Administrative Regulations on Radio Waves of Industrial, Scientific, Medical Equipment Amended Date[2016/07/19]

- 1. 30 Articles promulgated in full by the Ministry of Transportation and Communications (MOTC) on Oct. 3, 1970. Ref: Jiao-Yu (59) Tze No.11034.
- 2. The amendment of Articles 1,12 and 13 promulgated by MOTC on March. 11, 1977. Ref: Jiao-Yu (66) Tze No.02167.
- 22 Articles and the title amended and promulgated in full by MOTC on April. 10, 1998. Ref: Jiao-Yu- Fa Tze No.8711.
- 4. The annulment of Articles 7 to 9 and 20 promulgated by MOTC on Oct. 23, 2002. Ref: Jiao-Yu-Fa Tze No.091B000121.
- 5. The amendment of Articles 11,12 and 14 ,and annulled Articles 13 promulgated by MOTC on Jan. 6, 2006. Ref: Jiao-Yu Tze No.09500850011.
- 6.The amendment of Articles 5,18 and 19 promulgated by National Communications Commission (NCC) on July 19, 2007. Ref: Tung-Chuan-Fa Tze No.09605100651.
- 7. The amendment of Article 4,11and 12 promulgated by NCC on Jul. 19, 2016. Ref: Tong-Chuan-Zih-Yuan-Zih No. 10543014240.

Article 1

The regulations hereunder are promulgated pursuant to Paragraph 4, Article 48 of the Telecommunications Act.

Article 2

The administration of industrial, scientific, medical radio bands equipment (the "ISM equipment") shall follow regulations hereunder. The matters not provided herein shall be prescribed in accordance with other laws and regulations..

Article 3

Industrial, scientific, and medical (ISM) equipment refers to equipment or appliances designed to generate or transform locally RF energy for industrial, scientific, medical, or other similar purposes, excluding applications in the field of telecommunications. Typical ISM applications are such as industrial heating equipment, ultrasonic equipment, diathermy or magnetic resonance equipment, and other electrical

appliances but shall exclude those for home use.

Article 4

Definitions and scope shall be as follows:

4.1 Radio frequency (RF) energy:

Electromagnetic energy at any frequency in the radio spectrum from 8.3 kHz to 3 THz.

4.2 Diathermy or magnetic resonance medical equipment:

A category of ISM equipment in which RF energy is created by utilizing a radiofrequency oscillating machine or other forms of radio-frequency generator for therapeutic purposes. Or use of RF energy to create images and data representing spatially resolved density of transient atomic resources within an object but not including surgical diathermy apparatus designed for intermittent operation with low power.

4.3 Industrial heating equipment:

A category of ISM equipment used for or in connection with industrial heating operations utilized in a manufacturing or production process.

4.4 Other electrical equipment:

Equipment other than 4.2 and 4.3, which utilizes RF energy for the production of physical, biological, or chemical effects such as heating, ionization of gases, mechanical vibrations, hair removal and acceleration of charged particles excluding applications in the field of telecommunication or wireless receiving devices.

4.5 Ultrasonic equipment:

A category of ISM equipment in which the RF energy is used to excite or drive an electromechanical transducer for the production of sonic or ultrasonic mechanical energy for industrial, scientific, medical or other non-communication purposes.

4.6 Harmful interference:

Indicates any emission, radiation or conducted RF energy which either endangers or jeopardizes the function of a radio navigation service of other safety services (temporarily or permanently radio communication service to secure property and life), or seriously degrades, obstructs, or repeatedly interrupts the operation of radio communication.

4.7 ISM frequency:

A frequency assigned by regulations hereunder for the use of ISM equipment. The ISM frequency and frequency band associated with each ISM frequency is specified in the Article 11.

Article 5

The competent authority of regulations hereunder shall be the National Communications Commission (NCC).

Article 6

ISM equipment shall adhere to regulations set by the Ministry of Economic Affairs ("MOEA") EMC regulations. Installation shall be permitted only after obtaining approval. However, it does not apply to those falling beyond the scope of approval items.

Article 7 Obsolete

Article 8 Obsolete

Article 9

Obsolete

Article 10

Except for the research purposes of a research organization, ISM equipment shall not be modified or changed for purpose of use.

Prior to any modification prescribed in the preceding paragraph, a shielding facility shall be securely installed.

Article 11

The operating frequencies, operating band ranges, and radiation field strength used in ISM equipment shall accord with CNS standards.

The radiation field strength of ISM equipment using the following operating frequencies and band ranges is unlimited.

Operating center frequency Tolerance

11.1 13,560 kHz..... ±7.0 kHz

11.2 27,120 kHz..... ±163.0 kHz

11.3 40.680MHz	±20.0 kHz
11.4 2,450 MHz	±50.0 MHz
11.5 5,800 MHz	±75.0 MHz
11.6 24,125 MHz	. ±125.0 MHz

Article 12

The operation of ISM equipment shall not endanger the functioning of frequency bands for radio navigation or other safety services as below : 490-510 kHz, 2170-2194 kHz, 8354-8374 kHz, 121.4-121.6 MHz, 156.7-156.9 MHz, and 242.8-243.2 MHz.

Article 13

Obsolete

Article 14

The radiation field strength of ISM equipment shall not be strong enough to harm the human body.

Article 15

The management of ISM equipment shall adhere to the following:

15.1 In order to operate and manage wireless industrial heating equipment which generate radio waves by utilizing resonance, full-time personnel qualified in electronic or electrical engineering, graduating from senior high school or above shall be hired.

15.2 The radio frequency devices for scientific research purposes shall be managed by qualified personnel with a title of college lecturer or higher. While the equipment is in use, said personnel shall be responsible for on site instruction.

15.3 Medical ultrasonic equipment, diathermy or magnetic resonance medical equipment shall be operated and managed by dedicated doctor or specialist knowledgeable in radio waves .

Article 16

The ISM equipment manufacturer shall provide a detailed description of technical specifications and test records for inspection and reference basis once interference

has occurred.

Article 17

The installation of ISM equipment shall meet the following requirements:

17.1 The frequency stability shall be sufficient in compliance with the Telecommunications Act and relevant regulations.

17.2 Utilizing appropriate radio waves shielding facility.

17.3 It shall be grounded in the main power line connecting point.

Article 18

The operation of ISM equipment endangering the functioning of a radio navigation or safety service shall be stopped immediately upon notification by the competent authority. Operation may be resumed, under the supervision of the competent authority, only after the harmful interference has been eliminated and approval from the competent authority has been obtained. However, it does not apply to operation resumed subject to the consent of the competent authority on a temporary basis for the purpose of examining the cause of the harmful interference.

Article 19

Upon receiving notification from the competent authority, the operation of ISM equipment endangering or continuously interrupting legal communications other than radio navigations or safety services shall be instructed with the following:

19.1 operation shall be ceased immediately: Operator shall immediately cease operating the equipment upon notification of the competent authority and take appropriate measures per previous article.

19.2 continuous operation is allowed: Operator shall complete corrective action within 10 days after receiving notification. If corrective action is not completed within the prescribed period, the operator may apply to the competent authority for an extension, which may be granted depending on the examination of the case by the competent authority.

Article 20

Obsolete

Article 21

Punitive measures for violations of regulation hereunder shall be prescribed as per Telecommunications Act.

Article 22

The Regulations shall become effective as of the date of promulgation.