

## PUBLICATION NOTICE

### NOTICE 2010-16

**TO: Certification Bodies recognized by Industry Canada**

**RE: SAR TESTING REQUIREMENTS WITH REGARD TO BYSTANDERS FOR  
LAPTOP TYPE COMPUTERS WITH ANTENNAS BUILT-IN ON DISPLAY  
SCREEN (LAPTOP MODE/TABLET MODE)**

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This notice provides information on the prospective requirements and method to perform a SAR evaluation with regard to bystanders for laptop type computers (laptop mode<sup>1</sup> /tablet mode<sup>2</sup>) with antennas built-in on display screens.

The definition of Specific absorption rate (SAR) evaluation was revised in Industry Canada's RSS-102 - *Radio Frequency (RF) Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands)* Issue 4, published in March 2010, as follows:

**Specific absorption rate (SAR) evaluation** is the method used to evaluate the SAR levels from a device by physical measurement or computational modelling techniques. SAR evaluation is required if the separation distance between the user or bystanders and the device is less than or equal to 20 cm.

Laptop type computers (laptop mode/tablet mode ) with antennas built-in on display screens will sometimes have a separation distance of a 20 cm or less from bystanders, and therefore subject to the routine SAR evaluation. A warning that a minimum separation distance of 20 cm must be maintained between the bystanders and the device must be maintained in the manufacturer's user manual will not suffice.

Currently, section 3.1.4 of RSS-102 refers to FCC KDB Publication 612617 with respect to the testing requirements, but that document does not clarify the evaluation considerations for bystanders with respect to laptops with antennas built-in on display screens. Please note that Industry Canada will amend RSS-102 to include that the following tests must be performed to account for bystanders with respect to laptops with antennas built-in on display screens:

*Unless the side(s)/edge(s) of the laptop type computer (laptop mode/tablet mode) containing the built-in antenna(s) was already tested against the flat phantom to account for the user requirements (e.g. antenna in the laptop base), Industry Canada requires SAR measurements to be performed with the side(s)/edge(s) of the display screen containing the built-in antenna(s) pointing towards the flat phantom. The separation distance shall not exceed 25 mm between the device and the flat phantom to show compliance for bystanders. Additional configurations regarding SAR testing for laptop type computer (laptop mode/tablet mode) are not required if the separation distance of 25 mm for bystanders represents the worst-case configuration.*

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<sup>1</sup> *Laptop Mode* is defined as the operating configuration where the display is open perpendicular to and facing towards the keyboard.

<sup>2</sup> *Tablet Mode* for a convertible tablet computer is defined as the operating configuration where the display is folded over onto the keyboard section and facing outwards. The display orientation may be switched between portrait or landscape configurations for both slate and convertible tablets, allowing one or more of the tablet edges to become closest to the user during normal use.

These testing requirements are in addition to any other applicable requirements in RSS-102 and in the specific documents referred to therein. The above bystander testing requirements will be effective as of January 1, 2011.

Enquires regarding this Notice may be directed to the following address:

Industry Canada  
Engineering, Planning and Standards Branch  
300 Slater Street  
Ottawa, Ontario K1A 0C8

Attention: Regulatory Standards

E-mail: [res.nmr@ic.gc.ca](mailto:res.nmr@ic.gc.ca)

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