

ABSTRACT

DESIGN AND REALIZATION TELEMTRY OF VIBRATION SYSTEM WITH HANDY TALKY AS TRANSMISSION MEDIUM USING ACCELEROMETER MMA7361 THAT BASED ON MICROCONTROLLER ATMEGA8535

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It has been realized, a telemetry of vibration system using an accelerometer MMA7361 that based on microcontroller ATmega8535 with handy talky (HT) as transmission medium. The main purpose of the research was to make a simple earthquake detection system. The system consists of an accelerometer MMA7361, microcontroller ATmega8535, a pair of FSK TCM3105 modulator demodulator, HT as a transmitter and receiver, LCD and a PC. Research tested by put the accelerometer sensor on top of speakers witch given some frequencies from signal generator, which is regarded as the artificial earthquake vibrations. Vibration data automatically captured by microcontroller master, then the output signal was modulated by TCM3105, so that the signal can be send with HT transmitter. Data that received by HT receiver is demodulated before entering the microcontroller slave, then the output signal went to PC. The results of the research obtained an deviation standart of data delivery on the telemetry system was equal to 0,2313 V on the X-axis, the Y-axis is equal to 0,4954 V and 0,0198 V of the Z-axis.

Keyword : *Accelerometer MMA7361, TCM3105, HT, ATmega8535.*