

EN

EN

EN



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, XXX  
C(2009) YYY final

Draft

**COMMISSION REGULATION (EC) No .../..**

**of**

**implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for simple set-top boxes**

Draft

**COMMISSION REGULATION (EC) No .../..**

**of**

**implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for simple set-top boxes**

**(Text with EEA relevance)**

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Directive 2005/32/EC of the European Parliament and of the Council of 6 July 2005 establishing a framework for the setting of ecodesign requirements for energy-using products and amending Council Directive 92/42/EEC and Directives 96/57/EC and 2000/55/EC of the European Parliament and of the Council<sup>1</sup> and in particular Article 15(1) thereof,

After consulting the Ecodesign Consultation Forum,

Whereas:

- (1) Under Directive 2005/32/EC ecodesign requirements should be set by the Commission for energy-using products representing significant volumes of sales and trade, having a significant environmental impact and presenting significant potential for improvement in terms of their environmental impact without entailing excessive costs.
- (2) Article 16(2) first indent of Directive 2005/32/EC provides that in accordance with the procedure referred to in Article 19(3) and the criteria set out in Article 15(2), and after consulting the Consultation Forum, the Commission will as appropriate introduce implementing measures targeting consumer electronics.
- (3) The Commission has carried out a preparatory study which analysed the technical, environmental and economic aspects of simple set-top boxes (hereinafter SSTBs). The study has been developed together with stakeholders and interested parties from the EU and third countries, and the results have been made publicly available.
- (4) It has been stated in the preparatory study that the number of SSTBs placed on the Community market will grow from 28 million in 2008 to 56 million in 2014, and the annual electricity consumption of SSTBs will grow from 6 TWh in 2010 to 14 TWh in

---

<sup>1</sup> Directive 2005/32/EC (OJ L 191, 22.7.2005, p. 29). Directive as amended by Directive 2008/28/EC (OJ L 81, 20.3.2008, p. 48).

2014, but that the electricity consumption of SSTBs can be significantly reduced in a cost effective manner.

- (5) The electricity consumption of SSTBs can be reduced by implementing existing non-proprietary design solutions, which, despite being cost-effective, are not introduced onto the market in a satisfactory way because end-users are unaware of the running costs of SSTBs, providing manufacturers with no incentive to integrate such solutions to reduced power consumption during use.
- (6) Ecodesign requirements for the power consumption of SSTBs should be set with a view to harmonising ecodesign requirements for these devices throughout the Community and contributing to the functioning of the internal market and to the improvement of the environmental performance of these devices.
- (7) This Regulation should increase the market penetration of technologies yielding improved energy efficiency of SSTBs, leading to estimated annual energy savings of 9 TWh in 2014, compared to a business as usual scenario.
- (8) The ecodesign requirements should not have a negative impact on the functionality of the product and should not negatively affect health, safety and the environment.
- (9) A staged entry into force of the ecodesign requirements should provide an appropriate timeframe for manufacturers to redesign products. The timing of the stages should be set in such a way that negative impacts related to the functionalities of equipment on the market are avoided and cost impacts for manufacturers, in particular SMEs, are taken into account, while ensuring timely achievement of the policy objectives.
- (10) Measurements of power consumption should be performed taking into account the generally recognised state of the art; manufacturers may apply harmonised standards established in accordance with Article 9 of Directive 2005/32/EC.
- (11) The requirements laid down in this Regulation should prevail over the requirements laid down in Regulation 2009/..../EC implementing Directive 2005/32/EC with regard to ecodesign requirements for the standby and off mode power consumption of electrical and electronic household and office equipment<sup>2</sup>.
- (12) Pursuant to Article 8(2) of Directive 2005/32/EC, this Regulation should specify that the applicable conformity assessment procedures are the internal design control set out in Annex IV of Directive 2005/32/EC and the management system set out in Annex V of Directive 2005/32/EC.
- (13) In order to facilitate compliance checks manufacturers should be requested to provide information in the technical documentation referred to in Annexes IV and V of Directive 2005/32/EC in so far as it relates to the requirements laid down in this implementing measure.
- (14) Benchmarks for currently available SSTBs with low power consumption should be identified. The availability of a '0 W-mode' on SSTBs could support consumers' behaviour and decisions to reduce unnecessary loss of energy. Benchmarks help to

---

<sup>2</sup> OJ L ...

ensure wide availability and easy access to information, in particular for SMEs and very small firms, which further facilitates the integration of best design technologies for reducing the energy consumption of SSTBs.

- (15) The measures provided for in this Regulation are in accordance with the opinion of the Committee established by Article 19(1) of Directive 2005/32/EC,

HAS ADOPTED THIS REGULATION:

*Article 1*  
***Subject matter and scope***

This Regulation establishes ecodesign requirements for simple set-top boxes.

*Article 2*  
***Definitions***

For the purposes of this Regulation, the definitions set out in Directive 2005/32/EC shall apply. The following definitions shall also apply:

1. 'Simple set-top box' (SSTB) means a stand-alone device which, irrespectively of the interfaces used,
  - (a) has the primary function of converting standard-definition (SD) or high-definition (HD), free-to-air digital broadcast signals to analogue broadcast signals suitable for analogue television or radio,
  - (b) has no 'conditional access' (CA) function
  - (c) offers no recording function based on removable media in a standard library format;

A SSTB can be equipped with the following additional functions and/or components which do not constitute a minimum specification of an SSTB:

- (a) time-shift and recording functions using an integrated hard disk
  - (b) conversion of HD broadcast signal reception to HD or SD video output
  - (c) second tuner.
2. 'Standby mode(s)' means a condition where the equipment is connected to the mains power source, depends on energy input from the mains power source to work as intended and provides *only* the following functions, which may persist for an indefinite time:
  - (a) reactivation function, or reactivation function and only an indication of enabled reactivation function, and/or
  - (b) information or status display;

3. 'Reactivation function' means a function enabling the activation of other modes, including active mode, by remote switch, including remote control, internal sensor, timer to a condition providing additional functions, including the main function;
4. 'Information or status display' means a continuous function providing information or indicating the status of the equipment in a display, including clocks;
5. 'Active mode(s)' means a condition in which the equipment is connected to the mains power source and at least one of the main function(s) providing the intended service of the equipment has been activated;
6. 'Automatic power down' means a function which switches the active mode of an SSTB into standby mode after a period in the active mode following the last user interaction and/or channel change;
7. 'Second tuner' means a part of the SSTB available for independent recording while allowing to watch a different programme;
8. 'Conditional access' (CA) means a provider-controlled broadcasting service requiring a market subscription television service.

*Article 3*  
***Ecodesign requirements***

The ecodesign requirements for SSTBs are set out in Annex I.

*Article 4*  
***Relationship with Regulation 2009/./EC***

The requirements laid down in this Regulation shall prevail over the requirements laid down in Regulation 2009/./EC.

*Article 5*  
***Conformity assessment***

The procedure for assessing conformity referred to in Article 8(2) of Directive 2005/32/EC shall be the internal design control system set out in Annex IV of Directive 2005/32/EC or the management system set out in Annex V of Directive 2005/32/EC.

*Article 6*  
***Verification procedure for market surveillance purposes***

Surveillance checks shall be carried out in accordance with the verification procedure set out in Annex II.

*Article 7*  
**Benchmarks**

The indicative benchmarks for best-performing products and technology currently available on the market are identified in Annex III.

*Article 8*  
**Revision**

No later than 5 years after the entry into force of this Regulation the Commission shall review it in the light of technological progress and present the result of this review to the Consultation Forum.

*Article 9*  
**Entry into force**

This Regulation shall enter into force on the 20th day following that of its publication in the *Official Journal of the European Union*.

Point 1 of Annex I shall apply as from one year after the date referred to in the first paragraph.

Point 2 of Annex I shall apply as from three years after the date referred to in the first paragraph.

*Article 10*

This Regulation shall be binding in its entirety and directly applicable in all Member States

Done at Brussels,

*For the Commission*

*Member of the Commission*

**ANNEX I**  
**Ecodesign requirements**

1. One year after this Regulation has come into force, SSTBs placed on the market shall not exceed the following power consumption limits; SSTBs with an integrated hard disk and/or second tuner are exempt from that requirement:

	Standby mode	Active mode
Simple STB	1.00 W	5.00 W

Allowance for display function in standby	+ 1.00 W	–
Allowance for decoding HD signals	–	+ 3.00 W

2. Three years after this Regulation has come into force SSTBs, placed on the market shall not exceed the following power consumption limits:

	Standby mode	Active mode
Simple STB	0.50 W	5.00 W

Allowance for display function in standby	+ 0.50 W	–
Allowance for hard disk	–	+ 6.00 W
Allowance for 2 <sup>nd</sup> tuner	–	+ 1.00 W
Allowance for decoding HD signals	–	+ 1.00 W

3. Availability of standby mode

One year after this Regulation has come into force, SSTBs shall provide standby mode.

4. Automatic power-down

One year after this implementing measure has come into force, SSTBs shall be equipped with an 'automatic power-down' or similar function with the following characteristics:

- the SSTB shall be automatically switched from active mode into standby after less than 3 hours in active mode following the last user interaction and/or a channel change with an alert message 2 minutes before going into standby mode.
- the 'automatic power-down' function shall be set as default.



## 5. Measurements

The power consumption referred to in Points 1 and 2 shall be established by a reliable, accurate and reproducible measurement procedure, which takes into account the generally recognised state of the art.

Measurements of power of 0.50 W or greater shall be made with an uncertainty of less than or equal to 2% at the 95% confidence level. Measurements of power of less than 0.50 W shall be made with an uncertainty of less than or equal to 0.01 W at the 95% confidence level.

## 6. Information to be provided by the manufacturers for the purposes of conformity assessment

For the purposes of conformity assessment pursuant to Article 5, the technical documentation shall contain the following elements:

- a) For standby and active modes
  - The power consumption data in Watts rounded to the second decimal place including consumption data for the different additional functions and/or components
  - The measurement method used
  - Period of measurement
  - Description of how the appliance mode was selected or programmed
  - Sequence of events to reach the mode where the equipment automatically changes modes
  - Any notes regarding the operation of the equipment
- b) Test parameters for measurements
  - Ambient temperature
  - Test voltage in V and frequency in Hz
  - Total harmonic distortion of the electricity supply system
  - The fluctuation of the power supply voltage during the tests
  - Information and documentation on the instrumentation, set-up and circuits used for electrical testing
  - Input signals in RF (for digital terrestrial broadcasts ) or IF (for satellite broadcasts)
  - Audio/video test signals as described in the MPEG-2 transport stream
  - Adjustment of controls

The power requirements of peripheral devices powered by the STB for broadcast reception, such as active terrestrial antenna, satellite LNB or any cable or telecom modem are not required to be included in the technical documentation.

7. Information to be provided by the manufacturers for the purposes of consumer information

Manufacturers shall ensure that consumers of SSTBs are provided with the power consumption in Watts rounded to the first decimal place of standby and active modes of the SSTB.

**ANNEX II**  
**Verification procedure**

When performing the market surveillance checks referred to in Article 3(2) of Directive 2005/32/EC the authorities of the Member States shall apply the following verification procedure for the applicable requirements set out in Annex I, Points 1, 2 and 4, as applicable.

For power consumption larger than 1.00 W:

Member State authorities shall test one single unit.

The model shall be considered to comply with the provisions set out in Annex I, Points 1 and 2, as applicable, of this Regulation if the results for active and standby mode conditions, as applicable, do not exceed the limit values by more than 10%.

Otherwise, three more units shall be tested. The model shall be considered to comply with this Regulation if the average of the results of the latter three tests for active and standby mode conditions, as applicable, does not exceed the limit values by more than 10%.

For power consumption smaller than, or equal to, 1.00 W:

Member State authorities shall test one single unit.

The model shall be considered to comply with the provisions set out in Annex I, Points 1 and 2, as applicable, of this Regulation if the results for active and/or standby mode conditions, as applicable, do not exceed the limit values by more than 0.10W.

Otherwise, three more units shall be tested. The model shall be considered to comply with this Regulation if the average of the results of the latter three tests for active and/or standby conditions, as applicable, does not exceed the limit values by more than 0.10W.

Otherwise, the model shall be considered not to comply.

### **ANNEX III** **Benchmarks**

The following indicative benchmarks are identified for the purpose of Annex I, part 3, point 2, of Directive 2005/32/EC. They refer to the best available technology at the date of adopting this Regulation:

SSTB without any additional features:

- Active mode: 4.00 W
- Standby mode excluding the display function: 0.25 W
- Off-mode: 0 W

SSTB with an integrated hard drive

- Active mode: 10.00 W
- Standby mode excluding the display function: 0.25 W
- Off-mode 0 W:

The above benchmarks are established on the basis of a SSTB with a basic configuration, an 'automatic power down' function and a hard-off switch.