

## **ABSTRACT**

*Monitoring the health status of babies is very important, especially babies born prematurely. Premature babies often have respiratory problems that is premature apnea. When breathing stops, even for a moment, it causes a decrease in oxygen intake followed by a slowing of the heart rate. The purpose of making Wireless baby vital sign monitoring is to monitor the patient's vital condition continuously. The contribution of this research is to improve services in monitoring patients. This tool, is used to monitor 2 premature infants on a baby incubator simultaneously using 2 different sensors, namely the Neonatal Fingertip sensor and the Max 30100 sensor. This tool will display oxygen saturation values and signals (SpO<sub>2</sub>). Monitoring on this device is carried out wirelessly using HC-05. Based on the test results and measurements on 5 different patients with pulse oxymeter comparison on the Max 30100 sensor, the difference value is 1% in each patient result, the neonatal fingertip sensor also has a difference value of 1% in each patient. In general it can be concluded that the "Wireless Baby Vital Sign Monitoring (SpO<sub>2</sub> Signal)" tool can be used and according to plan.*

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**Keywords:** *Monitoring, SpO<sub>2</sub>, Fingertip Neonatal, Max 30100, HC-05*