

## ABSTRACT

*Monitoring heart rate, body temperature, ambient temperature and humidity is a tool used to monitor the condition of the patient continuously. In this paper is used to monitor premature babies. This tool will display the number of high and low heart rate and body temperature, room temperature and humidity in the baby incubator every minute continuously. Signal results from the four sensors censorship is what will be processed in the microcontroller circuit. In the processing of data to be displayed on the display using the IC author ATmega8 as a data processor.*

*Process monitoring is done on a wireless tool, so that the doctor or nurse can monitor heart rate and body temperature despite a premature baby is in a separate room. This tool can be used in patients in the NICU.*

*Based on the results of tests and measurements on five patients with measurements of 5 times on each patient by comparison BPM digital thermometer baby and average values obtained are not much different from the comparator, with an average error of 0.454% for BPM and error for body temperature amounting to 0.106%.*

*After doing the study of literature, planning, experiment, module manufacturing, testing tools, and data collection, in general it can be concluded that the tool "Monitoring Baby Incubator Berbasis PC Melalui Transmitter dan Receiver (Suhu Skin dan BPM)" may be used and in accordance with the planning.*

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**Keywords:** *Premature Babies, BPM, Finger Sensor, LM35, Microcontroller, Wireless*