

# A Simplified Signal System in the Transmission Line

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## ABSTRACT

This thesis investigates the signal communication system based on power line transmission. Using the characteristics of the power line, the sensor or detector signal can be transmitted from the far terminal. This system can simplify the design of sensor or detector signal equipments, furthermore it can be reduce the cost and trouble of wiring in addition to not affecting the transmission of power line. The 555 timer as a carrier wave generator to transmit the signal on the power line system is proposed in this research. The modulation of wave wide determines the sensor or detector signal. The 567 tone decoder picks up the analog signal of sensor on the power line. The IC555 and 567 are useful for the low cost and simplified the system, because of the wider frequency range. This system can detect many sensors on the terminal simultaneously, in spite of the alternate current or direct current power line transmission systems.

Keywords : power line system、 signal transmission、 modulation of wave wide、 decoder

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