

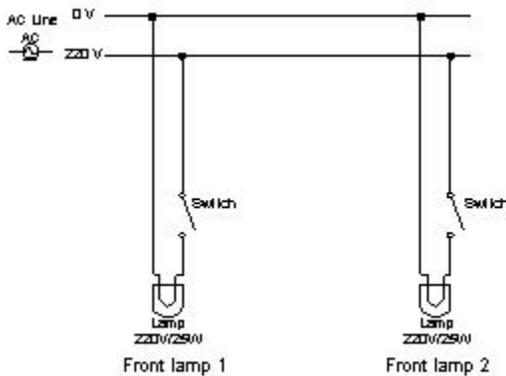
# AUTOMATIC LAMP CONTROL

First, this idea came to my mind when I felt it was very difficult for me when I went home in the evening. It's getting dark when I arrived at home and it's hard to see everything, especially when I must open the door, very hard to see the key hole. So it must take a few minutes until I could reach the button lamp.

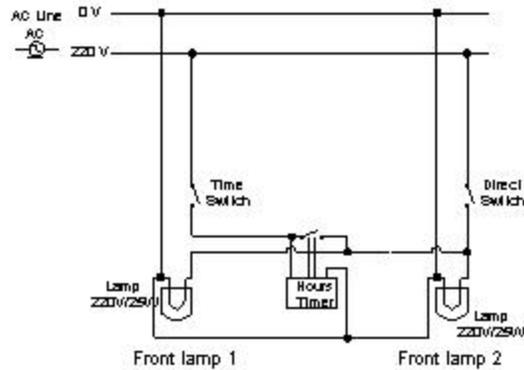
I made this simple circuit to control the lamp. I use a timer, plug connector and a length of cable. So the lamp will automatically turn on in the evening and off in the morning. Besides that, it can be very good to protect if we usually forget to turn off the lamp in the morning and cut the electrical bill for the inconvenience matter.

There are many kinds of timer in the market. Please choose it by your own purpose. In my design, I used one with battery backup (electronic timer). So the time didn't stop if electricity supply was cut. Another application, I used a home user timer (electromechanical timer). But it didn't have battery backup. So if the electricity cut off, you must adjust the time selector again after the electricity goes on.

The first one, you must make a lot of change to the electrical lamp circuit. For example, I use the first timer to control the lighting outside the house. There are 2 lamps to be controlled. One at the main door and another at the side door. Here are the detail circuit diagrams before changed (original) and after modification :



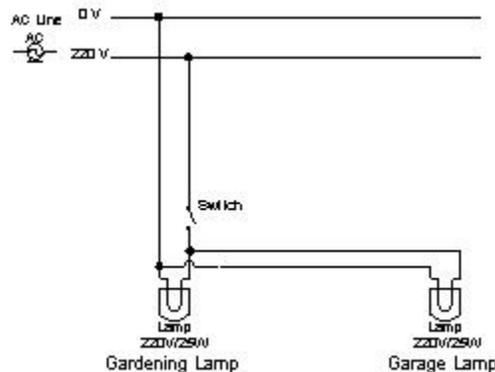
Before modification circuit.



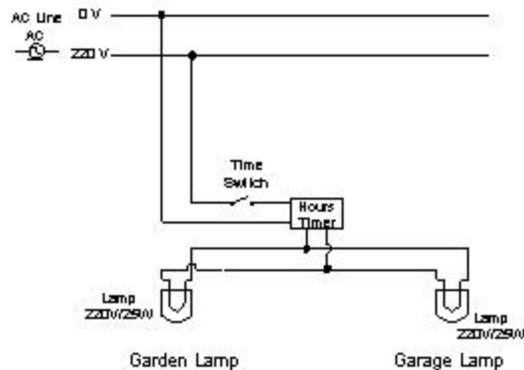
After modification circuit.

It can be seen that after modification the switch become 2 function. First, it be used to turn on the timer. Second, it be used to directly turn on the lamp. We can set the time by adjusting the time selector, if the lamp must be on than the selected time must be set. After that you must selected the time pointer to the correct time. The time setting depends on your time zone. In my area, it will be dark after 18:00 (Bangkok, Jakarta, Hanoi time zone). I lived in Jakarta - Indonesia. And the sun rise at 06:00 in the morning. So I set the time must on at 18:00 until 06:00 and off after that. Notice that the automatic operation only valid if the direct switch off and the time switch must on every time. The direct switch only needs if you want to turn on the lamp outside the time range setting.

In the second controller, I use to control the gardening lamp and the garage lamp parallel connection. The modification is quiet simple. Here are the circuit diagrams :



Before modification circuit.



After modification circuit.

It can be seen that the second modifying circuit is much more simpler than the first. Because I used an hour timer for the home appliance use. So it is very easy to assemble the wiring. Just use a plug connector and a stecker and cut the wire to the lamp. The timer has its own plug and stecker too.

Setting this timer just the same as with the first timer. But a little difference in time setting. If you want it on like the first timer, set the time like that, 18:00 until 06:00. In my applicant, I set it at 18:00 until 20:00. Only 2 hours, because it is not necessary to turn on the garden lamp for all the rest night. You can set it for your own purpose.

So, what we got from all of this?

First, we do not necessary turn on the lamp at night and turn off in the morning every day of our life.

Second, we can safe money to pay the electricity bill if we forgotten to turn off the lamp in the morning.

Third, we can look very easily when we come back home at night and there is no one at home at the moment. We can easily put the key to the key hole and open the door.

Fourth, we can cheat some one, as if there are people at home, so some one who think to steal must think twice before doing it.

Well, you can try it for your home. Enjoy ...

Source : <http://mediatoget.blogspot.in/2011/01/automatic-lamp-control.html>