

**Swan labelling of  
Audiovisual equipment**

DRAFT

Version 3.0



Nordic Ecolabelling

In November 1989, the Nordic Council of Ministers adopted a measure to implement an official voluntary ecolabelling scheme, the Swan. The organizations/companies listed below administer the Swan ecolabelling schemes on assignment from their national governments.

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Quotations may be made provided that Nordic Ecolabelling is stated as the source.

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

# Swan labelling of Audiovisual equipment

071/3.0, Date

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1	Marketing of ecolabelled products
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## Summary

Nordic ecolabelling criteria for audiovisual equipment have been put together in order to stimulate the development of equipment with:

- low energy consumption
- reduction of the use of substances that are harmful to the environment and to health
- improved possibility to reuse material
- improved possibility of simple handling as regards recycling.

In addition to the criteria, there is a background document, which is available from the ecolabelling organisation.

## Which products can be Swan labelled?

In order to be awarded the Swan label the product must fall within products listed below:

- Televisions
- Videoconferencing systems
- Televisions in combination with other equipment such as DVD/HD-DVD/Blu-ray players
- DVD /HD-DVD/Blu-ray players
- Stereo systems, which include speakers with at least one of the following: radio receivers, CD, DVD, cassette or gramophone.
- Set Top Boxes

Main powered electronic equipment; Appliances that may also use other power sources such as batteries are excluded.

Televisions, Videoconferencing systems, Televisions in combination with other equipment with CRT-displays are excluded.

If the development towards new technology proceeds in such a way that products not listed above can be considered for ecolabelling, the product definition may be changed.

In order to do this, a formal request has to be sent to any of the official bodies listed in the beginning of the document. The manufacturer or importer shall provide documentation that states that their product is considered to be environmentally more sound than similar products in their field of technology. If Nordic Ecolabelling considers it relevant, the criteria document can be extended with specific requirements for new appliances.

## How to apply

The applicant must submit the documentation specified in each individual requirement in chapter 1. The application must contain an outline specifying the documentation submitted for each individual requirement.

All requirements in the criteria document must be fulfilled in order for a product to be awarded an ecolabel. Applicants must also study the "Regulations for the Nordic Ecolabelling" 2001-12-12 or later version.

### 1 Harmonisation with EU-flower

Most product requirements for Televisions are harmonised with EU-flower. Some requirements are not harmonised and are found only in version 3.0 of the Swan criteria document.

If a product is approved under the EU-flower criteria (**eco-label to televisions 2007/---/EC**) it is easier to apply for a Swan licence. See requirement 1 and appendix 2 for details.

If the product does not have a valid EU-flower license, the product must fulfil the requirements in sections 2, 3 and 4.

Further information about EU-flower can be found at the following Internet address:  
[http://ec.europa.eu/environment/ecolabel/index\\_en.htm](http://ec.europa.eu/environment/ecolabel/index_en.htm)

#### **R1 Valid EU-flower license for televisions.**

If the television has a valid EU-flower licence (eco-label to televisions 2007/---/EC), send documentation according to Appendix 2 and Section 4 requirements R14-R23.



Description as specified above.

## 2 Requirements

### 2.1 Energy efficiency

#### R2 Specific requirements for Televisions/Televisions in combination with other equipment

All products shall have a clearly visible (front or side) hard on-off switch. When the switch is operated to the off position, the television's energy consumption shall be zero watts.

Products that have a "soft" off-switch will be programmed to automatically go from passive stand-by mode to the deep sleep mode after no more than one hour if there is no user interaction. In this mode the energy consumption shall be no more than 400mW. It is not a requirement that televisions must have a "soft" off-switch.

*Passive stand-by: the television is connected to a power source, produces neither sound nor vision, and is waiting to be switched into another mode on receipt of a direct or indirect signal, e.g. from the remote control.*

*Deep Sleep: The television is connected to a power source, produces neither sound nor vision, and is waiting to be switched into a higher mode on receipt of a direct or indirect signal from an external source, e.g. the prompt to download programme data via the digital tuner. Power consumption in this state is at a lower level than for passive stand-by. The user can not re-activate the television out of this state using the remote control; they need to press the on-off switch on the television.*

- Declaration that the requirement is fulfilled and photographic evidence regarding the on-off switch.
- For product equipped with a soft off-switch, clear details shall be provided in the user manual accompanying the television that the requirement is fulfilled. A copy of the manual shall be provided.

#### R3 Passive Stand-by

The passive stand-by consumption of the product shall be  $\leq 1.0W$ .

- The product shall be tested for its on-mode power consumption in its condition as delivered to the customer, according to IEC62087. If the product has an eco-mode setting, then it can be tested in this state if clear guidance is provided to consumers how to engage eco-mode via: i) the product's set-up menu and ii) the operating manual. A test report shall be provided by the applicant to demonstrating that the product meets the requirement.

#### R4 Maximum energy consumption

The product shall have an absolute maximum energy consumption of  $\leq 260W$ .

- See R3.

#### R5 Energy efficiency

The product shall have an on-mode energy efficiency  $\leq 0.04 W/cm^2$  screen area where an allowance is made for the tuner circuitry of 11.0W (i.e. absolute energy consumption minus 11.0W, divided by screen area).

*Screen Area: This is the area of the screen in cm<sup>2</sup>. It is equal to [screen size × screen size × 0.480] for a standard screen (4:3 aspect ratio), and [screen size × screen size × 0.427] for a wide screen (16:9 aspect ratio).*



See R3.

#### **R6 Specific requirements for Videoconferencing systems**

All products shall have a clearly visible (front or side) hard on-off switch. When the switch is operated to the off position, the television's energy consumption shall be zero watts.

The sleep mode and off mode shall be tested and measured as a total system.

	<b>Sleep mode</b>	<b>Hard off-mode</b>
Maximum power consumption:	<= 40 watts	= 0 watt

A test report declaring that the requirement is fulfilled and photographic evidence regarding the on-off switch.

The product shall be tested for its on-mode power consumption in its condition as delivered to the customer, according to IEC62087.

**R7 Specific requirements for DVD/HD-DVD/Blu-ray players and Stereo systems.**

The DVD/HD-DVD/Blu-ray player and Stereo system shall have an off-switch. The off-switch shall be clearly visible.

The passive stand-by consumption of the DVD/HD-DVD/Blu-ray player shall be at a maximum 2.0 watts.

The passive stand-by consumption of the stereo system shall be at a maximum 1.0 watt.

The stereo/video recorder shall have an on-mode power consumption, which is lower than the requirements below.

Type	
Stereo system	40 Watt
DVD/HD-DVD/Blu-ray player	15 Watt



The product shall be tested for its on-mode power consumption in its condition as delivered to the customer, according to IEC62087. A test report shall be provided to show that the requirement is fulfilled.

## R8 Specific requirements for Set top boxes

The equipment shall have a power consumption, which is lower than the requirements below.

Type	In use, Watt	Active stand-by, Watt	Passive Stand-by, Watt
Simple digital to analogy converter			
Earth antenna			
Basic converter	7		2
With two turners included	9		2
With HD <sup>1</sup> , SD-showing <sup>2</sup>	11		2
With HD, SD-showing, with two turner included	14		2
With HD, HD-showing	12		2
With HD, HD-showing, with two turner included	14		2
Cable net			
Basic converter	7		2
With HD <sup>3</sup> , SD-showing <sup>4</sup>	11		2
With HD, HD-showing	12		2
Satellite			
Basic converter	10		2
With HD <sup>3</sup> , SD-showing <sup>4</sup>	14		2
With HD, HD-showing	15		2
Internet DSL			
Basic converter	7		2
Basic converter with ADSL-modem	9		2
With HD <sup>3</sup> , SD-showing <sup>4</sup>	11		2
With HD, SD-showing, with ADSL-modem	13		2
With HD, HD-showing	12		2
With HD, HD-showing, with ADSL-modem	14		2
Digital set top box			
Earth antenna		6-20 <sup>3</sup>	3 <sup>4</sup>
Cable net		7-20 <sup>6</sup>	3 <sup>7</sup>
Satellite		8-20 <sup>6</sup>	3 <sup>7</sup>
Internet DSL		6-20 <sup>6</sup>	3 <sup>7</sup>



The product shall be tested for its power consumption in its condition as delivered to the customer, EU CoC: Code of Conduct on Energy Efficiency of Digital TV Service Systems - *Version 5*, 5 October 2006. A test report shall be provided to show that the requirement is fulfilled

<sup>1</sup> High Definition

<sup>2</sup> Standard Definition

<sup>3</sup> Only additional components will be allowed as supplements above base regulatory level. See EU Code of Conduct.

<sup>4</sup> Shall be met if this function exist

### 3 Hazardous Materials

#### R9 Heavy metals and flame retardants

Cadmium, lead, mercury, chromium 6+, poly-brominated biphenyl (PBB), poly-brominated diphenyl ether (PBDE), flame retardants, (as listed in Article 4 of Directive 2002/95/EC of the European Parliament and Council), may not be used in the products taking into account the thresholds specified in Commission Decisions 2005/618/EC, 2005/717/EC and 2005/747/EC amending Directive 2002/95/EC.

For PBBs and PBDEs the threshold concentration identified in Commission Decision 2005/618/EC shall be <0.01%.

Deca-bromo-diphenyl-ether (DBDE), may not be used in the products taking into account the thresholds specified in Commission Decisions 2005/618/EC, 2005/717/EC and 2005/747/EC amending Directive 2002/95/EC.

For DBDEs the threshold concentration shall be <0.01%.

Plastic parts shall not contain flame retardant substances or preparations containing substances that are assigned or may be assigned, at the time of application, any of the following risk phrases:

R45 (may cause cancer),

R46 (may cause heritable genetic damage),

R50 (very toxic to aquatic organisms),

R51 (toxic to aquatic organisms),

R52 (harmful to aquatic organisms),

R53 (may cause long-term adverse effects in the aquatic environment),

R60 (may impair fertility) or

R61 (may cause harm to the unborn child)

*As defined in Council Directive 67/548/EEC of 27 June 1967 on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances (1) and its subsequent amendments.*

- Declaratation that the requirement is fulfilled.
- Declaratation that the requirement is fulfilled and relevant Material Safety Data Sheets shall be provided and signed by the flame retardant suppliers.

#### R10 Mercury content in LCD displays

The mercury content of the lamps used to illuminate screens shall be  $\leq 3.5\text{mg/lamp}$ .

In total, the lamps shall contain no more than 75mg Hg.

- Declaratation that the requirement is fulfilled, including documentation on the mercury content of lamps from suppliers.

### 3.1 Design

The appliance must be designed in such a way as to ensure economically and environmentally feasible dismantling.

#### R11 Dismantling

The manufacturer shall demonstrate that the product can be easily dismantled by professionally trained recyclers, using the tools usually available to them. This is to enable

- The undertaking of repairs and replacements of worn-out parts
- Upgrades to older or obsolete parts and
- Separation of parts and materials, ultimately for recycling.

To facilitate this:

- Fixtures within the products shall allow for this disassembly, e.g. screws, snap-fixes, especially of parts containing hazardous substances.
- Plastic parts shall be of one polymer or be of compatible polymers for recycling and have the relevant ISO11469 marking if greater than 25g in mass.
- Metal inlays shall not be used that cannot be separated.
- Data on the nature and amount of hazardous substances in the television will be gathered in accordance with the Dangerous Substances Directive 67/548/EEC and its subsequent amendments and the Globally Harmonised System of Classification and Labelling of Chemicals (GHS).

✉ A test report detailing the dismantling of the product. This shall include an exploded diagram of the television labelling the main components as well as identifying any hazardous substances in components.

This can be in written or audio-visual format. Information regarding hazardous substances shall be provided in the form of a bill of materials identifying material type, quantity used and location.

### 3.2 Customer information/life-time extension

#### R12 Requirements regarding life-time extension

The manufacturer shall offer a commercial guarantee to ensure that the product will function for at least two years. This guarantee shall be valid from the date of delivery to the customer.

The availability of compatible electronic replacement parts shall be guaranteed for seven years from the time that production ceases.

☒ Declaratation that the requirement is fulfilled.

### **R13 Operating instructions**

The product shall be sold with an operating instruction containing advice on how the product is best used from an environmental point of view. The information shall be located in a single, easy-to-find place in the user instructions as well as on the manufacturer's website. The instructions for use must be in the official languages in the Nordic country where the Swan labelled product is on sale.

The information will include but not be limited to:

- The product's power consumption information in the various modes; on, passive standby and deep sleep
- Average annual energy consumption, following EICTA guidelines.

How to reduce power consumption when the product is not being used by being energy efficient, covering at least:

- Using the on/off-switch will reduce energy use to zero
- Putting the product into a standby mode, (e.g. passive standby or deep sleep) will reduce energy consumption, but will still draw some power
- Turning the product off at the wall will reduce energy use to zero for all products, and is recommended when the product is not being used for a long time, e.g. when on holiday
- For television: reducing the brightness of the screen will reduce energy use
- Energy efficiency reduces energy consumption and thus saves money by reducing electricity bills
- Repair information regarding who is qualified to repair products, including contact details as appropriate
- End-of-life instructions for the proper disposal of televisions at civic amenity sites or through retailer take-back schemes as applicable to be compliant with the WEEE Directive,

Information that the product has been awarded the Nordic Swan with a brief explanation as to what this means together with an indication that more information on the ecolabel can be found at the web-site address on page 2.

*Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/EC and 2003/108/EC*

☒ Declaratation that the requirement is fulfilled and a copy of the instruction manual.

## 4 Quality and regulatory requirements

### R13 Swan licence contact

The company shall appoint a person responsible for ensuring the fulfilment of Swan requirements, and a contact person for communications with Nordic Ecolabelling. Preferably, this should be the same person.

- A chart of the company's organizational structure detailing who is responsible for the above.

### R14 Documentation

The licensee must be able to present a copy of the application, and factual and calculation data supporting the documents submitted on application (including test reports, documents from suppliers and suchlike).

- Checked on site.

### R15 Quality of the product

The licensee must guarantee that the quality in the production of the Swan-labelled audiovisual equipment is maintained throughout the validity period of the licence.

- Procedures for collating and, where necessary, dealing with claims and complaints regarding the quality of the Swan-labelled audiovisual equipment.

### R16 Service and support

The licensee shall offer the possibility of service and support in the official Nordic language where the Swan labelled product is sold.

- Describe service and support organisation.

### R17 Planned changes

Written notice must be given to Nordic Ecolabelling of planned changes that have a bearing on Swan requirements.

- Procedures detailing how planned changes are handled.

### R18 Unplanned nonconformities

Unplanned nonconformities that have a bearing on Swan requirements must be reported to Nordic Ecolabelling in writing and journalled.

- Procedures detailing how unplanned nonconformities are handled.

### R19 Traceability

The licensee must have a traceability system for the production of the Swan-labelled audiovisual equipment.

- Description of/procedures for the fulfilment of the requirement.

**R20 Take-back system**

Relevant national producer responsibility regulations, legislation and/or agreements within the sector regarding the recycling systems for products and packaging shall be met in the Nordic countries in which the Swan-labelled audiovisual equipment are marketed.

- Declaration from the applicant regarding adherence to existing recycling/take-back agreements.

**R21 Legislation and regulations**

The licensee must guarantee adherence to safety and EMC regulations, working environment legislation, environmental legislation and conditions/concessions specific to the operations at all sites where the Swan-labelled product is manufactured. Additionally the licensee must guarantee adherence to product-specific regulations in all the Nordic countries where the product is sold.

**No documentation is required.**

**R22 Marketing**

Marketing of the Swan-labelled audiovisual equipment must comply with "Regulations for Nordic Ecolabelling".

- Appendix 1 duly completed.

## Requirements on test institute/analysis laboratory

**Comment [M1]:** Detta avsnitt passar bättre som en bilaga.

The analysis laboratory used must fulfil the general requirements of standard EN ISO 17025 or have official GLP status.

The applicant shall bear the costs of documentation and analysis.

The applicant's analysis laboratory/test procedure may be approved for analysis and testing if:

- sampling and analysis is monitored by the authorities, or
- the manufacturer's quality assurance system covers analyses and sampling and is certified to ISO 9001 or ISO 9002, or
- the manufacturer can demonstrate agreement between a first-time test conducted at the manufacturer's own laboratory and testing carried out in parallel at an independent test institute.

## Marketing

The Swan label is a very well-known and well-reputed trademark in the Nordic region. Swan-labelled products and services may be marketed using the Swan label so long as the associated licence is valid.

The label must be positioned so that there is no doubt as to what the label refers and so that it is clear that the personal computer is ecolabelled.

More information on marketing can be found in "Regulations for Nordic Ecolabelling" 12 December 2001 or later versions.

## Design of the Swan label

Design of the Swan label:



Licence number

**Comment [M2]:** Vilka undertexter kan användas?

Each licence has a unique licence number that must be displayed along with the label.

The name of the product group, Televisions, Videoconferencing systems, DVD/HD-DVD/Blu-ray players, Stereo systems or Set top boxes must always appear in conjunction with the label.

More information on the design of the label can be found in "Regulations for Nordic Ecolabelling" 12 December 2001 or later versions.

## Sales in other Nordic countries

To register a licence in another Nordic country allows the Swan label to be used on a larger market. The following must be submitted to Nordic Ecolabelling:

- A form for sales in other Nordic countries.
- A copy of the licence.

For Norway:

- Documentation showing how the recycling of packing material is organized.

Registration is free of charge but an annual fee shall be paid in accordance with the national regulations.

## Follow-up inspections

Nordic Ecolabelling may decide to check whether the audiovisual equipment fulfils Swan requirements during the licence period. This may involve a site visit, random sampling or similar test.

The licence may be revoked if it is evident that the audiovisual equipment does not meet the requirements.

Random samples may also be taken in-store and analysed by an independent laboratory. If the requirements are not met, Nordic Ecolabelling may charge the analysis costs to the licensee.

## How long is a licence valid?

The Nordic Ecolabelling Board adopted this criteria document on xx xxxxx xxxx and it will remain in force up to and including xx xxxxx xxxx.

Nordic Ecolabelling may introduce adjustments, clarifications and/or extensions of the criteria during the period of validity of the document. If so, a new version of the criteria document will be issued. This will not normally necessitate the renewal of existing licences.

The Nordic Ecolabelling Board shall, at least 12 months prior to the expiry date, give notice of which criteria will apply thereafter.

## **Future criteria**

Future criteria will consider the following:

- Requirements regarding recycled or reused plastics.
- The requirements on additives to plastic shall strive to minimise the amounts of additives and to clarify the effects regarding health and environment of the added substances.
- Further harmonising with the criteria for TV sets according to the EU flower.

## Appendix 1 Marketing of Audiovisual equipment (R19)

We hereby certify that we are well acquainted with the regulations governing the use of the Nordic Swan ecolabel, as detailed in "Regulations for Nordic Ecolabelling" 12 December 2001 or later versions. We agree to follow these regulations when marketing the Swan-labelled audiovisual equipment.

Further, we confirm that we are familiar with the criteria document regarding the Swan labelling of audiovisual equipment.

We undertake to advise those individuals within the company involved in marketing the Swan-labelled audiovisual equipment of the criteria for the Swan labelling of audiovisual equipment and "Regulations for Nordic Ecolabelling".

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Location and date

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Company

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Contact person

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Phone

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Marketing director

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Phone

In case of a change in personnel, a new declaration must be submitted to Nordic Ecolabelling