

## ABSTRACT

The high development of Indonesian people and the capacity of buying of Indonesian people which are higher make a need in transportation field more important where the transportation can help doing your daily activity, for example: bring you to the place where you want to go. Motorcycle is a primadonna for Indonesian people because its price can be reached and its flexibility can economize time. Thus, it needs a periodic treatment every month to check and service the motorcycle in motorcycle workshop authorized in order to keep the condition of your motorcycle every month and to keep it not broken which can make your safety threatened. Because of that, the writer makes a motorcycle detector system using UHF RFID Tag which will be scan by UHF RFID Long Range Reader. Thus, the output data represented as User ID read by the reader will be put into computer database as customer notes and transportation histories.

In this last project, the writer designs identification of customer motorcycle services system using UHF RFID Long Range Reader. How this tool works is that a motorcycle which has been mounted UHF RFID Tag passes UHF RFID Long Range Reader, after that the computer will detect User ID of motorcycle service customer. The data of the customer will be put into server computer which if the customer will change a spare part or do the regular service, the mechanic will input the activity of workshop services whose data are sent to the server. After servicing a motorcycle is done, the customer pays a transaction and the server will save the transaction data and the history of customer's motorcycle to the database.

Of measurement and testing of several parameters that produce as much as 660 cm maximum distance, obstacle distance of *UHF RFID Tag* maximum of 660 cm , data receive in the transmitter and the fit between the *UHF RFID Long Range Reader*, *UHF RFID Tag* into the database.

**Key words : *UHF RFID Long Range Reader, UHF RFID Tag, Database.***