TRAFICOM
Finnish Transport and Communications Agency

APPLICATION FOR A PMR/HH SYSTEM LICENCE

RJ

Application form for a radio licence for a Private/Professional Mobile Radio (PMR) system or for a paging (HH) system

1 CUSTOMER INFORMATION

Company, association or consumer customer information entered in section 1 of this application form will be used also as invoicing information for the radio licence granted based on this application, unless you have previously provided Traficom with other, licence-type-specific invoicing information. If you enter invoicing information in section 3 of this application form, that will be used instead, but only for invoicing the radio licence granted based on this application.

Name of customer	
Customer number (if available)	Business ID or personal identification code
Postal address (for mailing the licence)	
Postal code and town/city	
Telephone number	Email address

Contact details of the person in charge for radio licence matters in the company/association (does not apply to consumer customers)

The contact person works in the organisation of the customer company/association and has overall responsibility of the customer's radio licence matters. If your organisation has several people who are responsible for radio licence matters, please fill in the details of the person in charge of the radio licence in question.

Name of the contact person	Telephone number of the contact person	Email address of the contact person

2 CONTACT PERSON FOR THE RADIO LICENCE APPLICATION

In section 2 of the application form, please fill in the details of the person whom Traficom may contact in matters concerning this application or the radio licence granted based on this application. The contact person may be external to the customer organisation, for example a hardware supplier authorised by the customer to apply for a radio licence on customer's behalf. This section can be left blank if the details are the same as those indicated under customer details or contact person details in section 1.

Name of contact person (and name of employer if required)	
Telephone number 1	Telephone number 2
Email address	

Tick the applicable boxes

- ☐ The customer referred to in section 1 has authorised the contact person or the company represented by the contact person to apply for the radio licence on behalf of the customer.
- ☐ The customer requests a copy of the radio licence to be sent to the contact person.

3 INVOICING INFORMATION

In section 3 of the application form, please enter invoicing information for the radio licence granted based on of this application, where different from the customer details indicated in section 1. If section 3 is left blank but the customer has previously provided licence-type-specific invoicing information, those details will be used. If such information has not been provided, the customer details indicated in section 1 will be used as invoicing information.

Name of payer	
Business ID or personal identification code	Association register number
Postal address (where the invoices are to be mailed)	
Postal code and town/city	
Customer-selected invoice reference (max 35 characters)	

Online invoicing details (not applicable to consumer customers)

The online invoicing address is the recipient's 'Finvoice address', for example XX003707090192001, where XX is the operator ID and 003707090192001 is the EDI code (0037=country code, 07090192=business ID, 001=specifier).

EDI code	Operator ID	E-invoice operator

Please send the filled application form as an email attachment to the address radiotaajuudet@traficom.fi

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4 APPLICATION TYPE

In section 4 of the application form, please indicate whether you are applying for a completely new radio licence, an addition of a new radio system to an existing radio licence or a change to a radio system in an existing radio licence. If the radio licence is new, you may select the period of validity of your choice, but not exceeding 5 years. A new radio licence application is always required if the validity period requested for a new radio system is different from the validity period of the radio licence for the customer's existing radio system (for example a short-term licence for a few days).

Each radio system constitutes its own part of the radio licence. A single radio system may include both base stations and mobile stations or only either. A mobile station is a walkie-talkie or similar mobile device which can communicate with another mobile station directly (on simplex frequency) or via a base station (on duplex frequency). Mobile stations for PMR networks, which are considered to be part of the same operational entity based on their base stations used, location, purpose of use or similar grounds, are considered as mobile stations of the same radio system.

Application type (choose only one option)

- ☐ new radio licence for the period* (start date – end date) _____
- ☐ new radio system to an existing radio licence number (e.g. PMR1234567) _____
- ☐ change to an existing radio system, number of part of radio licence (e.g. PMR1234567-001) _____

* If you do not fill in a start date for the radio licence, the start date will be the date on which the radio licence is granted. If you do not fill in an end date for the radio licence, the default licence period is 5 years.

Automatic radio licence renewal (concerns only radio licences for which the customer has not defined the end date)

- ☐ The radio licence granted based on this application can be renewed automatically upon the expiry of the licence period.

If you do not tick the above box, Traficom will not contact you to enquire about your willingness to extend the radio licence upon its expiry and the frequencies specified in the radio licence will no longer be reserved for you.

5 PURPOSE AND STRUCTURE OF THE RADIO SYSTEM (I.E. RADIO NETWORK)

Section 5 of the application form explains the purpose of use and the structure of the new radio system, or the changes to be made to an existing radio system. A single filled application form may contain details for only one new radio system or changes to only a single radio system. The technical details of the equipment belonging to the radio system (base stations and mobile stations) are filled into section 6 and 7 of the form.

Purpose of use (choose only one option)

- ☐ radiotelephone use
- ☐ data transfer / telemetry
- ☐ paging
- ☐ other, please specify: _____

Structure (choose only one option)

- ☐ only mobile stations (such as walkie-talkies)
- ☐ one or several base stations (such as paging systems, where only base stations serve as transmitters)
- ☐ one or several base stations and mobile stations communicating only via base stations (on duplex frequencies)
- ☐ one or several base stations and mobile stations communicating via base stations (on duplex frequencies) and directly with each other (on simplex frequencies)
- ☐ other, please describe the structure below

Description of the structure of the new radio system or the requested change to a radio system included in an existing radio licence (use attachments if necessary)

Example of description: "The new radio system has 16 mobile stations, which communicate on duplex frequencies via a single base station. In addition to duplex frequencies, the mobile stations use two customer-specific direct channels on simplex frequencies and the common channels of band 5."

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6 BASE STATION DETAILS

In section 6 of the application form, please enter the base station details of the radio system. If there are several base stations, complete a separate application form on each base station. However, if in the same location there are used several base stations, which are identical otherwise apart from their operating frequencies, you may enter the details of all base stations in section 6 and indicate the different frequencies in the appropriate field. If the base station uses a different antenna for transmitting and receiving, indicate this in section 5 and include details of the location, height and gain of the receiving antenna, as well as the attenuation of the transmission path from the receiving antenna to the receiver. The location of the transmitting antenna of the base station can be marked on map at MapSite, a service of National Land Survey of Finland at https://asiointi.maanmittauslaitos.fi/?lang=en, and the hyperlink created from the marking can be added to the dedicated field under base station details.

Base station type (choose either option)

- ☐ repeater which relays the traffic of other stations
- ☐ fixed station which transmits its own traffic

Base station identifier (added to the 'Customer reference' column of the technical conditions of the radio licence)

Address of the transmitting antenna location and more detailed description of the location (e.g. "lightning column" or "rooftop of an office building")

Transmitting antenna location as a hyperlink or a map image attached to the application (coordinates of the location do not suffice)

Transmitting antenna height above ground level, m

Maximum radiated power used by the base station, W ERP

Technology (choose only one option)

- ☐ analogue
- ☐ digital (such as DMR or dPMR)
- ☐ TETRA

Channel width (choose applicable options)

- ☐ 12.5 kHz
- ☐ 25 kHz
- ☐ other, please specify: _____

Commercial type of transmitting antenna (if available)

Polarisation of transmitting antenna (choose either option)

- ☐ vertical (V)
- ☐ other, please specify: _____

Maximum gain of transmitting antenna

_____

Gain unit (choose either option)

- ☐ dBd
- ☐ dBi

Transmitting antenna directivity (choose either option)

- ☐ omnidirectional (ND)
- ☐ directional (D), main direction of radiation as measured from grid north

_____

Total attenuation of the transmission path (cables, connectors, filters etc.) from the transmitter to the transmitting antenna, dB

Base station transmit and receive frequencies

At least the requested frequency band, VHF or UHF, or a more specific request for the range of operating frequencies, e.g. "450–470 MHz", or a request for a specific transmit (Tx) and receive (Rx) frequency, e.g. "Tx/Rx = 450.325/460.025 MHz". If several transmit/receive frequencies are required for the same location, list the frequencies or indicate the desired total number of frequencies, e.g. "Two duplex frequency pairs on band 450–470 MHz".

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7 MOBILE STATION DETAILS

A mobile station is a radiotelephone or similar mobile device which can communicate with another mobile station directly (on simplex frequency) or via a base station (on duplex frequency). Mobile stations include portable devices and devices that can be installed in vehicles, also mobile devices which are installed in a fixed location (for example in a control room) and possibly connected to an external antenna (located for example on the roof of the control room).

Simplex frequencies are divided into customer-specific frequencies and common channels. Customer-specific frequencies are assigned as far as possible so, that on the same area there would be no other users of the same frequency. Common channels can be used throughout Finland, but the same channels have always been granted for other customers as well.

Section 7.1 is for the details of mobile stations communicating directly on customer-specific simplex frequencies.
Section 7.2 is for the details of mobile stations communicating via a base station on duplex frequencies.
Section 7.3 lists the user-selectable (licenced) common channels for business.
Section 7.4 lists the user-selectable common channels for lifting control.
Section 7.5 lists the user-selectable common channels for TETRA DMO (Direct Mode Operation).
Section 7.6 lists the user-selectable common channels for data transmission and transmitting DGNSS (Differential Global Navigation Satellite System) signal.

The total number of mobile stations is the same for all stations listed in sections 7.1 – 7.6, and all mobile stations included in the total number can use all the frequencies selected in sections 7.1 – 7.6 as long as the frequencies can be granted to the customer.

Total number of mobile stations, pcs.

7.1 DETAILS FOR MOBILE STATIONS COMMUNICATING DIRECTLY ON CUSTOMER-SPECIFIC SIMPLEX FREQUENCIES

The total number of mobile stations is filled in under the main header of section 7.

Area of use for the mobile stations (describe or attach a map with the area marked)

Maximum radiated power used by the mobile stations, W ERP

Technology (choose only one option)	Channel width (choose applicable options)
☐ analogue	☐ 12.5 kHz
☐ digital (such as DMR or dPMR)	☐ 25 kHz
☐ TETRA	☐ other, please specify: _____

Commercial type of mobile stations (if available)

Transmit and receive frequencies of the mobile stations

At least the requested frequency band, VHF or UHF, or a more specific request for the range of operating frequency, e.g. "440–450 MHz", or a specific operating frequency, e.g. "440.0125 MHz". If several frequencies are required for the same location, please list the frequencies or indicate the desired total number of frequencies, e.g. "Three simplex frequencies on band 440–450 MHz".

7.2 DETAILS FOR MOBILE STATIONS COMMUNICATING VIA A BASE STATION ON DUPLEX FREQUENCIES

Technology, channel width and frequencies of the mobile stations communicating via a base station are determined by the base station details of section 6. The total number of mobile stations is filled in under the main header of section 7.

Area of use for the mobile stations (describe or attach a map with the area marked)

Maximum radiated power used by the mobile stations, W ERP

Commercial type of mobile stations (if available)

Application for a radio licence to use base station frequencies included in the radio licence of another licence holder (fill in if needed)

Application for a radio licence for mobile stations to communicate via a base station on frequencies (e.g. 450.325/460.025 MHz) _____ recorded to the licence part (e.g. PMR1234567-001) _____ of another customer.

☐ The holder of the radio licence has granted the customer the permission to communicate via licence holder's base station(s) on the above listed frequencies.

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7.3 (LICENCED) COMMON CHANNELS FOR BUSINESS TO BE USED THROUGHOUT FINLAND

The common channels are intended to be used only for voice communications related to business or profession. The radio licence is granted to all channels of the selected band (2, 3, 4, 5, 2d or 5d) to be used throughout Finland. The total number of mobile stations is filled in under the main header of section 7, and the selected bands are marked in the table below (mark as many as needed). The channel width on bands 2, 2d and 5d is 12.5 kHz, and on bands 3, 4 and 5 it is 25 kHz. On all channels only mobile stations operating with radiated power levels up to 5 W ERP are allowed.

Analogue channels				Digital channels	
VHF band		UHF band		VHF band	UHF band
☐ **Band 2, 12 channels (MHz):**	☐ **Band 3, 8 channels (MHz):**	☐ **Band 4, 4 channels (MHz):**	☐ **Band 5, 9 channels (MHz):**	☐ **Band 2d, 8 channels (MHz):**	☐ **Band 5d, 8 channels (MHz):**
154.50625	147.100	407.525	443.125	154.65625	447.00625
154.51875	152.050	407.575	443.500	154.68125	447.05625
154.53125	152.100	408.375	443.550	154.71875	447.08125
154.54375	160.250	408.400	443.800	154.76875	447.15625
154.55625	160.275		445.200	154.79375	447.18125
154.56875	160.300		445.675	154.81875	447.20625
154.58125	170.425		458.250	154.85625	447.23125
154.59375	170.450		458.850	154.89375	447.28125
154.60625			458.900		
154.61875					
154.63125					
154.64375					

7.4 COMMON CHANNELS FOR LIFTING CONTROL TO BE USED THROUGHOUT FINLAND

The common channels are intended to be used only for voice communications related to lifting control in connection with business or profession. The radio licence is granted to all channels listed in the table below to be used throughout Finland. The number of mobile stations using common channels is filled in under the main header of section 7, and the channels are selected by ticking the corresponding box below. The width of the common channels is 25 kHz (for analogue use) or 12.5 kHz (for analogue or digital use), and on all channels only mobile stations operating with radiated power levels up to 1 W ERP are allowed. The centre frequencies of the common channels are listed in the table below, where each 25-kHz-wide channel can always be replaced with two 12.5-kHz-wide channels.

☐ I am applying for the below listed common channels to be used for lifting control throughout Finland (fill in the number of mobile stations under the main header of section 7).

Centre frequencies, channel width 25 kHz	Centre frequencies, channel width 12.5 kHz
442.850 MHz	442.84375 MHz
	442.85625 MHz
442.875 MHz	442.86875 MHz
	442.88125 MHz
442.900 MHz	442.89375 MHz
	442.90625 MHz
442.925 MHz	442.91875 MHz
	442.93125 MHz
442.950 MHz	442.94375 MHz
	442.95625 MHz
442.975 MHz	442.96875 MHz
	442.98125 MHz

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7.5 COMMON CHANNELS FOR TETRA DMO (DIRECT MODE OPERATION) TO BE USED THROUGHOUT FINLAND

The common channels are intended to be used only for communications related to business or profession. The radio licence is granted to all channels listed in the table below to be used throughout Finland. The number of mobile stations using common channels is filled in under the main header of section 7, and the channels are selected by ticking the corresponding box below. The width of the common channels is 25 kHz, and only mobile stations operating in accordance with the TETRA standard and using radiated power levels up to 5 W ERP are allowed. The centre frequencies of the common channels are listed in the table below

☐ I am applying for the below listed common channels for TETRA DMO (Direct Mode Operation) to be used throughout Finland (fill in the number of mobile stations under the main header of section 7).

Centre frequencies of DMO channels
416.2375 MHz
426.2375 MHz

7.6 COMMON CHANNELS FOR DATA TRANSMISSION AND TRANSMITTING DGNSS (DIFFERENTIAL GLOBAL NAVIGATION SATELLITE SYSTEM) SIGNAL TO BE USED THROUGHOUT FINLAND

The common channels are intended to be used only for data transmission and transmitting DGNSS (Differential Global Navigation Satellite System) signal in connection with business or profession. The radio licence is granted to all channels of the selected group (1, 2 or 3) to be used throughout Finland. The total number of mobile stations is filled in under the main header of section 7, and the selected groups are marked in the table below (mark as many as needed). On all channels of all groups it is allowed to use mobile stations operating with channel width 12.5 kHz or 25 kHz. The allowed purpose of use and the maximum radiated power for each channel group has been listed in the table below.

☐ **Group 1,** **5 channels:** 430.025 MHz 430.050 MHz 430.075 MHz 430.100 MHz 430.125 MHz Purpose of use: Data transmission or transmitting DGNSS signal. Radiated power max. 0.5 W ERP.	☐ **Group 2,** **4 channels:** 430.150 MHz 430.200 MHz 430.225 MHz 430.250 MHz Purpose of use: Transmitting DGNSS signal or sales demonstration of data transmission systems. Radiated power max. 10 W ERP.	☐ **Group 3,** **4 channels:** 430.300 MHz 430.325 MHz 430.350 MHz 430.375 MHz Purpose of use: Data transmission or transmitting DGNSS signal. Radiated power max. 10 W ERP.