

## ***ABSTRACT***

*In communications system generally there are peripheral of and transmitter and receiver. Phase Locked Loop (PLL) is one of the existing component in a communications system. Phase Locked Loop (PLL) can be used for the filtering, frequency synthesis, motor-speed control, frequency modulation, demodulation, signal detection, and other applications. The realization of PLL as a relatively inexpensive integrated circuit has made it one of the most frequently used communication circuits.*

*But in reality not all of Phase Locked Loop (PLL) parameter given in component datasheet. So that measurement of realization PLL is a must in order to know required parameters so that can be process furthermore.*

*In this final project have been designed and realized a Phase Locked Loop (PLL) which consist of phase detector, Low Pass Filter (LPF), and Voltage Control Oscillator (VCO) at forward loop while at its feedback loop there are divider of frequency where its divide value can fluctuate. Then conducted measurement of Phase Locked Loop (PLL) like detector gain  $K_d$ , VCO gain  $K_o$ , capture range and lock range*

*From the measurement result then analyse to be compare with the theory which is known before . To know how accurate the theory that we learn before. It can be used for reference to design other Phase Locked Loop (PLL) in the future.*