

Automatic Feed and Water Giver on Hamster Cages Using Arduino

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ABSTRACT

In the development of computer technology needs will become even more important and not just in one area but all areas in need technology. Hence the idea of "Feed and Water Giver Automatic on Hamster Cages Using Arduino".

Hamsters are mammals including rodent family that had a variety of species and are almost in every country. Hamsters usually breed in the desert, the dunes, at the foot of the mountain, lowland bush, rocky, valley river, vast grasslands, there are also staying in the planting fields (Nanda Son, 2011). Hamster is a strain of mice that many kept for fur is very smooth, its tiny, cute and funny.

Feed and water for the hamster is one of the important things to keep hamsters. A feeder and an automatic water can help facilitate maintenance hamster, especially when the owner abandoned hamster in a long time. This tool is composed of hardware and software. Hardware for use arduino uno, LED, LCD, push button, soil moisture, servo motors, HC-SR04 ultrasonic sensor, 1.5V-12V DC motor, DS1307 RTC. As for the software used to make the arduino software program (coding). The working principle of this tool is after power supply is turned on, to the workings of paraphernalia water ultrasonic sensor as an input to measure the water level when the condition of the water is low output 1.5V-12V DC motor by gear box is designed as an active water pump to provide water to the brim when the water is full of dc motor condition will die. How the tool works, namely the feed as an input sensor DS1307 RTC that serves as a timer, when every 12 hours once a automated giver feed with servo motor output to open the cover of the feed so the feed will come out. Indicators using red and green LEDs. LCD to the viewer time, distance and soil moisture. There are also additional functions such as feeding and water manually using push button and manually setting scheduled feeding using push button.

Keywords : hamster, arduino uno, LED, LCD, push button, soil moisture, servo motors, ultrasonic sensor HC-SR04, motor DC 1.5V-12V, RTC DS1307