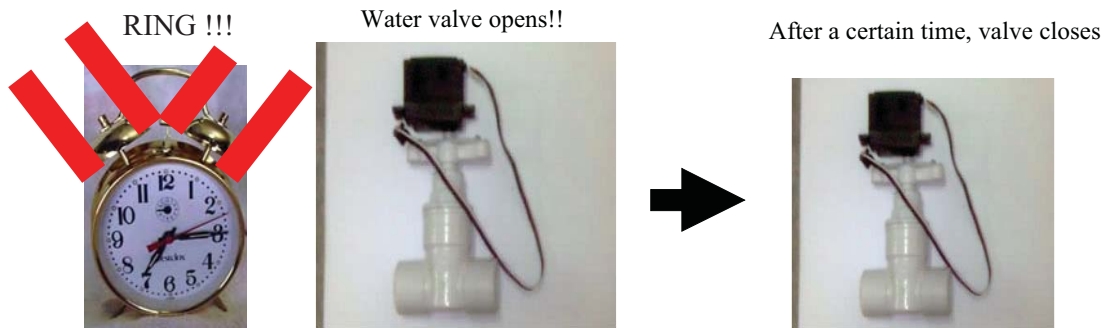


INTRODUCTION

The water valve controller is a stand alone product that can control the opening and closing of a plastic water valve. It uses the concept of an alarm clock whereby the valve will open to allow water flow for certain timeduration (programmable) and then closes to wait for the next alarm time. The system comprises a number of electronic components such as the PIC as the microcontroller, 7 segments to display time, resistors, transistors, switches and a hobby servo motor.

OBJECTIVES

- ~ To design a stand alone time-based sensor-free water valve controller
- ~ To introduce the controller for non-industrial applications such as household gardening and agriculture
- ~ To integrate a microcontroller and a hobby servo motor in a stand alone system
- ~ To develop a functioning end product that has high potential for commercialization and agriculture
- ~ To integrate existing valve systems with electronic servo control, avoid modifications on existing systems



ADVANTAGES

- ~ Time-based sensor-free control
- ~ Can be digitally set to any time in a day, in hours and minutes
- ~ Activates every 12 hours
- ~ USB programmable
- ~ Able to run on batteries
- ~ Can be installed on existing valves with minor modifications

NOVELTY

This product is a stand alone time-based water valve controller. It does not rely on any server or remote controller and functions on its own. The user only has to set the trigger time for allowing water flow and the duration of water flow is programmable via USB. The system runs on AC power supply and batteries.

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