

ABSTRACT

The development of wireless communications (wireless) enabled many standard or platform that is utilized. One of the wireless technology that is currently developing a Wireless Instrument System. To remove the sound of the instrument is a musical instrument such as a guitar, the required transmission medium as a medium that connects between the instrument and the instrument amplifier (speaker). In General, cable audio Jacks are used as transmission medium. When the perform on the stage that is as large as the concerts and other large-scale music performances, use the cable will make players of the instrument is not free expression and interact on stage.

Instrument Wireless System is a transmission medium that utilizes wireless technology in lieu of the audio cable, where there are two (2) device that is the sender (Tx) and receiver (Rx). Tx device connected to the guitar, and Rx devices connected to a guitar amplifier. Device Instrument Wireless System is working on a different frequency for each product.

This final project will discuss the performance analysis of the Instrument Wireless System with working frequency usage parameters (VHF, UHF and 2.4 GHz), obstacle, distance, and the main one is the quality of the output signal.

The results of this study is the use of frequencies is best to use the 2.4 GHz frequency for digital output signal approaching the 90% reference parameter (cable) with very little noise (the noise threshold -0.5 dB) and the maximum distance between the Receiver Transmitter 50 meters.

Keywords: Wireless, Guitar, Wireless Guitar, Music Instrument.