

ABSTRACT

PASSIVE IN-VEHICLE UNIT

A modulated wave and a carrier wave radiated from an antenna connected to a roadside unit are received by a transmitting/receiving antenna of an in-vehicle unit, passed as such through a semiactive circuit, and then transferred to an in-vehicle unit circuit. The in-vehicle unit circuit reflects and modulates the carrier wave to create an in-vehicle unit output RF wave for return. The in-vehicle unit output RF wave is amplified by the semiactive circuit, and then transmitted from the transmitting/receiving antenna toward the antenna of the roadside unit. By interposing the semiactive circuit in the in-vehicle unit, the power of an uplink RF wave can be increased.

Figure 1