHz			
446,06875 MHz			
446,08125 MHz			
446,09375 MHz			

### 3.5 The radiocommunication stations of plain reception.

<b>Characterization of the stations</b>
<p>Includes the following receiver stations:</p> <ul style="list-style-type: none"><li>• of sound and television broadcasting</li><li>• of GPS</li><li>• multiband, which are not associated to any radiocommunication services in particular (“scanners”)</li><li>• of satellite radiocommunications in the frequency bands: 3,4 - 4,2 GHz; 10,7 - 12,75 GHz; 17,7 - 20,2 GHz.</li></ul>

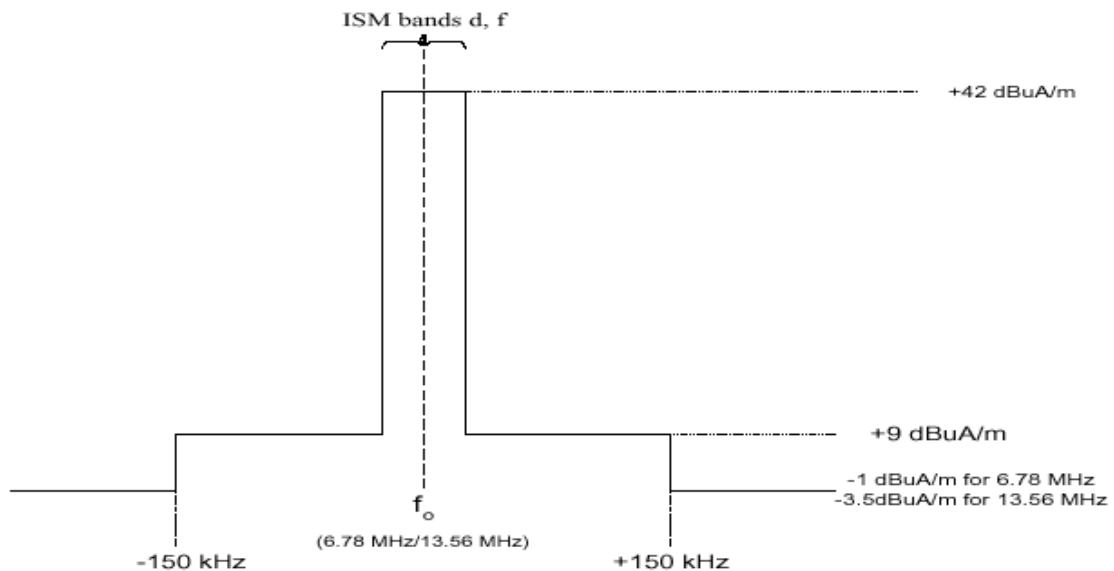
**FIGURES :**

**Eurobalise**



**Figure 1** - Field strength limits to 10 meters around the frequency  $f_0 = 27,095 \text{ MHz}$

**Inductive Systems**



**Figure 2** - Field strength limits to 10 meters for the frequency bands 6,765 - 6,795 MHz and 13,553 - 13,567 MHz

## Mobile Land Stations GMPCS



**Figure 4** – Marking placed on the stations GMPCS

### **DEFINITIONS:**

**“SRD-Short Range Devices”** - The designation “Sort Range Devices” (SRDs, Short Range Devices) is meant to include the radio transmitters which establish uni-directional or bi-directional communications and those unlikely of causing interferences to other radio equipment. The SRDs uses integrated, dedicated or external antennas, being allowed all types of modulation as long as they fulfil whatever is specified in the relevant norms. Given the diversity of supplied services of this equipment, no description can be exhaustive enough.

**Applications for railways** - Specific applications for railways, including automatic vehicle identification and balises (Train control system)

**Telemetry systems for road transportation** - Communication systems for transportation support (mobile data links amongst vehicles and between vehicles and the infrastructure)

**Movement detection and alert** - Movement detection equipment and alert equipment (low power radar systems for the purpose of radiodetermination: determination of position, of speed and/or other characteristics of an object, or then obtaining information relative to these parameters).

**Model Control** – Movement control equipment for models in the air, on land and above or under the water.

**Inductive Systems** – Vehicle immobilizer, animal identification, alarm systems, cable detection, surplus management, personnel identification, voice wireless links, access control, proximity sensors, theft prevention systems including RF systems of theft prevention induction, data transfer for portable equipment, goods automatic identification, wireless control systems and automatic toll systems.

**Active medical implantation with very low power** - Instruments, apparatus, devices, materials or other goods, to be used isolated or jointly, for: diagnosis, prevention, monitoring, treatment or mitigation of illness; diagnosis, monitoring, treatment or mitigation or compensation of injury or deficiency; examination, substitution or modification of anatomy or of a physiological process; conception control.

**Wireless audio systems** – Wireless loudspeakers; wireless headphones; wireless headphones for portable use, for example CD and cassettes players or portable radios; wireless headphones for use inside vehicles, for example for use in radios, telephones, etc.; auricular monitoring for use in concerts or other type of stage productions.

**Effective radiated power (ERP)** in a given direction - the product of the power supplied to the antenna by its gain relative to a half-wave dipole in a given direction.

**Equivalent isotropically radiated power (EIRP)** in a given direction - the product of the power supplied to the antenna by its gain relative to an isotropic antenna in a given direction (absolute or isotropic gain)

**Average equivalent isotropically radiated power (EIRP)** – it is equal to the average of EIRP throughout a data burst, whenever the power control is at its maximum.

**Integrated antenna** – non removable antenna

**Dedicated antenna** – removable antenna supplied with the station

**External Antenna** – antenna not suitably designed for certain type of station

**Spread Spectrum** - the transmission technique where the signal occupies a bandwidth much larger than the minimum necessary to send information;

**Frequency hopping spread spectrum** - the technique of spread spectrum where the information is sent over several channels in a pseudo-aleatory form;

**Direct sequence spread spectrum** - the technique of spread spectrum where the information is combined with a pseudo-aleatory code;

**“Duty cycle”** – It is a relation, expressed in percentage, of the maximum period of time where equipment is active with one or more carriers, relatively to one hour period.

**Interference** - the effect caused on the reception, in a radiocommunication system, by an unwanted energy due to some emission, radiation or induction (or a combination of these emissions, radiations or inductions) and that is clearly shown by the degradation of the transmission quality, by the deformation or loss of information that could be obtained in the absence of that unwanted energy.

### **Elements that must instruct the applications for the attribution of radioelectric licenses and requisites for technical projects to be presented**

4 In compliance with provisions of paragraph 3 of article 12, the elements that must instruct the applications for the attribution of radioelectric licenses, as well as the requisites of technical projects to be presented by radioelectric license type and for each service, are the following ones:

#### **4.1 Network License**

4.1.1 Elements to be presented for the licensing of private networks of the Land Mobile Service (LMS/RPR)<sup>10</sup>:

Application indicating the bands for localized networks.

- Applicant's identification;
- Correspondence addresses;
- Network objective;
- Network structure;

- Location of the stations;
- Service area;
- Number of stations;
- Number of requested channels;
- Applicant's signature.

#### Application for licensing of localized networks

- Applicant's identification;
- Collecting Address;
- Project;
- Applicant's lawful witnessed signature.

#### Application for licensing of networks without fixed structures

- Applicant's identification;
- Correspondence and collecting addresses;
- Preferred frequency bands;
- Number and justification for the requested channels;
- Number of stations;
- Service area;
- Applicant's lawful witnessed signature.

#### Requisites for Technical Projects – localized networks

- Identification elements;
- Network generic characteristics;
- Class and location of the stations;
- Bands and working method;
- Installation diagram of the stations;
- Calculations of E.R.P.;
- Network devices;
- Identification of the project manager;

4.1.2 Elements to be provided for licensing of the Fixed Service networks – Point to Point Link (FS/PPL)<sup>11</sup>, Studio -Transmitter Link (FS/STL)<sup>12</sup>.

Application:

- Applicant's identification;
- Correspondence and collecting addresses;
- Network objective;
- Applicant's lawful witnessed signature.

Requisites of the technical project:

- Identification Elements;
- Diagram of the requested links;
- Location of the stations;
- Links characteristics;
- Characteristics of the antenna systems;
- Link calculations;
- Identification of the project manager;

4.1.3 Elements to be provided for licensing of Broadcasting Service networks (BS/DVB-T<sup>13</sup> and BS/T-DAB<sup>14</sup>).

Application:

- Applicant's identification;
- Correspondence and collecting addresses;
- Network identification;
- Location of the stations;
- Characteristics of the station antenna systems;
- Calculation of the stations E.R.P.;
- Applicant's lawful witnessed signature;

#### 4.1.4 Elements to be provided for licensing of other services networks.

- Fixed Service – Transportable Links (FS/FT)<sup>15</sup>, Electronic News Gathering, (FS/ENG)<sup>16</sup>, Point-Multipoint Link (FS/PML)<sup>17</sup>;
- Satellite Fixed Service – Earth Stations (SFS/VSAT)<sup>18</sup>;
- Land Mobile Service – Public Networks (LMS/GSM<sup>19</sup>, LMS /UMTS<sup>20</sup>, LMS /RPA<sup>21</sup>, LMS /TETRA<sup>22</sup>, LMS /CP<sup>23</sup>).

#### Application

- Applicant's Identification;
- Correspondence and collecting addresses;
- Network objective (not applicable to Land Mobile Service – Public Networks)
- Location of the stations;
- Estimated maximum power (applicable to Land Mobile Service – Public Networks);
- Link characteristics;
- Characteristics of the antenna systems;
- Applicant's lawful witnessed signature.

## 4.2 Station License

#### 4.2.1 Elements to be provided for licensing of the stations requiring presentation of technical project.

- Fixed Service – Short Wave (SF/SW)<sup>1</sup>
- Broadcasting Service - Analogical Sound (BS/BAS)<sup>7</sup>

#### Application

- Applicant's Identification;
- Correspondence and collecting addresses;
- Network/Station objective;
- Attested copy of the certificate allowing the exercise of the activity ( applicable to analogical sound broadcasting)
- Applicant's lawful witnessed signature.

#### Requisites of the Technical Project (FS/SW) <sup>1</sup>

- Identification Elements;
- Diagram of requested links;
- Location of the Stations;
- Link characteristics;
- Characteristics of the antenna systems;
- Link calculations;
- Identification of the project manager.

#### Requisites of the Technical Project (BS/BAS) <sup>7</sup>

- Elements of Identification, including the studios location, the link method to the station (applicable in the scope of local stations) and the location of the station.
- Technical characteristics of radiocommunication equipment to be used;
- Exact location (geographical co-ordinates) of broadcast antenna, location quota and height of the antenna support tower;
- Power Calculations;
- Reasoned outline of the installation, based in measurements of field intensity, for the cases pursuant to article 2 of the Decree-Law no. 126/2002, 10 May;
- Identification of the project manager.

#### 4.2.2 Elements to be provided for licensing of the stations which does not require the presentation of the technical project:

- Satellite Fixed Service – Land Stations (SFS/LS<sup>2</sup> e SFS/SNG<sup>3</sup>);
- Mobile Air Communications (MAC) <sup>4</sup>;
- Mobile Sea Communications (MSC) <sup>5</sup>;
- Broadcasting Service – Analogical Television (BS/ATV)<sup>6</sup>
- Broadcasting Service - “Digital Radio Mondiale” (BS/DRM)<sup>8</sup>
- Radiodetermination Service (SRDT)<sup>9</sup>.

#### Application

- Applicant’s identification;
- Correspondence and collecting addresses;
- Network/station objective;
- Location of stations;

- Characteristics of the antenna systems;
- Power calculations (applicable to Analogical Television stations and radiodetermination);
- Link characteristics (applicable to Land Stations);
- Applicant's lawful witnessed signature.

4.2.3 The application forms for licensing of stations and radiocommunication services network, when available, can be obtained at ICP - Autoridade Nacional de Comunicações' Head-Office and Delegations.

---

<sup>1</sup> Fixed Service/Short Wave Links – FS/SW: Fixed stations with defined localization, to establish point to point links, using frequency bands attributed for that effect, between 3 MHz and 30 MHz;

<sup>2</sup> Satellite Fixed Service/Land Stations - SFS/LS: Land stations with defined localization, excluding VSAT stations, operating in frequency bands attributed exclusively for the effect;

<sup>3</sup> Satellite Fixed Service/"Satellite News Gathering" - SFS/SNG: Land stations, meant to be used as broadcasting auxiliary, of occasional nature, ensuring links between a news gathering place and a studio, operating in frequency bands attributed for the effect;

<sup>4</sup> Mobile Air Communications – MAC: Aeronautical stations with defined localization in airports and aerodromes for communication with aircraft, operating in frequency bands attributed for the effect;

<sup>5</sup> Mobile Sea Communications – MSC: Coastal stations with defined localization, operating in frequency bands attributed for the effect, for communications with ship stations, not anchored, and harbour stations with fixed localization for communications with ship stations installed in vessels within the scope of the harbour activities.

<sup>6</sup> Broadcasting Service/Analogical Television - BS/ATV: Television transmitter and/or retransmitters stations with defined localization and using analogical technology, operating in frequency bands attributed for the effect;

<sup>7</sup> Broadcasting Service/Analogical Sound - BS/BAS: Sound broadcasting transmitter and/or retransmitters stations with defined localization and using analogical technology, operating in frequency bands attributed for the effect;

<sup>8</sup> Broadcasting Service/"Digital Radio Mondiale" - BS/DRM: Sound broadcasting transmitter and/or retransmitters stations with defined localization and using DRM specifications, operating in frequency bands attributed for the effect;

<sup>9</sup> Radiodetermination Service - (RDTS): Radiodetermination Service stations operating in frequency bands attributed for the effect;

<sup>10</sup> Land Mobile Service/Private Networks – LMS/PN: Networks designed to support private telecommunications services and consisting of base stations with localization in definitive points and or by mobile stations, operating in frequency bands attributed for the effect. It might include fixed stations operating in frequencies within the scope of Fixed Service (FS/PPL) for command and/or interconnection of base stations;

<sup>11</sup> Fixed Service/Point to Point Links - FS/PPL: Fixed stations with defined localization, to make point to point links, operating in frequency bands attributed for the effect;

<sup>12</sup> Fixed Service/Studio-Transmitter Links - FS/STL: unidirectional links which include a Fixed Station next to the studio and another Fixed Station next to the respective transmitter broadcasting station, operating in frequency bands attributed for the effect;

<sup>13</sup> Broadcasting Service/"Terrestrial Digital Video Broadcasting" - BS/DVB-T: Networks constituted by transmitters and or retransmitters television stations with defined localization and using digital technology, operating in frequency bands attributed for the effect;

<sup>14</sup> Broadcasting Service/"Terrestrial Digital Audio Broadcasting" - BS/T-DAB: Networks constituted by transmitters and or retransmitters sound broadcasting stations with defined localization and using T-DAB specifications, operating in frequency bands attributed for the effect;

<sup>15</sup> Fixed Service/Transportable Links - FS/FT: Networks constituted by stations without defined localization (within an area), operating in frequency bands attributed for the effect;

<sup>16</sup> Fixed Service/"Electronic News Gathering" - FS/ENG: Networks constituted by stations operating as broadcasting auxiliary, of occasional nature, ensuring links between a defined news gathering place and a studio (or a point with possibility of connection to the studio through other systems), operating in frequency bands attributed for the effect;

<sup>17</sup> Fixed Service/Point-Multipoint Links - FS/PML: Networks constituted by base stations with defined localization, and fixed terminal stations, operating in frequency bands attributed for the effect;

<sup>18</sup> Satellite Fixed Service/"Very Small Aperture Terminals" - SFS/VSAT: Networks constituted by VSAT land stations with defined localization (there might exist transportable VSAT stations defined by utilization areas) operating in frequency bands exclusively attributed for the effect;

<sup>19</sup> Land Mobile Service/"Global Systems for Mobile Communications" - LMS/GSM: 2nd generation systems networks, constituted by base stations with defined localization and by mobile stations, operating in frequency bands attributed for the effect;

<sup>20</sup> Land Mobile Service/"Universal Mobile Telecommunications System" - LMS/UMTS: 3rd generation systems networks, constituted by base stations with defined localization and by mobile stations, operating in frequency bands attributed for the effect;

<sup>21</sup> Land Mobile Service/Analogue Trunking - LMS/AT: Trunking networks and using analogue technology, constituted by base stations with defined localization and by mobile stations, operating in frequency bands attributed for the effect;

<sup>22</sup> Land Mobile Service/"Terrestrial Trunking Radio" - LMS/TETRA: Trunking networks and using digital technology, constituted by base stations with defined localization and by mobile stations, operating in frequency bands attributed for the effect;

<sup>23</sup> Land Mobile Service/Radio Paging - LMS/RP: Radio Paging networks constituted by base stations with defined localization and by mobile stations (receiver), operating in frequency bands attributed for the effect;

Lisbon, 10 July 2003

The Chairman of the Board of Directors

Para encontrar este ficheiro no site [www.anacom.pt](http://www.anacom.pt) siga este caminho ou cole a URL (link) abaixo no campo address do seu navegador (browser), e pesquise por "aviso\_licencas.pdf"

[Página Inicial](#) >

Url: <http://www.anacom.pt/render.jsp?categoryId=2>

Publicação: 13.02.2004