

**[LTFRB Memorandum Circular No. 2015-013, May
04, 2015]**

GUIDELINES TO GOVERN THE ACCREDITATION OF GPS DEVICE PROVIDERS

Adopted: 04 May 2015
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PURSUANT TO SECTION 5, PARAGRAPH (K) OF EXECUTIVE ORDER NO. 202 EMPOWERING THE BOARD "TO FORMULATE, PROMULGATE, ADMINISTER, IMPLEMENT AND ENFORCE RULES AND REGULATIONS ON LAND TRANSPORTATION PUBLIC UTILITIES, STANDARDS OF MEASUREMENTS AND/OR DESIGN, AND RULES AND REGULATIONS REQUIRING OPERATORS OF ANY PUBLIC LAND TRANSPORTATION SERVICE TO EQUIP, INSTALL AND PROVIDE IN THEIR STATIONS SUCH DEVICES, EQUIPMENT FACILITIES AND OPERATING PROCEDURES AND TECHNIQUES AS MAY PROMOTE SAFETY, PROTECTION, COMFORT AND CONVENIENCE TO PERSONS AND PROPERTY IN THEIR CHARGES AS WELL AS THE SAFETY OF PERSONS AND PROPERTY WITHIN THEIR AREAS OF OPERATION," THE FOLLOWING GUIDELINES GOVERNING THE ACCREDITATION OF GLOBAL POSITIONING SYSTEM (GPS) DEVICE PROVIDERS ARE HEREBY PROMULGATED.

I. GPS FLEET MANAGEMENT SYSTEM

All GPS devices shall conform to the specifications set forth by the Board in coordination with the Department of Science and Technology – Advance Science and Technology Institute (DOST - ASTI), to wit:

1) Specifications

Accuracy	: at least 5m
Velocity Accuracy	: at least plus or minus 1 km/hr
Back-up Battery	: included
Communication	: GPRS (TCP/ UDP)
	: SMS
Configurable I/O's	: at least 4
Internal Memory	: at least 8MB
Serial Output	: for interfacing with other devices

2) Data Format

To make the format extensible, headers must be placed before each data value.

ID#+TM#+DT#+LT#+LN#+AT#+SP#+CO#

E.g.

ID#abc1234+TM#14:12:12+DT#2014-10-03+LT#10.6667+LN#122.9500+AT#10+SP#12+CO#10

Headers - ID, TM, DT, LT, LN, AT, SP, CO

ID# : GPS ID provided by GPS Registration System (8-12 characters)

TM# : Time of GPS reading in HH:MM:SS format

DT# : Date of GPS reading in YYYY-MM-DD format

LT# : Latitude reading in DDD.dddddd

LN# : Longitude reading in DDD.dddddd

AT# : Altitude reading in meters

SP# : Speed reading in km per hour

CO# : Course/Heading in degrees (0 degrees = north, 90 degrees = east, etc)

3) During Operation

The firmware of the GPS device must be able to perform the following:

- Send the General Packet Radio Service (GPRS) data to the server via Transmission Control Protocol (TCP) or User Data Protocol (UDP) on a pre-defined interval with the correct format.
- Only data streams required should be sent to the server.
- Device must be able to send data to the server at least every 30 seconds.
- Settings have the provision to be remotely configured via Short Message Service (SMS) or Global System for Mobile (GSM) or GPRS including but not limited to:
 - sending time
 - IP address
 - port.
- Handle GPS signal loss or erratic readings
 - if received data is erratic, last good known coordinates will be sent.
- Handle GSM signal loss
 - in the absence of GSM signal, all data will be stored and will be sent once GSM signal is again detected.
- Log sent data.
- Has provision for direct download of data logs to personal computer.

II. APPLICATION FOR ACCREDITATION

An Application for the Issuance of a Certificate of Accreditation shall be made in writing on a form provided by the Board, and signed and sworn to by the applicant, or if the applicant is a juridical entity, by its duly authorized representative. Each Application, in addition to other documents that are required, shall submit at a minimum the following:

- 1) If the applicant is an individual:
 - a. Full Name;
 - b. Residence Address;