

**Report on the  
Fourth Joint Cross Border  
R&TTE Market Surveillance Campaign  
(low power FM Transmitter)**

**By the European Market Surveillance  
Authorities in 2009**

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# 1 Executive Summary

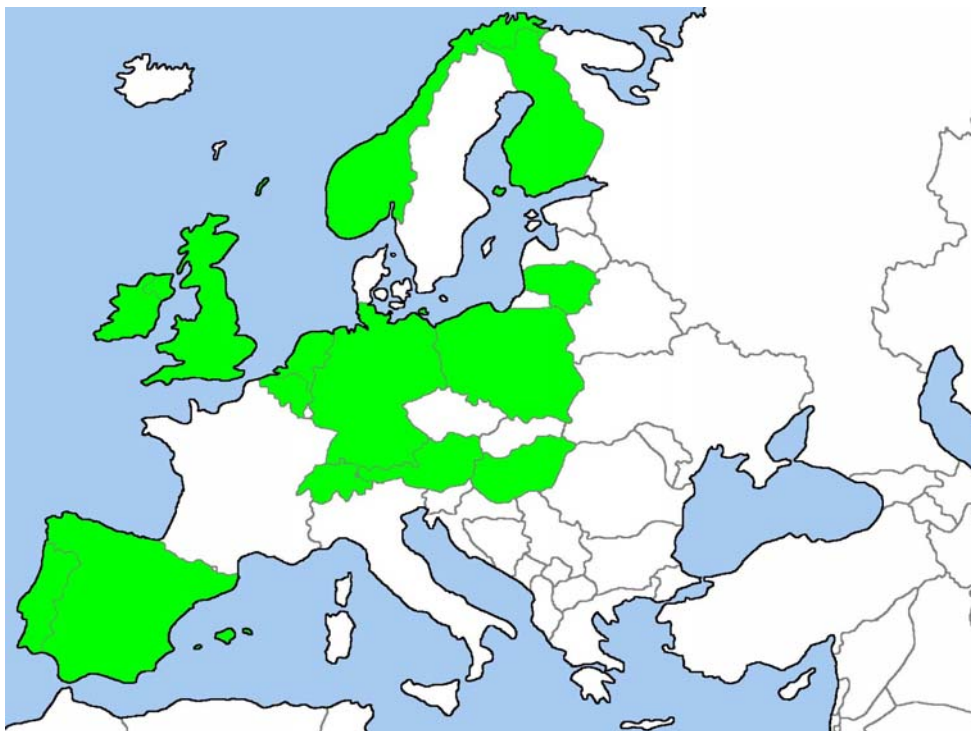
A joint cross-border market surveillance campaign in the field of the Radio Equipment & Telecommunications Terminal Equipment ('R&TTE') Directive 1999/5/EC was carried out between 15 June and 2 October 2009.

The campaign was carried out by 14 of the European market surveillance authorities ('MSA') who are participating members of the R&TTE ADCO (Administrative Cooperation) group.

This campaign focused on low power FM transmitter, this category was selected having analysed the results of from 11 MSA in 2007/8 which concluded that there was a low level of compliance (22%).

FM low power transmitters, also referred to as Band II LPD (low power devices) in the EN 301 357-2, are consumer products transmitting audio signals in the FM broadcast band (87.5 – 108 MHz) with radiated power levels up to a max. of 50mW. Such low power FM transmitters are typically used for the provision of a wireless link between a personal audio device, including mobile phone, and the in-car or home entertainment system.

The previous analysis was now considered less relevant because they did not take into account the most recent Harmonised Standard (EN 301357-2 V. 1.4.1.; pending publication in the OJ) that contained amendments that clarified a number of ambiguities.



**Figure 1 : Countries participating in the campaign**

The purpose of this campaign was to assess the compliance of low power FM transmitter presently available on the market with the administrative provisions and the most important technical requirements of the effective use of the spectrum of the R&TTE Directive (technical documentation, electrical safety, electromagnetic compatibility and some minor aspects of effective use of spectrum were not assessed).

In addition, it was agreed to carry out a study to review their compliance with the revised Harmonised Standard EN 301357-2 V. 1.4.1 (pending publication in the OJ).

ADCO R&TTE recognises the unclear situation on classification of low power FM transmitter (class 1 or class 2) and decided not to evaluate any administrative compliance checks in the respect of class identifier in this report. Further on the information requirements

- countries where the radio equipment is intended to be used (on the packaging) and
- restriction of use for radio equipment

are not used for the following administrative evaluation.

In common with the previous campaigns, the objectives of the fourth campaign were to assess the level of compliance with elements of the R&TTE Directive and to improve information exchange between MSA. The campaign required co-ordinated activities, information gathering, reporting and data analysis. Subsequent enforcement by MSA was considered a matter under the principle of subsidiary and was left to the discretion of individual MSA.

In summary the results of the fourth campaign showed that when assessed against the current Harmonised Standard (EN 301357-2 V. 1.3.1):

- Only 17% of the 60 products surveyed comply with the assessed administrative requirements of the R&TTE Directive
- Only 28% of 60 products complied with selected technical requirements of the R&TTE Directive when assessed against the current valid Harmonised Standard.
- Overall, only 10% of the examined 60 products had reported compliances against the assessed requirements of the R&TTE Directive.

In summary the results of the fourth campaign showed that when assessed against the new Harmonised Standard (EN 301357-2 V. 1.4.1.; pending publication in the OJ):

- Only 22% of 60 products complied with selected technical requirements of the R&TTE Directive when assessed against the new version of the Harmonised Standard.
- 17% of the assessed products are not permitting the selection of any and all possible frequencies within the 88,1 MHz to 107,9 MHz which is an obligation in the new version of the Harmonised Standard
- 10 % of the assessed products use a pilot tone to ensure continuity of transmission which will be forbidden in the new version of the Harmonised Standard
- Overall, only 8% of the examined 60 products had reported compliances against the assessed the requirements of the R&TTE Directive (on the basis of the new version of the Harmonised Standard).

The above results were interesting, but gave little insight into the causes of the significant non-compliance issues indicated, limiting the conclusions that could be drawn from the results. The report therefore focuses on the analysis of statistics collected during the course of the campaign showing the relative level of non-compliance with various requirements of the R&TTE Directive, without speculating on the causes of such non-compliances. However, a follow-up investigation into the causes could be very valuable for all involved parties (administrations, manufacturers, importers, dealers, users).

The principal conclusions drawn from the campaign were as follows:

1. The level of compliance of low power FM transmitter present on the European market is too low.
2. The implementation of the new version of the applicable Harmonised Standard will lead to a rising number of non conform low power FM transmitter

A full list of all the conclusions and recommendations are shown in chapter 4 and 5 of the report.

## **2 Background**

### **2.1 Reasons and aims for the 4th cross-border Campaign**

Three cross-border Market Surveillance Campaigns in the field of the R&TTE have been carried out by MSA participating in the ADCO R&TTE group and showed the effectiveness of such campaigns.

Previously MSA discovered a particular problem with low power FM transmitter that did not meet the essential requirements of the R&TTE Directive. The ADCO R&TTE group decided to carry out a fourth (short) campaign to assess the compliance with the provisions of the R&TTE Directive of products presently available on the market and in addition, to review their compliance with the new revised Harmonised Standard (pending publication in the OJ).

In common with the previous campaigns, the objective of the fourth campaign was to assess the level of compliance with elements of the R&TTE Directive and to improve information exchange between MSA. The campaign required co-ordinated activities, information gathering, reporting and data analysis. Subsequent enforcement by MSA was considered a matter under the principle of subsidiary and was left to the discretion of individual MSA.

As market surveillance is an essential tool for the enforcement of New Approach directives<sup>1</sup> the European Commission is placing increasing emphasis on effective market surveillance in the context of the New Legislative Framework, and cross-border campaigns have proven to be an effective means of carrying out such activities.

### **2.2 Practical Arrangements**

#### **Participation**

Participation in the campaign was voluntary, and was open to all MSA of the ADCO R&TTE group.

#### **Timing**

The campaign began on 15 June 2009, and the information gathering, testing and data-reporting phase of the campaign lasted nearly four month, ending on 02 October 2009. Within that period, participating MSA were responsible for their own timing of market surveillance actions. Test results could be uploaded to CIRCA at any time during the course of the campaign.

#### **Common understanding / Code of Practice**

In order for this campaign to be effective, it was important that participating MSA had a common understanding of its purpose and, as far as possible, used a harmonised practice. An agreed "Code of Practice" was adopted by all participating MSA. It was intended to describe the methodology employed when carrying out the campaign.

#### **Report of the campaign**

It was also agreed that following the analysis of the results of the campaign, a report would be presented to TCAM and CEPT ECC/WG RA. This present document constitutes the report of the campaign.

Based on the conclusions of the campaign the report sets out recommendations for future actions. These include measures aimed at improving manufacturer's awareness of the R&TTE Directive.

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<sup>1</sup> Article 8 of the "Guide to the implementation of directives based on the New Approach and the Global Approach" (blue guide)

## **2.3 Choice of equipment surveyed**

ADCO R&TTE chose to concentrate the third campaign on following R&TTE product:

### **Low power FM transmitter**

It was decided that the MSA would make their own choice of the specific types (manufacturers/models) to be surveyed. However it was agreed to avoid double checks of the same product.

To avoid this problem, countries are requested to upload basic information (manufacturer, product type, quantities) of products they have selected for testing, as soon as this is determined, to the special CIRCA folder.

## **2.4 Data collecting, processing and Method of analysis**

Data on the equipment surveyed was collected on the ADCO R&TTE section of the secure CIRCA website which is accessible to all MSA attending ADCO R&TTE. All participating MSA were required to respect the confidentiality of the data.

The analysis of the results were divided into

- administrative compliance
- technical compliance against the current version of the applicable Harmonised Standard
- a summary of products' overall compliance with the assessed current provisions and requirements of the R&TTE Directive
- technical compliance against the new version of the Harmonised Standard (study)
- a summary of products' overall compliance with the assessed new provisions and requirements of the R&TTE Directive (study)

## **3 Test results and Analysis of results**

The fourth market surveillance campaign was carried out with the participation of 14 MSA:

Austria, Belgium, Finland, Germany, Hungary, Ireland, Lithuania, Norway, Poland, Portugal, Spain, Switzerland, the Netherlands and the United Kingdom.

During the campaign 60 low power FM Transmitter were assessed.

ADCO R&TTE recognises the unclear situation of classification of low power FM transmitter (class 1 or class 2) and decided not to evaluate any administrative compliance checks in the respect of class identifier (neither product, nor packaging and accompanying documentation).

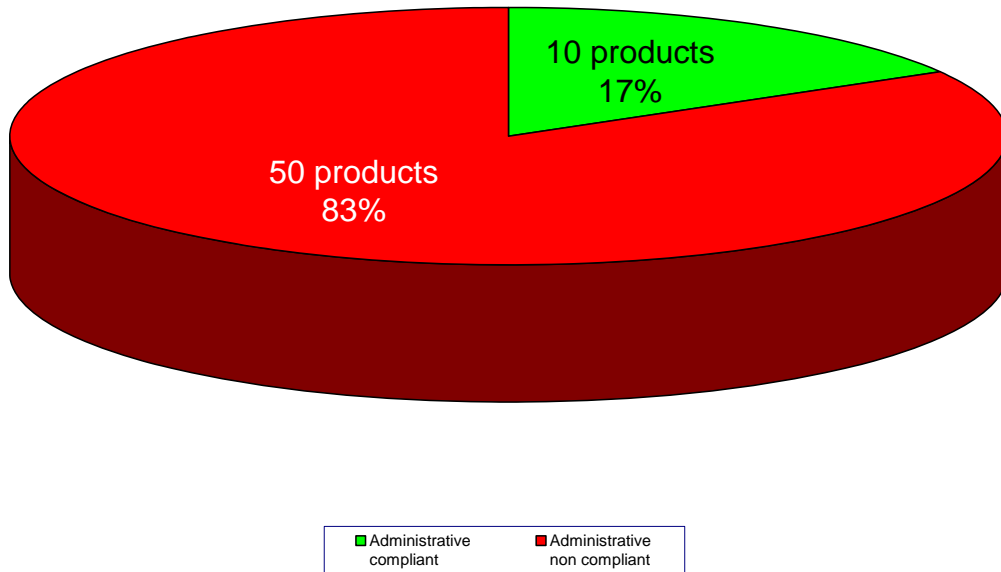
Further on the information requirements

- Countries where the radio equipment is intended to be used (on the packaging) and
- Restriction of use for radio equipment

are not used for the following administrative evaluation.

### 3.1 Administrative compliance

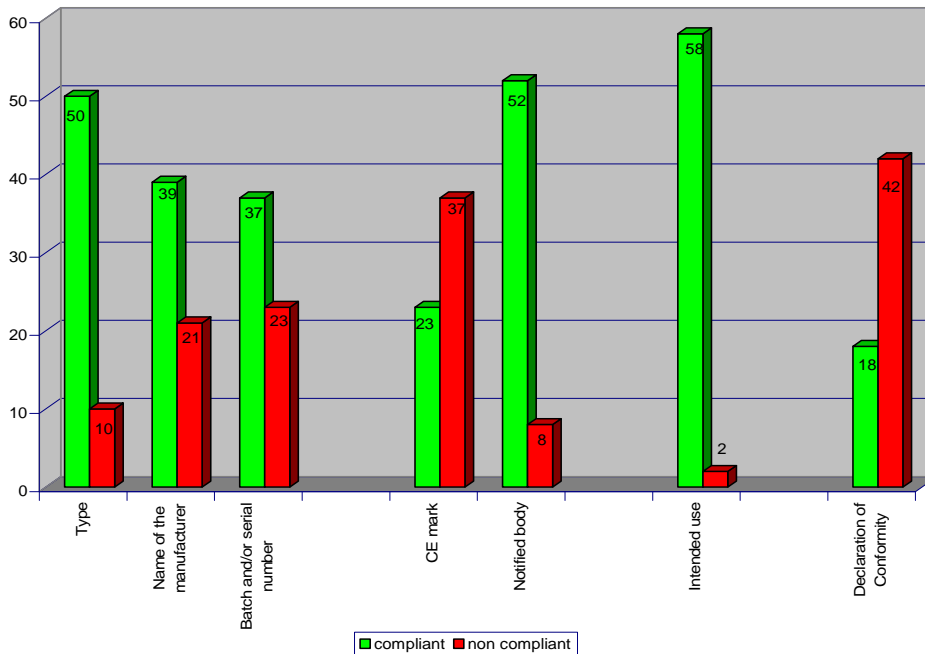
The following figure shows the overall compliance of the surveyed products with the administrative requirements.



**Figure 2 : Administrative compliance**

The result of the fourth campaign shows a high level of administrative non compliance (83%).

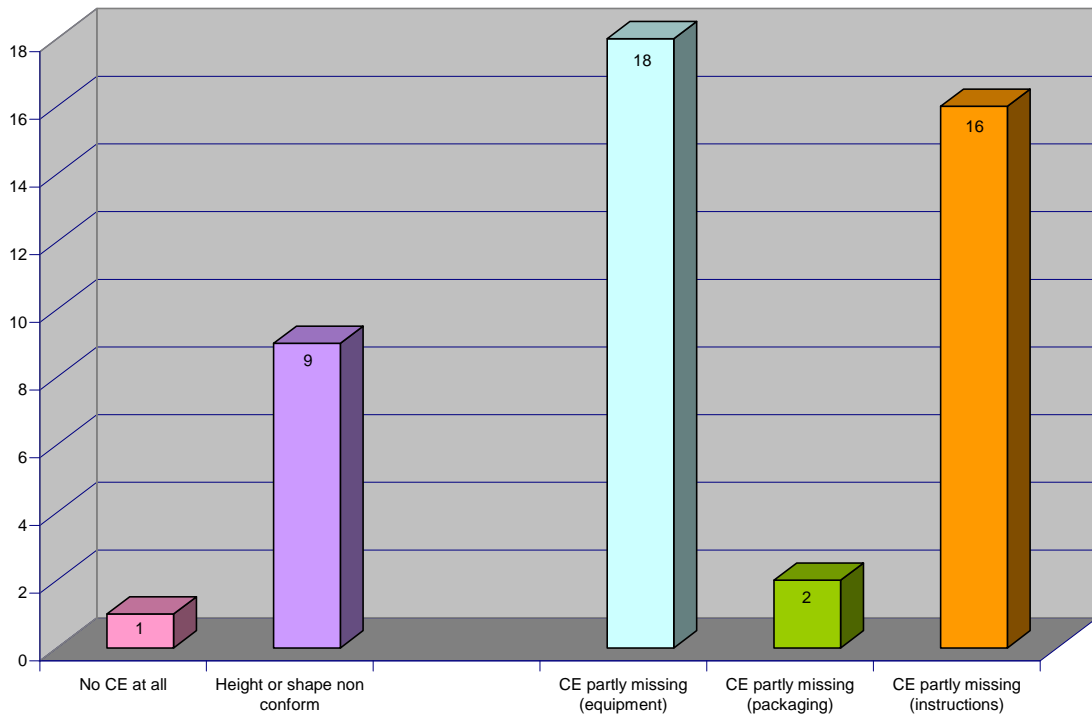
The following figure shows the results of the administrative checks in detail as required by the R&TTE Directive:



**Figure 3 : Compliance with the administrative requirements**

A total of 37 products (62%) were not correctly CE marked, 21 products (35%) did not state the manufacturer and 23 products (38%) did not have any batch and/or serial number.

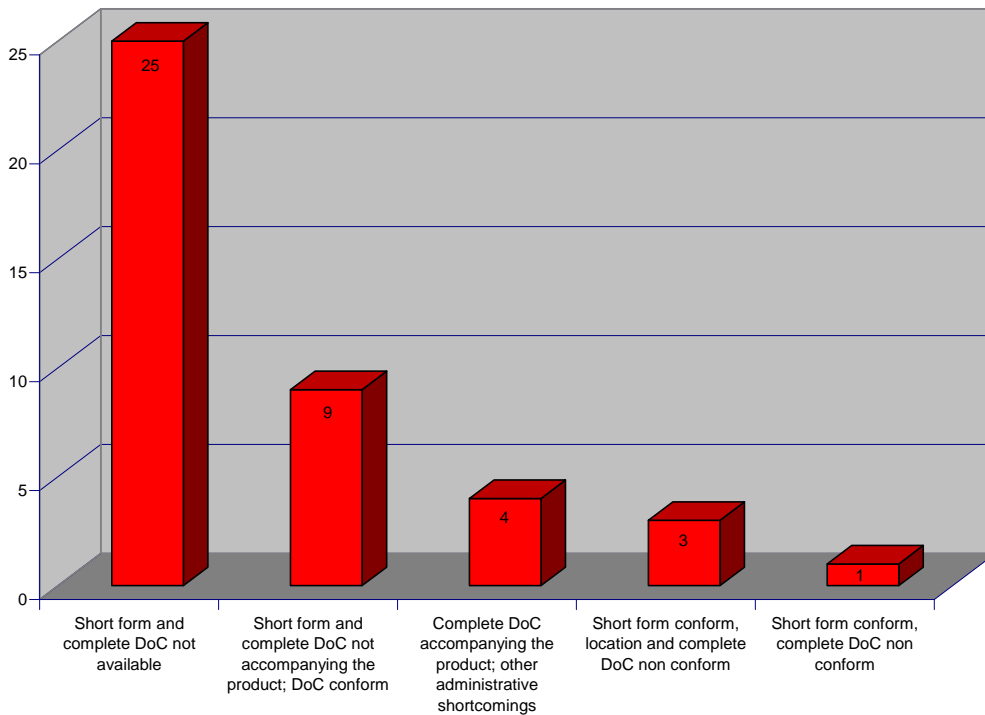




**Figure 4 : CE mark evaluation**

Only one low power FM Transmitter was not CE marked at all.

The following Figure shows the non conformities in the area of Declaration of Conformity:



**Figure 5 : Declaration of Conformity (detail)**

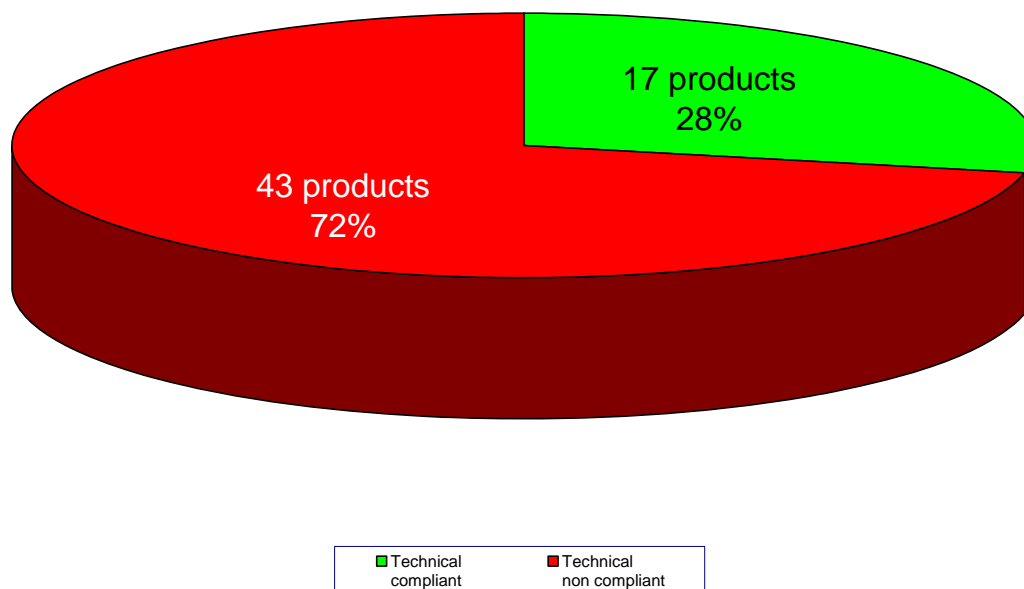
No Declaration of Conformity was found for 25 products (42% of all surveyed products). For a total of 42 products it was not possible to find a compliant Declaration of Conformity (70% of all surveyed products).

### 3.2 Technical compliance (current version of the Harmonised Standard)

60 low power FM Transmitter were assessed against specific technical requirements of the current version of the Harmonised Standard (EN 301357-2 Version 1.3.1). Assessed requirements were:

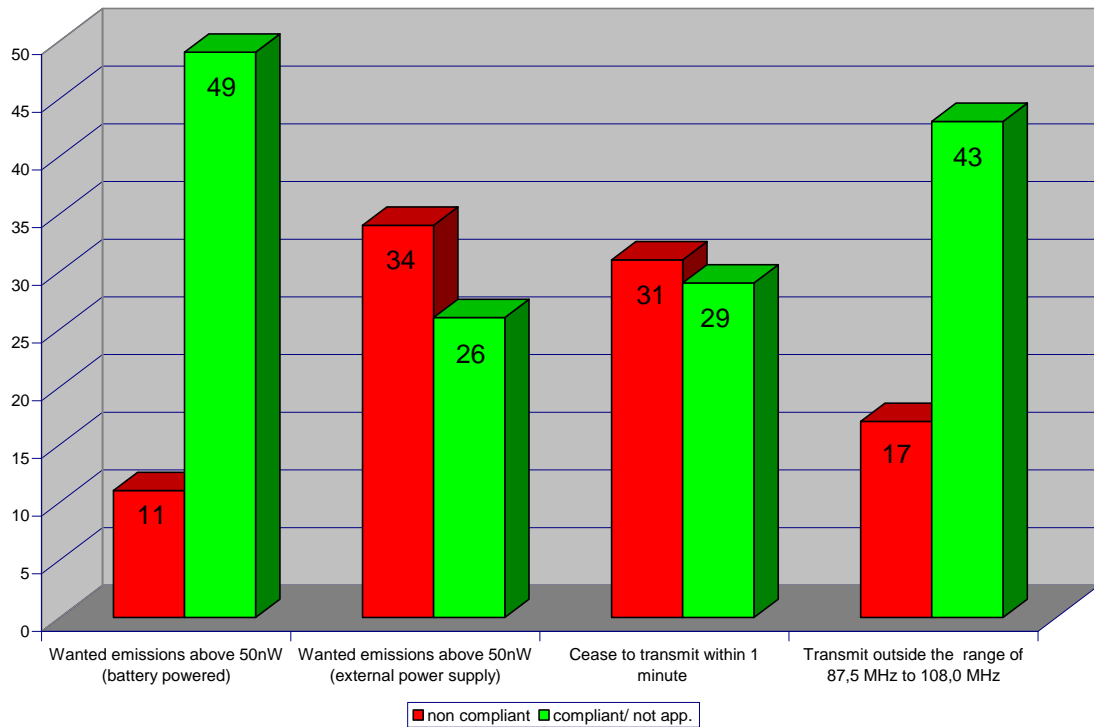
- radiated power
- time-out after 1 minute without audio input
- tuning range of the equipment

The overall level of technical compliance, measured against the current Harmonised Standard, for low power FM transmitter is 28%.



**Figure 6 : Measured products overall technical compliance (current version of the Harmonised Standard)**

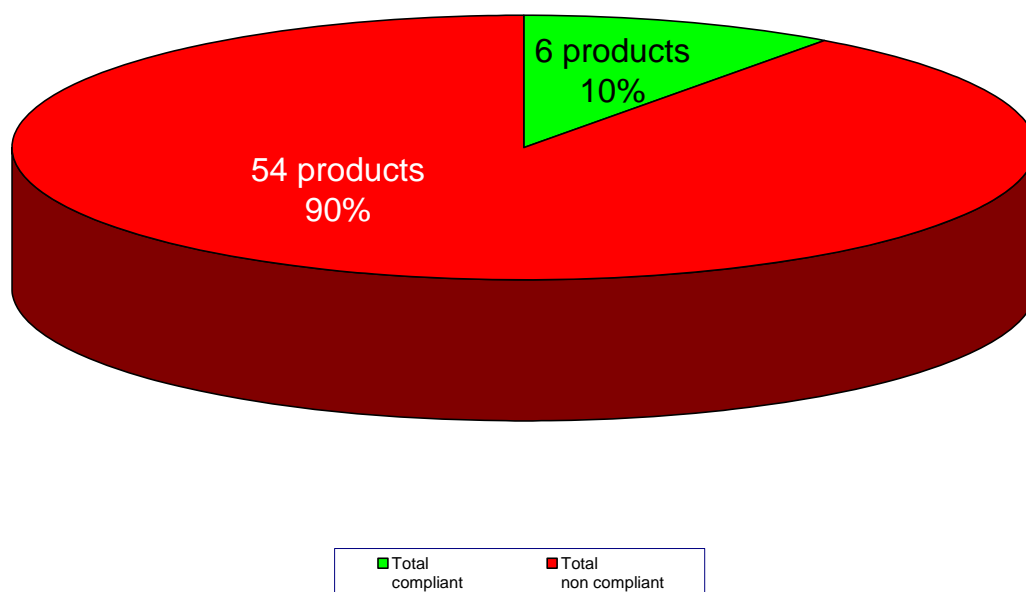
The overall level of technical compliance for low power FM Transmitter is 28%. Overall 43 products failed in one or more of the aspects measured.



**Figure 7 : Evaluation of non compliances in essential requirements (current version of the Harmonised Standard)**

### 3.3 Overall compliance (current version of the Harmonised Standard)

A total of 60 products were surveyed, 54 did not fulfil at least one provision of the R&TTE Directive (technically tested against the current version of the Harmonised Standard and administratively).



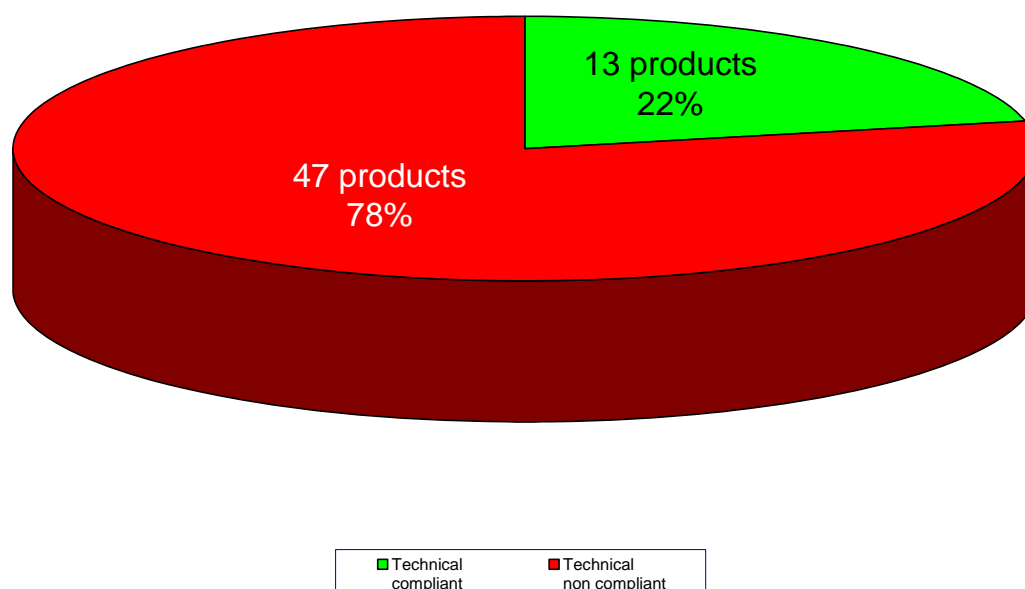
**Figure 8 : Overall compliance (current version of the Harmonised Standard)**

### 3.4 Technical compliance (new version of the Harmonised Standard)

60 products were assessed against specific technical requirements of the new version of the Harmonised Standard (EN 301357-2 Version 1.4.1). It regards following requirements:

- no use of pilot tone
- radiated power when supplied externally
- selection of any and all possible frequencies within the frequency band

The overall level of technical compliance, measured against a Harmonised Standard, for low power FM transmitter is 22%.

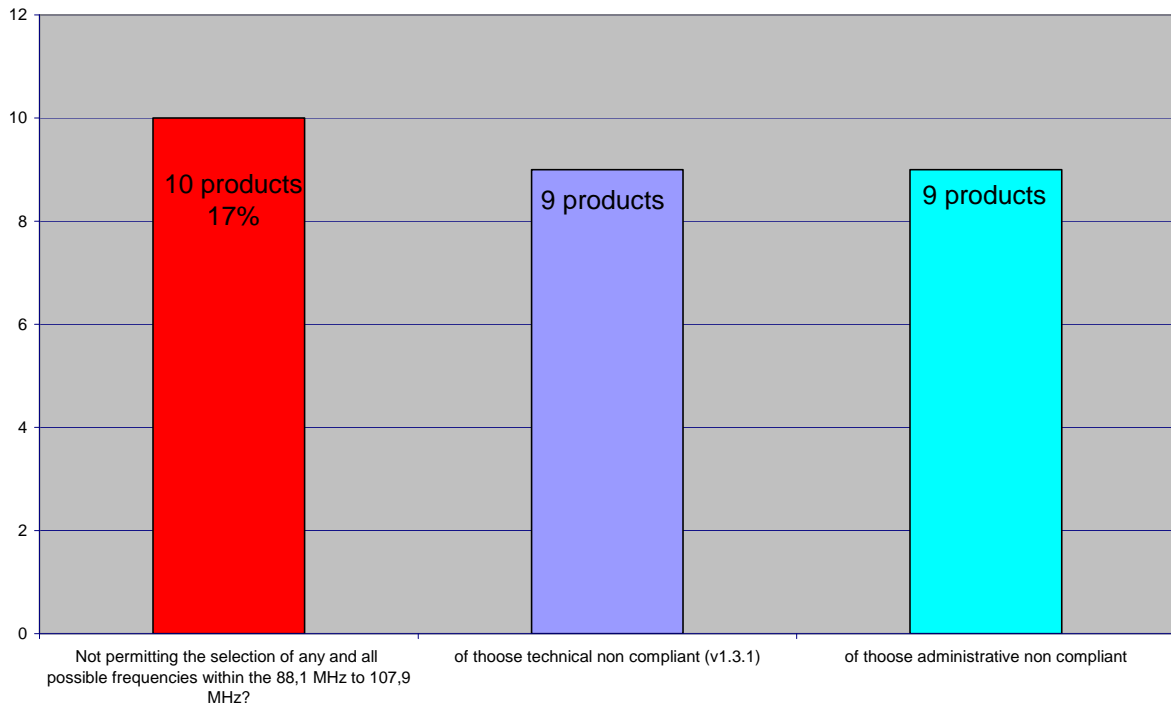


**Figure 9 : Measured products overall technical compliance (new version of the Harmonised Standard)**

The overall level of technical compliance for low power FM Transmitter in the future would be 22%. Overall 47 products failed in one or more of the aspects measured of the new version. 4 further low power FM Transmitter will fail if they had to fulfil the new version of the Harmonised Standard.

A requirement of the new version of the Harmonised Standard for low power FM Transmitter is to permit the selection of any and all possible frequencies within 88,1 up to 107,9 MHz.

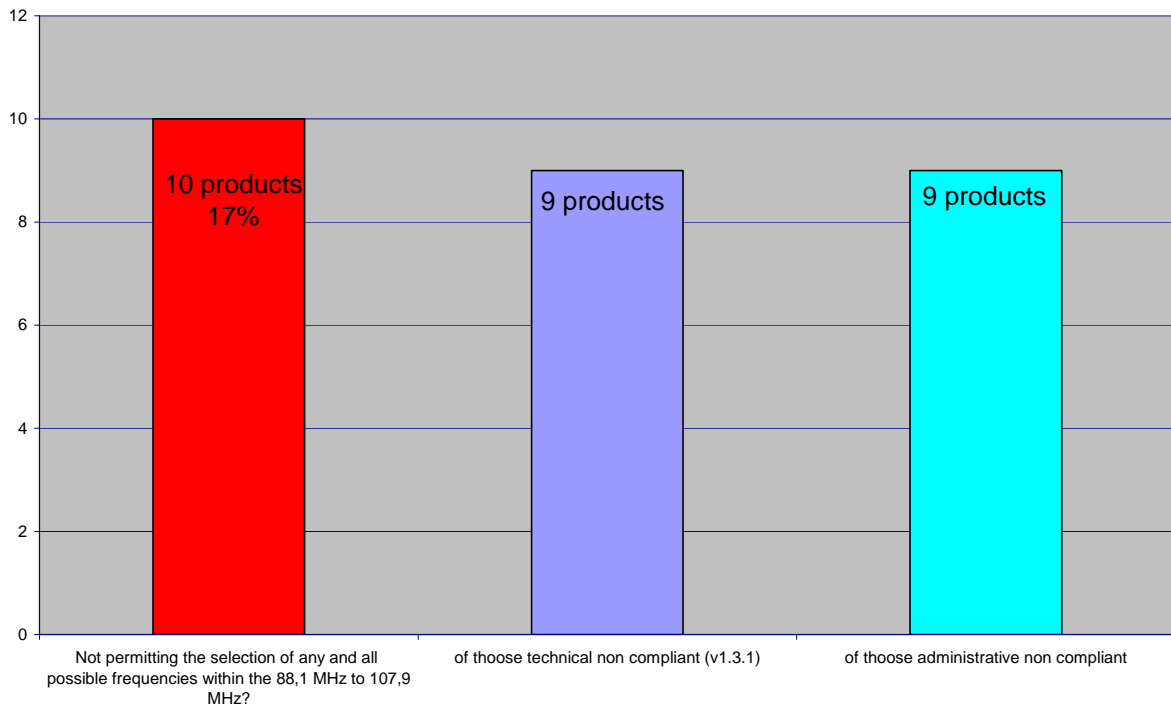
The following figure shows that 17% of the assessed products are not permitting this new requirement:



**Figure 10 : Evaluation of permitting the selection of any and all frequencies (new version of the Harmonised Standard)**

The new version of the Harmonised Standard prohibits the use of pilot tones for low power FM Transmitter.

The following figure shows that 10% of the assessed products are using pilot tone which is prohibited in the future:



**Figure 11 : Evaluation of pilot tone (new version of the Harmonised Standard)**

### 3.5 Overall compliance (new version of the Harmonised Standard)

A total of 60 products were surveyed, 55 did not fulfil at least one provision of the R&TTE Directive (technically tested against the new version of the Harmonised Standard and administratively).

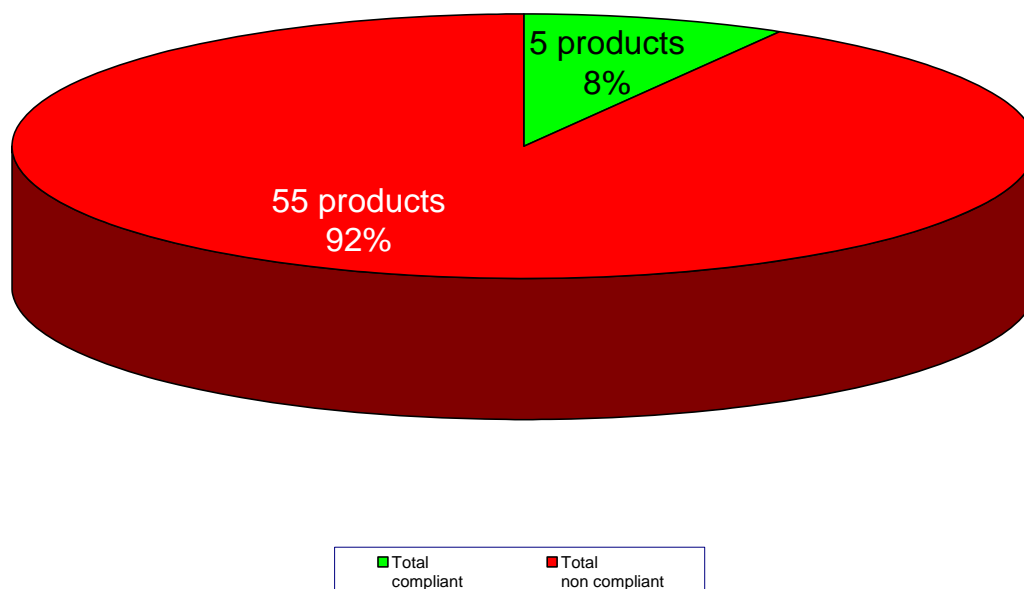


Figure 12 : Overall compliance (new version of the Harmonised Standard)

## 4 Overall conclusions

The campaign looked at low power FM Transmitter, which are available all over Europe and has shown a high level of non compliance when measured against a Harmonised Standard. Nevertheless, they indicate a significantly low level of overall compliance (only 10%).

The level of administrative compliance of low power FM Transmitter from this campaign is 17%. Given the fact that Technical Documentation, class identifier marking and some information requirements were not assessed the results of the administrative checks indicate a very bad situation on the Market with a very low level of administrative compliance.

The level of technical compliance of low power FM Transmitter (assessed against the current version of the Harmonised Standard) from this campaign is 28%. A majority of 34 low power FM Transmitter (57%) fail to meet the limitation of wanted emissions of 50nW (external power supply). Given the fact that all technical requirements were not assessed, the level of compliance may be worse than the results that have been found.

The level of technical compliance of low power FM Transmitter (assessed against the new version of the Harmonised Standard) from this campaign is 22%. A total of 10 low power FM Transmitter (17 %) does not permit the selection of any and all possible frequencies within 88.1 up to 107.9 MHz and 6 low power FM Transmitter uses a pilot tone to ensure the continuing of transmission (10%). Both requirements are specified and clarified in the new version of the Harmonised Standard. Given the fact that all technical requirements were not assessed, the level of compliance may be worse than the results that have been found.

The overall level of compliance of low power FM Transmitter (assessed against the current version of the Harmonised Standard) from this campaign is 10%. The overall level of

compliance of low power FM Transmitter (assessed against the new version of the Harmonised Standard) from this campaign would be 8%. Given the fact that all administrative and technical requirements were not assessed, the level of compliance may be worse than the results that have been found.

A list of specific Conclusions follows:

#### **Conclusion 1**

This campaign focussed on a specific category of consumer products and involved testing 60 different models. The level of compliance of low power FM Transmitter (assessed against the current version of the Harmonised Standard) indicated by the campaign is significantly low.

#### **Conclusion 2**

The level of compliance with the R&TTE Directive of low power FM Transmitter (assessed against the new version of the Harmonised Standard) indicated by the campaign show more low power FM Transmitter not fulfilling the essential requirements.

#### **Conclusion 3**

Analyses of the statistics concerning the application of the “CE” mark indicate that manufacturers have frequently used a “CE” mark on non compliant products.

#### **Conclusion 4**

A significant level of non- compliance was observed when analysing the name of the manufacturer (35%) and the batch and/or serial number requirements (38%). MSA consider these requirements a particularly important aspect because these requirements are necessary to identify a product

#### **Conclusion 5**

The availability of Declaration of Conformity (58%) is not satisfactory for MSA. The level of compliant Declaration of Conformity (30 %) is significantly low.

#### **Conclusion 6**

Only 28% of 60 low power FM Transmitter comply with the selected technical requirements of the R&TTE Directive when assessed against current Harmonised Standards EN 301.357-2 V. 1.3.1 Almost one out of three products tested did not meet the technical requirements.

#### **Conclusion 7**

Only 22% of 60 low power FM Transmitter comply with the selected technical requirements of the R&TTE Directive when assessed against new Harmonised Standards EN 301.357-2 V 1.4.1. Four further low power FM Transmitter will fail if they had to fulfil the requirements of the new Harmonised Standard.

#### **Conclusion 8**

The result of the fourth Market Surveillance campaign highlighted the importance of MSA conducting laboratory tests in conjunction with administrative evaluation and to check this type of product.

## 5 Recommendations

### Recommendation 1

Efforts should be made to ensure that manufacturers, importers and suppliers of low power FM Transmitter are continuously informed about the requirements of the R&TTE Directive and their responsibilities.

### Recommendation 2

It is recommended to the Commission that a future revision of the R&TTE Directive at least requires the name and address of the responsible for placing on the Market. The requirements for that are already laid down in Regulation n. 765/2008.

### Recommendation 3

It is recommended to the Commission that any future revision of the R&TTE Directive has to ensure the traceability of equipment.

### Recommendation 4

A further Market surveillance campaign for low power FM Transmitter should be carried out after implementation of the new version of the Harmonised Standard.

## 6 Abbreviations

ADCO R&TTE	Group on administrative Cooperation for the sector R&TTE
CIRCA	A web-based password secured tool developed by the European Commission to share information (for MSA)
DoC	Declaration of Conformity
EMC	Electromagnetic compatibility
MSA	Market surveillance Authorities
R&TTE Directive	Directive 1999/05/EC of the European Parliament and of the Council of 9th March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity
TCAM	Telecommunication Conformity Assessment and Market Surveillance Committee (Standing Committee under the R&TTE Directive according article 13 ff.)