

**QUESTIONNAIRE ON THE USE OF
THE FREQUENCY BAND 863 - 870 MHz BY SHORT RANGE DEVICES (SRD)**

Information to be provided in the cover of the questionnaire:

Responding company/organisation	[responding organisation]
Country	[country of the responding organisation]
Address /e-mail address	[mail address of the responding organisation]
Contact name	[contact name within the responding organisation]

Contact details of the company will not be published outside SRD/MG, only answers in gray boxes will be used for analysis. Contact details may be used in case of inaccuracy or in case of specific questions.

**Respondents are kindly invited to return the completed questionnaire
before 4 March 2011
to the European Communications Office (ECO)**

To: Thomas Weber
preferably by e-mail: weber@ero.dk
or
by fax: +45 33 89 63 30

Thank you for your cooperation.

Introduction

ERC Recommendation 70-03 relates to the use of spectrum for Short Range Devices (SRDs) within the 48 countries of the CEPT. This Recommendation contains a number of annexes on areas of SRD radio use and the latest revision of Annex 1 (non-specific SRDs) has led to the addition of new harmonized solutions for data, audio/voice and video applications in frequency bands 433 MHz and 863 – 870 MHz.

Short Range Device Maintenance Group has been tasked to investigate how to improve the spectrum use efficiency for the 863-870 MHz band. It also follows on from CEPT Report 014 which CEPT produced in response to a Commission Mandate on a strategy to improve the effectiveness and flexibility of spectrum availability for SRDs. This Report contained a number of recommendations including additional spectrum only being made available on the basis of a clear need and assessment of future demand for SRD spectrum. This questionnaire can be seen as an element in fulfilling the objectives of this Report.

The latest update of ERC/REC 70-03 Annex 1 generated a considerable effort to understand all footnotes of this annex. The last three years of extensive debates within ETSI TG28, ECC SE24 and SRD/MG about spectrum access techniques such as LBT+AFA versus Low Duty Cycle devices revealed serious concerns by some sectors of industry and some administrations.

Administrations and Industry representatives agreed that the new Annex 1 published on June 2010 reached a point where it is the right time to check the level of understanding and applicability of its rules. Before considering a possible further re-farming of Annex 1, SRD/MG decided to consult extensively with the SRD industry to see if all existing technical parameters are really used, understood and if there are any new requirements to meet technology.

Moreover, this questionnaire is not restricted to the regulatory parameters defined in Annex 1 of ERC/REC 70-03; any other proposals to improve the regulatory framework for SRD operating in the 863-870 MHz frequency band are also welcomed.

Note that ERC/REC 70-03 is not a stand alone document. It should be read in conjunction with any applicable EC and ECC Decisions and the relevant Harmonised European Standards (HEN) such as EN 300 220. The HEN contains the technical detail of spectrum access techniques such as Duty Cycle, LBT, AFA, FHSS, etc.

Note also that while Annex 1 lists the use of 863-870 MHz by generic SRDs, other Annexes list the use of parts of the band by specific types of SRD.

SRD/MG relies on CEPT administrations to widely spread this questionnaire to their national industry players.

The analysis of the responses to this questionnaire should be discussed during the SRD/MG meeting in April 2011.

Overview of current 863-870 MHz band

Note that this diagram includes the designations from ERC/REC 70-03

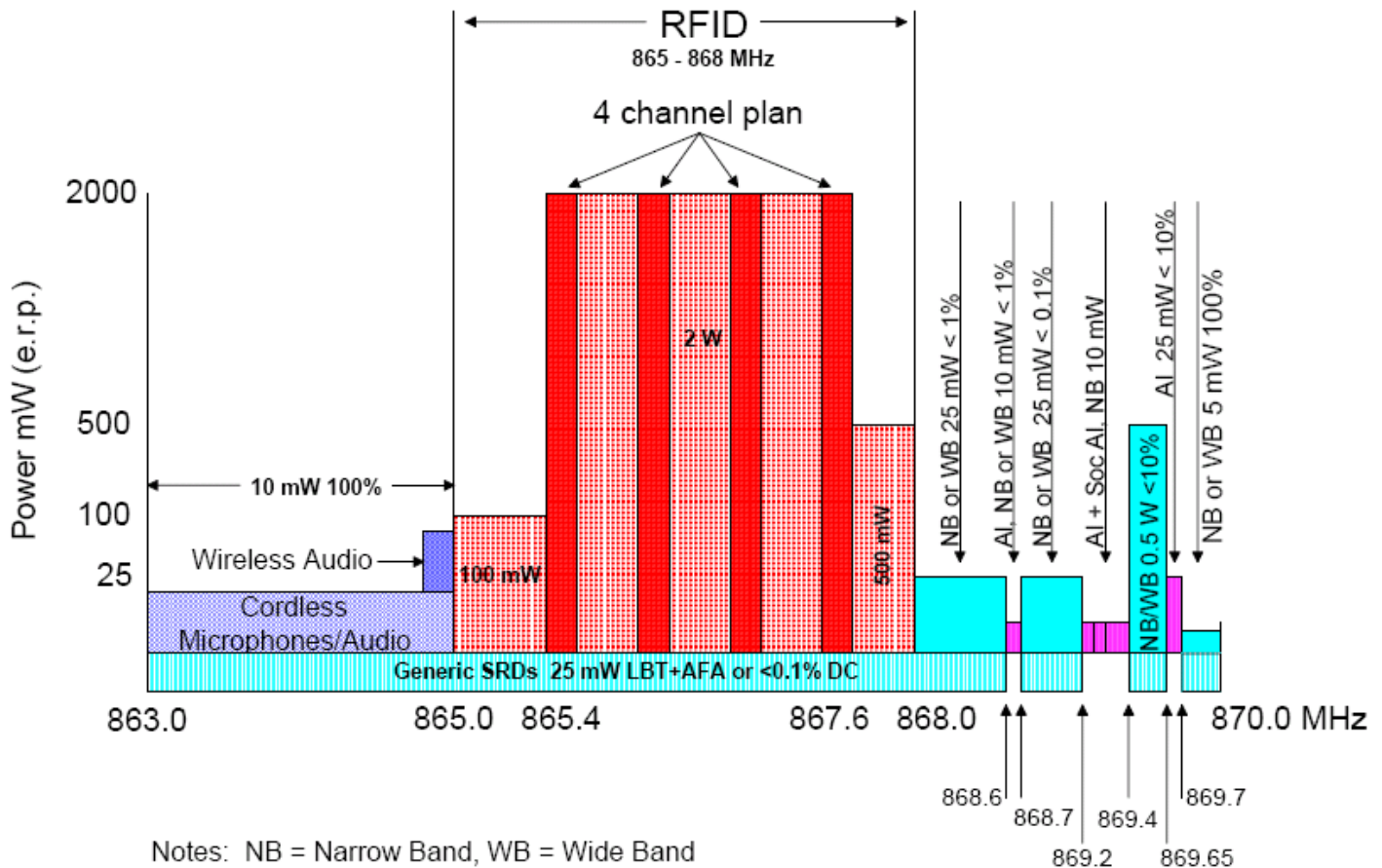
Annex 1 (Non-specific)

Annex 7 (Alarms)

Annex 10 (Radio Microphones)

Annex 11 (RFID)

Annex 13 (Wireless Audio)



Notes: NB = Narrow Band, WB = Wide Band

Band 869.2 - 869.4 sub-divided as follows:-

869.2 - 869.25 Social alarms < 0.1%

869.25 - 869.3 Alarms < 0.1%

869.3 - 869.4 Alarms < 1%

The existing regulations for the use of frequency band 863 – 870 MHz as legacy from past philosophy are still partially structured on a principle of segmentation by application that distinguishes non-specific SRDs, RFIDs, wireless audio applications and radio microphones¹.

The revision of Annex 1 of ERC/REC 70-03 published in June 2010 has led to the addition of new harmonized solutions for data, audio/voice and video applications in frequency bands 433 MHz and 863 – 870 MHz. In addition, a more flexible use of the band 863-870 MHz was introduced thanks to the rules that allow generic SRDs using 25mW e.r.p. by LBT+AFA or DC 0.1%. Further to note is the expansion of allowed transmission bandwidth up to 300 kHz.

¹ In the frequency range 865.4 to 867.6 MHz, the light red dashed areas correspond to the limits given in ERC Rec. 70-03. The ETSI standard EN 302 208 specifies that the up to 2 W transmissions can only occur in the 4 red channels and the low power tag return signals in the space between.

However, some comments were received that these changes might be not sufficiently responsive to SRD industry trend, inclusive of flexible convergence of services (data/ voice/ audio/ video). Whereas REC/ERC 70-03 still partially imposes channel segmentation to deliver multiple services.

Questions

In order to investigate a possible refarming of SRDs technical parameters in the frequency band 863-870 MHz please answer the following questions on existing situation and future needs:

Contact details:

Date of the response:	[dd month yyyy]
What is your activity in wireless domain? Multiple choice is possible	<input type="checkbox"/> Radio manufacturer <input type="checkbox"/> End product manufacturer <input type="checkbox"/> Chips or parts/modules seller <input type="checkbox"/> User (please specify) <input type="checkbox"/> Test house, Notified Body <input type="checkbox"/> Consultant <input type="checkbox"/> Other (please specify)
What is your function in your company?	<input type="checkbox"/> Designer <input type="checkbox"/> Marketing <input type="checkbox"/> Compliance and Quality <input type="checkbox"/> Other (please specify)
Applications/Devices with wireless Interfaces	
Approximate number of wireless devices sold/bought annually in Europe	<input type="checkbox"/> > 1M <input type="checkbox"/> < 1M <input type="checkbox"/> < 100 000 <input type="checkbox"/> < 1000 <input type="checkbox"/> < 100
Is there a person responsible for the compliance of wireless products to the relevant framework in the company?	

1. After reading the introduction, do you understand the aim of the questionnaire?

Yes	
No	

2. Have you already designed or integrated 863-870 MHz devices into modules or end products?

Yes	
No	

3. If yes (Q2), for what kind of SRD application or portion of the 863-870 MHz band?

Please insert one product type in each block/page (please multiply when more than one applications):

SRD application:	
Frequency(ies)	
Bandwidth used Wideband [BW>25kHz] or Narrowband [BW≤25kHz]	
In case of wideband system what is the modulation bandwidth?	
In case of frequency agile device, how many channels are used?	
What is the spectrum access mechanism?	<input type="checkbox"/> Frequency Hopping Spread Spectrum <input type="checkbox"/> Direct Sequence Spread Spectrum <input type="checkbox"/> Listen Before Talk + Adaptive Frequency Agility <input type="checkbox"/> Listen Before Talk <input type="checkbox"/> Duty Cycle <input type="checkbox"/> Other:
What is the modulation scheme?	

4. If no (Q2), are you planning to use 863-870 MHz band in the future?

Yes	
No	
Why?	
For which application? If possible please fill out Question 3	

5. Is the existing ERC/REC 70-03 Annex 1 easy to understand? (see copy attached)

Yes	
No	
Why?	

6. Do the existing 863-870 MHz regulations suit your application(s)?

Yes	
No	
Why?	

7. Do the existing spectrum access techniques (FHSS, DSSS, LBT, DC, etc...) listed below, for the use of frequency band 863-870 MHz, suit your application(s)?

a) FHSS

Yes	
No	
Why?	

b) DSSS

Yes	
No	
Why?	

c) LBT + AFA

Yes	
No	
Why?	

d) LBT

Yes	
No	
Why?	

e) Duty cycle

Yes	
No	
Why?	

f) Others (may include proposal for new spectrum access technique or combination of techniques not covered by a) to e) above)

Which?	
Yes	
No	
Why?	

8. Do you have knowledge of situations where the normal operation of your SRD application/device is affected by congestion of the spectrum or harmful interference? (If necessary please multiply table below)

Yes	
No	
Description of the situation	
How often does the problem occur?	
Was the interference evaluated? Please explain.	
Possible remedies?	

9. If you are producing products for the world market, how important is harmonisation between the different regions to you?

Not important, it is necessary to make regional variants anyway	
Very important, a worldwide single product is essential	

10. Please give your views on the rate of change of the regulations?

How do you receive your information about amendments or changes of regulations? Please specify	
Change should be very gradual. Stability is important	
Updates on 1 or 2 year cycle is acceptable	
Improvements should be made as soon as they are possible	

11. Would you prefer an increase or a decrease in the number of spectrum access techniques (e.g., Duty Cycle, LBT, FHSS, DSSS, AFA) in the regulations?

Increase options	
Leave as it is	
Decrease	
Please specify your suggestion	

12. Would you support the consolidation of ERC Recommendation 70-03 Annexes 1, 7, 10, 11, 13 into fewer annexes?

Yes	
No	
Comments	

13. Alternatively, should Annexes 1, 7, 10, 11, 13 be kept separate but have cross references added to show where they refer to the same spectrum?

Yes	
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No	
Comments	

14. Do you think certain applications require some kind of protection in regulation?

Yes. Special treatment is justified for certain applications	
No. If they require protection, they should be protected by licensing	
No. They should protect themselves by technical means	
Which application?	

15. If the previous answer was yes, then how such protection should be achieved?

By means of spectrum management	
By means of enhanced technical standards	
It is the responsibility of the manufacturer	
By educating the end user	

16. Do you feel it is possible to enhance the existing 863-870 MHz band regulations? (For example reducing further band segmentation, etc...)

Yes	
No	
Please specify your suggestion	

17. Are there emerging market needs or requirements for your business applications that would fall in any portion of the 863-870 MHz band? If yes, may they be fitted in the present 863-870 MHz regulations?

Yes	
No	
Please Specify	
Should these be treated as generic (non-specific) SRDs or as a specific type?	

18. Do you agree with the principle of “application and technology neutrality”?

Yes. Access to spectrum should be on the basis of signal parameters only	
No. Some segmentation by application should be retained	
Comments	

19. Do you have proposals and descriptions of modifications to technical parameters keeping in mind that the use of spectrum has to be as much as possible technology neutral meanwhile ensuring that other SRDs applications (including existing ones) have to share the same spectrum on equal basis and work properly ?

Proposal	
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20. Any other suggestion?

Proposal	
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