## ABSTRACK

In step of the technology development right now, it has been created many new communication systems that are more sophisticated. However, the attenuation and noise always appear on each transmission of information and can't be lost. The attenuation and noise don't really have effect on transmitter system, but they have effect on receiver system. So, it is needed low noise amplifier on receiver system. Low noise amplifier has function to amplify received signal with low noise. With this equipment, the attenuation and noise can be reduced so the quality of information on receiver is still good.

At this final project, it will be made a wide band low noise amplifier by utilizing semiconductor devices at local market and the other self made passive components, such as inductor with microstrip. Range frequency in this device is ranging from 500 MHz – 1000 MHz. This device also will be designed with noise figure less than 2 dB. The circuit of LNA will be made by negative feedback circuit.

The result of this engineering is prototype of a wide band low noise amplifier with a range frequency between 500 MHz – 1000 MHz. This LNA is expected could be used for any kinds of receiver system, such as wide band communication, passive radar and etc.

Key words: LNA, negative feedback, microstrip for inductor