

**For discussion
on 13 February 2012**

**Legislative Council Panel on
Information Technology and Broadcasting**

**Proposed Amendments to the
Telecommunications (Control of Interference) Regulations (Cap. 106B)**

Purpose

This paper briefs Members on the proposed amendments to the Telecommunications (Control of Interference) Regulations (Cap. 106B) (the Regulations).

Proposal

2. We propose to –
 - (a) update the classes of apparatus subject to the Regulations;
 - (b) update the control limits of interference applicable to each class of apparatus that is subject to the Regulations;
 - (c) introduce a more flexible mechanism for the future updating of control limits; and
 - (d) introduce transitional arrangements leading to the full compliance with the new requirements by the industry.

The Regulations to effect the amendments proposed in paragraphs 3-7 below are hereinafter referred to as the “Amendment Regulations”.

Proposed Amendments and Rationale

Updating the Classes of Apparatus

3. The classes of apparatus that are subject to the Regulations were last updated in 1993. With the advent of new technologies, new types of apparatus (e.g. light-emitting diode (LED) lighting equipment, electrical vehicles) which may emit electrical or radiated interference but not covered by the Regulations have become increasingly popular. International standards such as those published by the International Special Committee on Radio Interference (i.e. Comité International Spécial des Perturbations Radio-électriques, or commonly known as CISPR)¹ have been revised to embrace these new types of apparatus. Meanwhile, there have been complaints in Hong Kong of interference caused by unregulated equipments to the radiocommunications service. For instance, LED lighting equipment has been found to interfere with the proper functioning of base stations established in its vicinity by public radiocommunications service operators. To bring these new apparatuses under control and to align the scope of the Regulations with that of the CISPR standards, we propose to amend the classes of apparatus as specified in the Regulations (with amendments marked up), as follows -

- (a) vehicles and boats propelled by an internal combustion engine, electrical means, or both, and devices (not primarily intended to carry persons or goods) equipped with ignition apparatus of internal combustion engines or traction batteries or both;
- (b) information technology equipment;
- (c) sound and television broadcast receivers and associated equipment;
- (d) fluorescent lamps and luminaires electrical lighting and similar equipment; and
- (e) household ~~electrical~~ appliances, electric tools and similar ~~electrical~~ apparatus; ~~and portable tools.~~

¹ CISPR is a technical committee established under the International Electrotechnical Commission (IEC) responsible for developing international standards on electromagnetic compatibility. IEC is an international standards organization which is responsible for the development of international standards for all electrical, electronic and related technologies. IEC standards cover a vast range of technologies from power generation, transmission and distribution to home appliances and office equipment.

Updating the Control Limits

4. The control limits of interference specified in the Regulations were last updated in 1993. There is a need to update the Regulations to align the control limits with the relevant current CISPR standards. In addition to the CISPR standards, we see the need to make reference to an expanded set of widely recognised standards for compliance by the industry. These include regional or national standards set by the European Union (EU), the People's Republic of China (PRC) and the United States of America (USA), all of which have large consumer markets. Most of these standards make reference to the CISPR standards, but they may not be identical. Many products available in Hong Kong are manufactured and tested against conformance to these regional or national standards, instead of the CISPR standards. As such, we propose to update the control limits in the Regulations by making reference to the relevant CISPR standards, European harmonised standards, National Standards of the PRC, and Code of Federal Regulations published by the Federal Communications Commission (FCC) of the USA. For apparatuses under the control of the Regulations, compliance with any one of these standards would be acceptable.

5. The regional or national standards we propose to make reference to are set out in the Annex to this paper. Instead of following the current arrangement of specifying the exact control limits in the Regulations, we propose that reference be made to the relevant standards (e.g. CISPR 12:2007). The rationale is that normally products placed on the local market are tested against the relevant standards. Under the current arrangement, manufacturers and suppliers have to cross-check whether products complying with the standards are in compliance also with the control limits specified in the Regulations. The proposed arrangement will remove this inconvenience.

Future Updating of the Control Limits

6. In view of the rapid development of technologies and the availability of products imported from different places, we need a more flexible mechanism for the Telecommunications Authority (TA) to adopt control limits that are set out in the relevant international, regional or national standards. Currently, the TA may, by order published in the Gazette, amend the control limits in the Regulations. However, no such order can be made without the prior approval of the Chief Executive in Council (CE in C) if such order would impose control limits tighter than those specified in the CISPR standards, or control limits in respect of which no recommendation has been made by CISPR. However, as mentioned in paragraph 4 above, other than the standards set by CISPR,

apparatuses designed to comply with the control limits of other regional or national standards are widely available in the market. To keep our control regime on a par with international best practices, we propose to amend the Regulations such that the TA may, by order published in the Gazette, amend the control limits without the need for the prior approval of the CE in C provided that the control limits are set out in the standards published by any one of the following bodies –

- (a) the International Electrotechnical Commission (IEC);
- (b) the CISPR;
- (c) a European Standards Organisation² recognised by the European Commission;
- (d) the General Administration of Quality Supervision, Inspection and Quarantine of the PRC and/or the Standardisation Administration of the PRC; and
- (e) the FCC of the USA.

Transitional Arrangements

7. To allow sufficient time for the industry to ensure that their products will comply with the new requirements as set out in paragraphs 4 and 5 above, we propose the following transitional arrangements -

- (a) for a period of one year from the date when the Amendment Regulations come into operation (“the one-year transitional period”), apparatuses covered by the existing Regulations (as given in paragraph 14 below) shall comply either with the requirements specified in the current Regulations or the new requirements specified in the Amendment Regulations;
- (b) within the one-year transitional period, new apparatuses covered by the Amendment Regulations (as given in paragraph 3 above) but not covered by the current Regulations (as given in paragraph 14 below) are not subject to control under the Amendment Regulations.

² European Standards Organisations include -

- (a) European Committee for Standardisation (CEN);
- (b) European Committee for Electrotechnical Standardisation (CENELEC); and
- (c) European Telecommunications Standards Institute (ETSI).

Implication for the Industry

8. With the emergence of the new electrical and electronic apparatuses in recent years, the TA received reports of these apparatuses generating interference to radiocommunications systems and equipment. The inclusion of the new types of apparatus in the Amendment Regulations imposed with the relevant control limits will serve to ensure that these apparatuses will operate in a harmonious manner with other radiocommunicaitons services, systems and equipment in the local environment.

9. The standards in the Annex that we propose to follow are adopted by the EU, Mainland China, and the USA. Under the control regimes of these regions or countries, apparatuses have to demonstrate compliance with the relevant standards listed in the Annex before they can be placed on the relevant markets. Many products being sold in Hong Kong are imported from or designated for these markets, and they have already complied with the relevant standards in force in these markets. Even for products locally made and available in Hong Kong, they would not be targeted at the Hong Kong market alone. Their focus would be on the much larger markets like the EU, Mainland China or the USA. Since we propose to adopt standards that are in force in these regions or countries, the additional compliance costs incurred by the manufacturers to meet the requirements of the Amendment Regulations should be minimal. The proposed Amendment Regulations should therefore be acceptable by the industry.

Industry Consultation

10. On 17 November 2011, the Office of the Telecommunications Authority issued a consultation paper to solicit views on the proposed amendments to the Regulations. By the end of the consultation period on 6 January 2012, eight submissions were received from the following -

- (a) Electrical and Mechanical Services Department;
- (b) Environmental Protection Department;
- (c) Hong Kong Information Technology Federation;
- (d) Hong Kong Productivity Council (relaying comments from the Hong Kong Solid State Lighting Industry Consortium);
- (e) Hong Kong Wireless Technology Industry Association;
- (f) Hutchison Telephone Company Limited;
- (g) Marine Department; and

- (h) Motor Traders Association of Hong Kong (relaying comments from the vehicle manufacturers of Honda, Daimler, Daihatsu and Hino).

11. In general, all the respondents supported or had no objection to the proposed amendments to the Regulations. The vehicle industry suggested that the Vehicle Regulations of the United Nations Economic Commission for Europe on, among other things, electrical emissions should be included in the Amendment Regulations on the ground that it is based on the CISPR standard and is the standard to which the industry commonly adheres. We accept the proposal and have duly reflected this in Note 2 in the Annex. There were requests from the lighting industry for extension of the date that an order made by the TA should come into effect, and from a telecommunications operator asking for more stringent standards to be imposed. Having duly considered these submissions, we are of the view that the Amendment Regulations have struck a proper balance between the interests of the operators of public telecommunications services on one side and those of the suppliers of electrical, lighting and electronic apparatus on the other.

Way Forward

12. Subject to Members' views, we will proceed with the necessary legislative amendments. Gazettal of the subsidiary legislation and tabling at the Legislative Council for negative vetting are scheduled for the second quarter of 2012. It is our plan to complete the legislative process in mid 2012.

Advice Sought

13. Members are invited to note and comment on our proposal.

Background

14. Under section 37 of the Telecommunications Ordinance (Cap. 106), the CE in C may by regulations provide for the operation and use of apparatus that generates and emits radio waves, and for the prohibition and control of electrical or radiated interference with the working of apparatus for telecommunications. For the purpose of controlling the potential interference which may be caused by prescribed classes of electrical and electronic apparatus, the Regulations came into operation in 1966. They were subsequently amended in 1993 to update the classes of apparatus under control and the associated

control limits. Currently, the classes of apparatus under the control of the Regulations are -

- (a) ignition apparatus of internal combustion engines;
- (b) information technology equipment;
- (c) sound and television broadcast receivers and associated equipment;
- (d) fluorescent lamps and luminaires; and
- (e) household electrical appliances and similar electrical apparatus, and portable tools.

While these apparatuses are not designed to transmit radio signals for telecommunications, they may emit unintentionally radio frequency energy which may cause interference to radiocommunications systems and equipment.

15. The control limits currently specified in the Regulations were based on the CISPR standards which were in force around 1993 when the Regulations were amended. These CISPR standards are listed in the table below -

Class of apparatus covered by the current Regulations	CISPR standard
(a) ignition apparatus of internal combustion engines	CISPR 12
(b) information technology equipment	CISPR 22
(c) sound and television broadcast receivers and associated equipment	CISPR 13
(d) fluorescent lamps and luminaires	CISPR 15
(e) household electrical appliances and similar electrical apparatus; and portable tools	CISPR 14-1

**Commerce and Economic Development Bureau
(Communications and Technology Branch)
Office of the Telecommunications Authority
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Relevant standards under reference in the Amendment Regulations

Apparatus	Control Limits, with their respective conditions, as specified in¹	Title of Standards
Vehicles, boats propelled by an internal combustion engine, electrical means or both, and devices (not primarily intended to carry persons or goods) equipped with internal combustion engines or traction batteries or both	EN 55012:2002 + A1:2005 ² CISPR 12:2001 + A1:2005 ³	Vehicles, boats, and internal combustion engine driven devices - Radio disturbance characteristics - Limits and methods of measurement for the protection of receivers except those installed in the vehicle/boat/device itself or in adjacent vehicles/boats/devices
	EN 55012:2007 CISPR 12:2007	Vehicles, boats and internal combustion engines - Radio disturbance characteristics - Limits and methods of measurement for the protection of off-board receivers
	EN 55012:2007 + A1:2009 CISPR 12:2007 + A1:2009	
	GB 14023-2006 ⁴	Vehicles, boats, and internal combustion engine driven devices - Radio disturbance characteristics - Limits and methods of measurement
	GB 14023-2011	Vehicles, boats, and internal combustion engine - Radio disturbance characteristics - Limits and methods of measurement for the protection of off-board receivers

¹ Editions of CISPR, EN and GB standards later than those specified above would also be acceptable.

² The vehicle manufacturing industry commonly adheres to the Vehicle Regulations of the United Nations Economic Commission for Europe (UNECE) for vehicle construction. UNECE Regulation 10 (UNECE R10) draws reference to CISPR 12:2001 + A1:2005 and its equivalent European standard is EN 55012:2002 + A1:2005.

³ CISPR 12:2001 + A1:2005 is added to cater for the requirement of the vehicle manufacturing industry. Please refer to Note 2 above.

⁴ GB 14023-2006 is retained as it also draws reference to CISPR 12:2001 + A1:2005.

Apparatus	Control Limits, with their respective conditions, as specified in¹	Title of Standards
Information technology equipment	EN 55022:2006 + A1:2007 CISPR 22:2005 + A1:2005	Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement
	EN 55022:2006 + A1:2007 + A2:2010 CISPR 22:2005 + A1:2005 + A2:2006	
	EN 55022:2010 CISPR 22:2008	
	GB 9254-2008	
	FCC 47 CFR Part 15 Edition 1 October 2005 or later	Radio frequency devices
Sound and television broadcast receivers and associated equipment	EN 55013:2001 + A1:2003 + A2:2006 CISPR 13:2001 + A1:2003 + A2:2006	Sound and television broadcast receivers and associated equipment - Radio disturbance characteristics - Limits and methods of measurement
	CISPR 13:2009	
	GB 13837-2003	
	FCC 47 CFR Part 15 Edition 1 October 2005 or later	Radio frequency devices
Electrical lighting and similar equipment	EN 55015:2006 + A1:2007 CISPR 15:2005 + A1:2006	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
	EN 55015:2006 + A1:2007 + A2:2009 CISPR 15:2005 + A1:2006 + A2:2008	
	GB 17743-2007	
Household appliances, electric tools and similar apparatus	EN 55014-1:2006 CISPR 14-1:2005	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission
	EN 55014-1:2006 + A1:2009 CISPR 14-1:2005 + A1:2008	
	CISPR 14-1:2005 + A1:2008 + A2:2011	
	GB 4343.1-2009	