

ABSTRACT

MOBILE OBJECT IDENTIFICATION DEVICE

A communication area for an antenna disposed on a toll collection gate and a communication area for a responder unit (IU) mounted on an automobile are arranged to coincide with each other, and communication failure in intervening areas when a plurality of communication areas are formed in a toll collection area. When an IU mounted on an automobile receives a pilot signal-wave, it modulates a carrier-radio-wave-signal which is subsequently transmitted thereto with a responding data-signal and transmits the modulated-carrier-radio-wave as a responding signal-wave. In this system, the output power of the responding signal-wave is attenuated during the round trip of the carrier-radio-wave. Therefore, the output power thereof is decreased from an original level when the pilot signal-wave is transmitted. On the other hand, when other signal waves are transmitted, their output power are restored to the original level, thereby equalizing the power of the responding signal of the IU and that of the communication signals from the antenna thereby ensuring steady communication.

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