

ABSTRACT

Static Bicycle is a bicycle that is used to exercise around the house or indoors. This bicycle does not have wheels so it cannot run and just stands still. Exercising on a bicycle has many health benefits, one of which is to maintain a healthy immune system. Cycling is good at least 30 minutes per day, this can be done at any time before starting the activity. Of course, when exercising indoors using a bicycle it will be more fun when combined while playing bicycle racing games. This will make cycling more fun.

Cycling while playing games requires several tools to be able to connect the device from the bicycle to the game you want to play. One of them uses the Arduino Uno, Push Button, 433 MHz RF Module Transmitter and Receiver, KY-003 Hall Effect Magnetic Sensor Module, and a Unity application to make this racing bike game. The language used for programming on Arduino is C.

Based on the research results, the tools used to connect the device from the Static Bicycle to Unity are using Arduino Uno, to be able to move the bicycle left and right using the push button, as well as the use of the KY-003 Hall Effect Magnetic Sensor Module to run the bicycle in the game. and the linking system uses wireless media to position the bicycle as we want by using a 433 MHz RF Module tool. For validation of 100 strokes with accurate data received by Unity using a delay of 50, the distance of 100 meters on the Static Bicycle can move the bicycle on Unity for an average of 100 meters, and the push button when pressed for one second can move the bicycle left and right as far as an average of 15 degrees.

Keyword: *Static Bicycle, Unity, Arduino Uno, Module RF 433 MHz, KY-003 Hall Effect Magnetic Sensor Module.*