

## **UNDERSTANDING RADIOFREQUENCY (RF) RADIATION SAFETY STANDARDS OF HAND-HELD MOBILE PHONES**

### ***What is the safety standard with respect to RF radiation from hand-held mobile phones?***

For hand-held mobile phones which operate in close proximity to human body, the radiation exposure is quantified in terms of “Specific Absorption Rate” (S.A.R). S.A.R. measures the amount of RF energy actually absorbed in a human body. Currently, there are two commonly adopted S.A.R. limits, one recommended by the International Commission on Non-Ionising Radiation Protection (ICNIRP) and the other by the Institute of Electrical and Electronics Engineers (IEEE). In consultation with the Director of Health, the S.A.R. limits of ICNIRP and IEEE are adopted by the Communications Authority (CA)<sup>1</sup> as the safety standard with respect to RF radiation from hand-held mobile phones. The S.A.R. limit of both the ICNIRP and the IEEE applicable to hand-held mobile phones is 2 W/kg.

### ***Are mobile phones for use in Hong Kong in compliance with the RF radiation standard?***

2. From 1 April 2003 onwards, hand-held mobile phones to be type-approved must comply with the S.A.R. limits of the ICNIRP or the IEEE. However, it does not mean that the mobile phones approved before 1 April 2003 do not meet the requirement. A number of major mobile phone manufactures have taken the initiative to publish the data regarding the S.A.R. of their products. According to these manufacturers, the majority of the mobile phones being marketed in Hong Kong are actually designed and made to meet the RF radiation standard.

### ***How do I know whether my mobile phone has been type-approved against the RF radiation standard?***

3. OFCA operates a voluntary labelling scheme for hand-held mobile phones. Under the scheme, manufacturers, suppliers and dealers are authorized to affix a label prescribed by the CA to mobile phones which have been evaluated to be in compliance with the RF radiation standard. Although labelling is voluntary, manufacturers, suppliers and dealers are encouraged to use labels prescribed by the

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<sup>1</sup> Pursuant to the Communications Authority Ordinance (Cap. 616), with effect from 1 April 2012, all duties and powers of the Telecommunications Authority (TA) are conferred on the Communications Authority (CA), and all duties and powers of the Office of the Telecommunications Authority (OFTA) are conferred on the Office of the Communications Authority (OFCA), the executive arm of the CA.

CA for consumer guidance. More details about the labelling arrangement can be found in the Standardisation Guide [HKCA 3211 “Standardisation Guide for Labelling of Telecommunications Equipment”](#).

4. It is important to note that a mobile phone without the label prescribed by the CA does not mean it fails to comply with the RF radiation standard because affixing the label by the manufacturers, suppliers or dealers is on a voluntary basis. If a consumer wants to be sure that his equipment meets the safety standard, he may choose a mobile phone with the label prescribed by the CA. Alternatively, a consumer may inspect a list of type-approved mobile phones which is posted on OFCA’s homepage at <http://app1.ofca.gov.hk/apps/cte/content/listSafetyEq.asp?lang=E>.

***How can I know the S.A.R. value of my mobile phone?***

5. From the list of type-approved mobile phones, you may also find the maximum S.A.R. values of the mobile phones which have been evaluated against the limits recommended by ICNIRP or IEEE. Besides, some major manufacturers have published the maximum S.A.R. values emitted by their mobile phones on their websites or product brochures for consumers’ information.

6. S.A.R. levels fluctuate while you are making a call. This is because mobile phones are designed to operate at multiple power levels so as to use only the power required to reach the network. When you are using your mobile phones, the actual S.A.R. will typically fall well below the maximum value.

***What should I do if I still remain concerned about the exposure to RF radiation?***

7. There is no proof that hand-held mobile phones in normal use can be harmful. But if you remain concerned, you may consider taking the following measures. These measures include limiting conversations on the hand-held mobile phones, avoiding contacts with antennas when the phones are operating and making greater use of mobile phones with a hands-free kit. In addition, because a mobile phone transmits a stronger signal in areas of bad reception, you may wish to avoid using your phone in areas of poor reception.

***Where can I get further information?***

8. There are a number of sources of information on the RF radiation safety of mobile phones including:

- World Health Organization (WHO) - [www.who.int/emf](http://www.who.int/emf)
- Mobile Manufacturers Forum (MMF) - [www.mmfai.org](http://www.mmfai.org)
- The International Commission on Non-Ionizing Radiation Protection

(ICNIRP) - [www.icnirp.de](http://www.icnirp.de)

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