



**MEMORANDUM CIRCULAR**

No.: 03-08-2006

**SUBJECT: USE AND OPERATION OF RADIO FREQUENCY IDENTIFICATION (RFID) WITHIN THE 13.553-13.567 MHz, 918-920 MHz, and 2446 - 2454 MHz BANDS**

Whereas, pursuant to EO 546 series of 1979, Act 3846, RA 7925 and to Rule 600 of Memorandum Circular 8-9-95 (Implementing Rules and Regulations of RA 7925), the radio spectrum allocation and assignment shall be subject to review in the interest of public service and in order to keep pace with the development in the wireless technology with the view of insuring a wider access to the limited radio spectrum and the use of cost effective technology;

Whereas, the Commission had received several interest from stakeholders, local and international, regarding the use of Radio Frequency Identification (RFID);

Whereas, the use of RFID is gaining popularity and the widespread adoption of RFID systems on a regional level will reduce the cost implementation for such systems through economies of scale;

Wherefore, the National Telecommunications Commission, hereby issues the following rules and regulations:

**1. DEFINITION OF TERMS**

**1.1 RFID (Radio Frequency Identification Systems)** are intended to carry data in suitable transponders, generally known as tags, and to retrieve data, by hand- or machine-readable means, at a suitable time and place to satisfy particular application needs. Data within a tag may provide identification of an item, goods in transit, a location, the identity of persons and/or their belongings, a vehicle or assets, an animal or other types of information.

**RFID (radio Frequency Identity) systems** employ tiny chips and wireless antennas that can be imbedded into products and used for unique identification purposes. It is a contact-less solution that works with proximity readers and RFID tags.

**1.2 Proximity readers** – a device which transmits an interrogating/querying signal to an RFID tag and receives unique information from the tag. Readers have two high level versions- those that store data and those that simply store a reference key for look-up on a host system. Readers may be classified into:



- a) **low power** with erp not exceeding 500 milliwatts, and
- b) **high power** with erp not exceeding 2 watts (or 4 watts eirp).

1.3 **RFID tag** – a microchip attached to an antenna that picks up signals from and sends signals to a reader. A tag contains a unique number, but may have other information, such as customers' account number.

RFID tags maybe classified as:

- a) **active tag** - used for long distance purposes such as in toll highways, parking areas, gas stations. This tag uses small batteries which enable it to send signals at a longer distance, and
- b) **passive tags** - used very near or in close proximity to a reader and does not use any internal battery.

## 2. OPERATING PARAMETERS

2.1 The use and operation of RFIDs shall be allowed in the following frequency bands:

13.553 - 13.567 MHz  
918 - 920 MHz  
2446 - 2454 MHz

2.2 The maximum effective radiated power for readers is a) low power: 500 milliwatts, and b) high power: 2 watts (or 4watts eirp).

## 3. TYPE APPROVAL/ACCEPTANCE, REGISTRATION AND LICENSING

3.1 Only type approved/accepted RFID proximity readers shall be allowed for use in the country.

3.2 RFID proximity readers shall be subject to one time registration prior to use and shall bear NTC registration number issued by the Commission for proper identification. The Commission shall device a standard numbering scheme for the registration of RFID proximity readers.

3.3 Only duly accredited radio dealers/manufacturers shall buy, sell and carry on stocks RFID proximity readers that are legally imported, type-approved/accepted and registered with the Commission. However, any individual/entity intending to use, purchase, import RFID proximity readers may be allowed provided that the equipment are type-approved/accepted and shall be registered with the Commission.

3.4 Duly accredited radio dealers/manufacturers shall register with the Commission all imported RFID proximity readers not later than Five (5) days upon release from the Bureau of Customs.



3.5 A report of registered RFID proximity readers shall be submitted by the Regional Offices to the RRLD along with monthly regional licensing report.

#### 4. FEES AND CHARGES

4.1 Proximity readers shall be covered by a certificate of registration to be issued upon one-time payment of the following fees:

- a. low power readers, PHP 100.00
- b. high power readers, PHP 300.00

4.2 Imported RFID tags shall be covered by Permit to Import to be issued upon payment of Permit fee of PHP 100.00 per 1,000 units.

#### 5. TRANSITORY PROVISION

5.1 RFID proximity readers purchased and/or operated prior to the effectivity of this circular shall be registered after type approval/acceptance within Ninety (90) days from the effectivity of this circular.

#### 6. ADMINISTRATIVE SANCTIONS:

6.1 Violations of any provisions of this circular shall be dealt with in accordance with law.

6.2 The following fines shall be imposed:

- 6.2.1. Sale of unregistered RFID proximity reader, PHP 5,000.00 per unit or with forfeiture of equipment
- 6.2.2. Selling of RFID tags not covered by Permit Fee, PHP 2,500.00 for the first offense, PHP 5,000.00 for the second offense, PHP 7,500.00 for the third offense, and so on.
- 6.2.3. Illegal acquisition of RFID reader, PHP 5,000.00 per unit and/or with forfeiture of equipment
- 6.2.4. Sale of illegally acquired RFID reader, PHP 5,000.00 per unit or with forfeiture of the equipment.
- 6.2.5. Non-registration of imported RFID readers within Five (5) days from released from the Bureau of Customs, PHP 1,000.00 per unit.
- 6.2.6. Selling of RFID proximity readers by non-NTC accredited radio dealers/manufacturers, PHP 5,000.00 per reader, PHP 1,000.00 per 1,000 tags.
- 6.2.7. Operating RFID proximity reader without valid registration, PHP 5,000.00 per reader




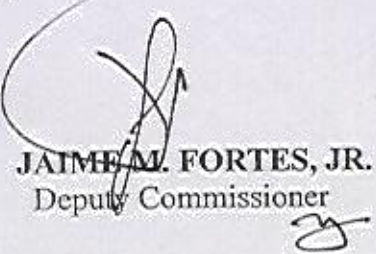
7. The use and operation of RFIDs shall be on an unprotected and non-interference basis i.e. operators cannot claim protection against interference and are not permitted to cause harmful interference to other radio services to which the bands are also allocated. It shall not constrain the operation of other radio services to which the band is also allocated.

This Circular shall take effect fifteen (15) days after publication in a newspaper of general circulation and three (3) copies furnished the UP Law Center.

Quezon City, Philippines, August 14, 2006.

  
**RONALD OLIVAR SOLIS**  
Commissioner

  
**JORGE Y. SARMIENTO**  
Deputy Commissioner

  
**JAIME M. FORTES, JR.**  
Deputy Commissioner

