BLUE ANGEL

The German Ecolabel

Baby Monitors

DE-UZ 125

Basic Award Criteria

Edition April 2009

Version 4

The Environmental Label is supported by the following four institutions:

Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety

The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety is the owner of the label. It regularly provides information on the decisions taken by the Environmental Label Jury.

Umwelt Bundesamt

The German Environmental Agency with its specialist department for "Ecodesign, Eco-Labelling and Environmentally friendly Procurement" acts as office of the Environmental Label Jury and develops the technical criteria of the Basic Criteria for Award of the Blue Angel.

Jury Umweltzeichen

The Environmental Label Jury is the independent, decision-making body for the Blue Angel and includes representatives from environmental and consumer associations, trade unions, industry, the trade, crafts, local authorities, academia, the media, churches, young people and the German federal states.

RAL gGmbH

The RAL gGmbH is the awarding body for the Environmental Label. It organises the process for developing the relevant award criteria in independent expert hearings – which involve all relevant interest groups.

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Version 1 (04/2009): Revised Edition
Version 2 (01/2013): Prolongation without any change for 4 years until December 31, 2017
Version 3 (01/2017): Prolongation without any change for 1 years until December 31, 2018
Version 4 (01/2018): Prolongation without any change for 1 years until December 31, 2019

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This document is a translation of a German original. In case of dispute, the original document should be taken as authoritative.

1 Introduction

1.1 Preface

In cooperation with the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, the German Environmental Agency and considering the results of the expert hearings conducted by RAL gGmbH, the Environmental Label Jury has set up these Basic Criteria for the Award of the Environmental Label. RAL gGmbH has been tasked with awarding the Environmental Label.
Upon application to RAL gGmbH and on the basis of a Contract on the Use of the Environmental Label to be concluded with RAL gGmbH, the permission to use the Environmental Label may be granted to all products, provided that they comply with the requirements as specified hereinafter.
The product must comply with all the legal requirements in the country in which it is to be marketed. The applicant shall declare that the product meets this requirement.

1.2 Background

Baby monitors allow parents, in particular, to monitor their children's sleep and activities while they are in another room. Baby monitors principally consist of transmitter, a medium for transmission and a receiver.
The transmitter unit includes a microphone to record the room's noise which is transmitted to the receiver unit either permanently or as soon as a defined minimum sound level is exceeded. The receiver unit receives the transmitted signals and converts them to audible sound by means of a loudspeaker. The transmission can be by direct wire connections or via radio transmission. Today, radio-based transmission uses frequency ranges from about 27 to 2.400 MHz. Like all transmitting devices they use high-frequency electromagnetic fields. Available, today, are products using non-pulsed analogous transmission technology as well as appliances using pulsed digital transmission technology.
In all products using alternating current power supply units and lines, in particular, are additional sources of low-frequency electric and magnetic fields.

1.3 Environmental and Health Aspects

Scientific studies have been unable so far to establish any direct cause-effect connection between possible health risks and high and low-frequency electromagnetic fields. Some studies give, however, an indication of possible health risks. For precautionary reasons all technical means should be used to keep the exposure to high and low-frequency fields as low as possible - especially for babies and infants who are to be regarded as particularly sensitive.
From the environmental point of view the energy consumption of the appliances would be an important aspect. In this connection, special attention should be given to the energy consumed by electrical appliances in Stand-by Mode.
In addition, the materials used should not contain any particularly health and environment-related materials which might cause problems in use or disposal.

By implementing the EU regulations relating to the collection of electronic waste and to the restriction on the use of certain hazardous substances into national law, the Electrical and Electronic Equipment Act, relevant aspects of design, take-back and recycling of electronic devices have already been considered and laid down.

Therefore, following benefits for the environment and health are stated in the explanatory box:

1.4 Objective of the Eco-label Award

The purpose of „Blue Angel“ eco-label for baby monitors is to inform the consumer interested in such an appliance that - compared with other products - the eco-labelled product better takes the aspects of precautionary environmental, health and consumer protection into account. So, the eco-label could serve as a decision-making aid when buying a new appliance.
The Blue Angel label for baby monitors is to motivate manufacturers to develop products with lowest-possible radiation and optimised energy consumption values as well as to enable them to inform customers in a simple way about these aspects of product properties.

2 Scope

These Basic Award Criteria apply to all types of baby monitors (frequently called „baby phone“, “Babyfon”, or “Babyrufgerät”[1]), regardless of whether the signal is transmitted via radio or wire.
Apart from their main function of monitoring the baby the appliances may principally accomplish additional functions too, such as, for example, two-way voice transmission.
Appliances that work as permanent transmitters or transmit data using ultra-short pulses (> 1x/20 sec) will be excluded from the award of the Blue Angel eco-label.

3 Requirements and Compliance Verifications

The eco-label shown on page 1 can be used to mark baby monitors as mentioned in paragraph 2 provided that they meet the requirements as stipulated hereunder in paragraph 3.
Some of these requirements only refer to the appliance components on the side of the monitored room, hereinafter called “baby side”.
The requirements under paragraph 3.1.1 shall not apply to wire-based products

[1] The frequently used German terms „Babyfon“ and „Babyrufgerät“ are registered combined name-and-logo trademarks of individual manufacturers.

3.1 Emissions

3.1.1 High-frequency Radiation

In order to minimize the impact of high-frequency alternating fields (frequency ranges 27 MHz to 2.400 MHz) the radiated power of the transmitter on the „baby side“ may not exceed 1.25 mW (EIRP, see standards mentioned below).
Appliances with adjustable transmission power shall meet the above requirement at maximum adjustable transmission power in transmission mode.
A range check shall only be permissible if the frequency as well as the duration of the corresponding transmission signals are limited. The following shall apply:

- with respect to frequency: not more frequent than 1x/20sec and
- with respect to duration < 20 msec.

Compliance Verification

The radiated power shall be measured in transmission mode in accordance with the relevant requirements of ETSI EN 300 220-1: 2006-04 (for appliances with an effective frequency < 1 GHz) or ETSI EN 300 440-1: 2001-09 (for appliances with an effective frequency > 1 GHz). Measurement shall be performed by use of an averaging time over a transmission period of 6 minutes in accordance with EU Directive 1999/519.
The applicant shall submit the summary of a test report prepared by an independent testing laboratory that has been accredited for these measurements in accordance with DIN EN ISO/IEC 17025.
Test reports prepared by applicant shall be viewed as equivalent if the latter operates a testing laboratory accredited for these measurements in accordance with DIN EN ISO/IEC 17025.
The manufacturer shall declare compliance with the restrictions on duration and frequency of transmission signals during a distance check.

3.1.2 Low-frequency Radiation

In the frequency ranges 0.025 to 150 KHz[2] („low-frequency radiation“) the magnetic alternating fields radiated by the appliance components (including power supply unit) on the „baby side“ shall not exceed the effective values given in the table below at a measurement distance of 30 cm[3].

Frequency range	**Magnetic flow density** [in nT]
0,025 – 0,8 KHz	5/f *
0,8 – 3 KHz	6,25
3 – 150 KHz	6,25

* Please include the frequency in KHz into the formula for the frequency range 0.025 – 0.8 KHz.

Appliances with adjustable transmission power shall meet the above requirement at maximum adjustable transmission power in transmission mode.

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[2] A further lowering of the restriction of the magnetic flow density in alternating fields is to be reviewed as part of a future revision.
[3] These values were determined at 50 Hz from the transfer of the reference values of 1999/519/EC into the requirement level of 100 nT for magnetic flow density.

Compliance Verification

Measurements of magnetic flow density in transmission mode shall be performed in accordance with EN 50413 Basic standard on measurement and calculation procedures for human exposure to electric, magnetic and electromagnetic fields (0 Hz – 300 GHz). In doing so, measurements shall be made in all directions of the room. None of these measured values shall exceed the above requirements regarding magnetic flow density and electric fields strength.
The applicant shall submit a test report prepared by an independent testing laboratory that has been accredited for these measurements in accordance with DIN EN ISO/IEC 17025.
Test reports prepared by applicant shall be viewed as equivalent if the latter operates a testing laboratory accredited for these measurements in accordance with DIN EN ISO/IEC 17025.

3.2 Electric Power Consumption

The electric power consumption of the appliance components on the „baby side“ shall not exceed a maximum of 2 watts in Room-Monitoring Mode[4].
In Off Mode[5] electric power consumption shall not exceed a maximum of 1 watt.

Compliance Verification

The applicant shall submit the summary of a test report prepared by an independent testing laboratory that has been accredited in accordance with DIN EN ISO/IEC 17025 and declare in Annex 1 to the contract that the requirements, para 3.1 – 3.3 are fullfilled.
Test reports prepared by applicant shall be viewed as equivalent if the latter operates a testing laboratory accredited in accordance with DIN EN ISO/IEC 17025.

3.3 Material Requirements for Plastics used in Housings and Housing Parts

Plastics used in appliance housings shall not contain any halogenated polymers and additions of halogenated organic compounds (e.g. as flame retardants).
Exempted from this rule are:

- Process-related, technically unavoidable impurities.
- Fluorinated plastics, such as PTFE.
- Plastic parts weighing less than 25 g. These may not, however, contain PBBs (polybrominated biphenyls), PBDEs (polybrominated diphenyl ethers) or chlorinated paraffins.

Substance bans according to Section 5, German Electrical and Electronic Equipment Act (ElektroG) shall be obeyed.
Apart from that, no substances may be added to the plastics which are classified according to Directive 67/548/EEC as

- carcinogenic according to Category Carc.Cat.1, Carc.Cat.2 or Carc.Cat.3,
- mutagenic according to Category Mut.Cat.1, Mut.Cat.2 or Mut.Cat.3;
- reprotoxic according to Category Repr.Cat.1, Repr.Cat.2, Repr. Cat.3

or which are classified in TRGS 905.

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[4] Baby monitor monitors the room and does not transmit. 4 Baby monitor is turned off but the power supply unit is connected to the mains supply.
[5] Baby monitor is turned off but the power supply unit is connected to the mains supply.

Compliance Verification

The applicant shall declare compliance with the requirements in Annex 2 to the Contract.

3.4 Consumer Information on Reduction of Radiation Impact and Electric power consumption

The product papers shall list the concrete radiation values of the respective appliance (for high and low-frequency radiation according to the requirements set out in paras. 3.1.1 and 3.1.2 of the Basic Award Criteria) as well as the electric power consumption in the various operating modes according to the requirement set out in para. 3.2 in a context with other technical data.
The requirements set out in paras. 3.1.1, 3.1.2 and 3.2 refer to all appliance components on the „baby side“. In order to ensure the intended allocation of the different components (especially monitor and power supply unit) a clear and permanent marking is to be applied to the appliance components belonging together. The product papers shall include corresponding explanatory notes.
In addition, the user of the appliance shall be informed in a separate paragraph of the product papers about precautionary measures in the area of high and low frequency fields. The shall be done by use of the following standard text:
„Scientific studies on possible health risks associated with high and low-frequency electromagnetic fields have been unable so far to establish any direct cause-effect connection. Some studies give, however, an indication of possible health risks. For precautionary reasons all technical means should be used to keep exposure to high and low-frequency fields as low as possible - especially for babies and infants who are to be regarded as particularly sensitive.
In addition to using a Blue-Angel-labelled appliance you can contribute to further reduction of impact by taking some precautionary measures of your own:

- *The appliance should be located not closer than 1.0 m from baby's bed.*
- *Take care that especially the power supply unit is located as far as possible from the child."*

In addition, the product papers shall include a separate paragraph informing the user about the possibilities of further reducing the appliance's electric power consumption. Such paragraph shall refer to aspects, such as a complete separation from the mains supply, the influence of battery charge and/or the effect of different transmission power classes.

Compliance Verification

The applicant shall submit the corresponding pages of the product papers.

4 Applicants and Parties Involved

Manufacturers of final products according to Paragraph 2 shall be eligible for application.

Parties involved in the award process are:

- RAL gGmbH to award the Blue Angel Environmental Label,
- the federal state being home to the applicant's production site,
- Umweltbundesamt (German Environmental Agency) which after the signing of the contract receives all data and documents submitted in applications for the Blue Angel in order to be able to further develop the Basic Award Criteria.

5 Use of the Environmental Label

The use of the Environmental Label by the applicant is governed by a contract on the use of the Environmental Label concluded with RAL gGmbH.

Within the scope of such contract, the applicant undertakes to comply with the requirements under Paragraph 3 while using the Environmental Label.

Contracts on the Use of the Environmental Label are concluded to fix the terms for the certification of products under Paragraph 2. Such contracts shall run until December 31, 2019. They shall be extended by periods of one year each, unless terminated in writing by March 31, 2019 or March 31 of the respective year of extension.
After the expiry of the contract, the Environmental Label may neither be used for labelling nor for advertising purposes. This regulation shall not affect products being still in the market.

The applicant (manufacturer) shall be entitled to apply to RAL gGmbH for an extension of the right to use the ecolabel on the product entitled to the label if it is to be marketed under another brand/trade name and/or other marketing organisations.

The Contract on the Use of the Environmental Label shall specify:

- Applicant (manufacturer/distributor)
- Brand/trade name, product description
- Distributor (label user), i.e. the above-mentioned marketing organisations.

6 Outlook

Within the scope of a revision of these Basic Award Criteria the following criteria are to be reviewed in particular:

- Further reduction of the restriction of magnetic flow density in alternating fields between 0.025 and 150 KHz.
- Application of the requirements so far only applying to the appliance components on the baby side to all appliance components.
- Use of standard storage batteries.