# LED Strip Illuminator

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This project uses a 555 to provide dimming to a 5 metre length of LEDs and the circuit can be powered from a 12v plug pack, two 5v plug packs or a battery.

Five metre LED strips are very cheap and allow a long passage, driveway or room to be illuminated with as little as 6 watts of power.

This circuit will drive two LED strips and the brightness can be reduced to as little as 2 watts to conserve energy if a battery is used.

The circuit also has a light-detector (Light Dependent Resistor – LDR) to automatically turn on the LEDs at night if you want an automatic installation.

The project has been built on Talking Electronics.com Universal 555 circuit board and this board makes it very quick and easy to design any 555 project. Most of the tracks are already on the board and it's only a matter of placing the
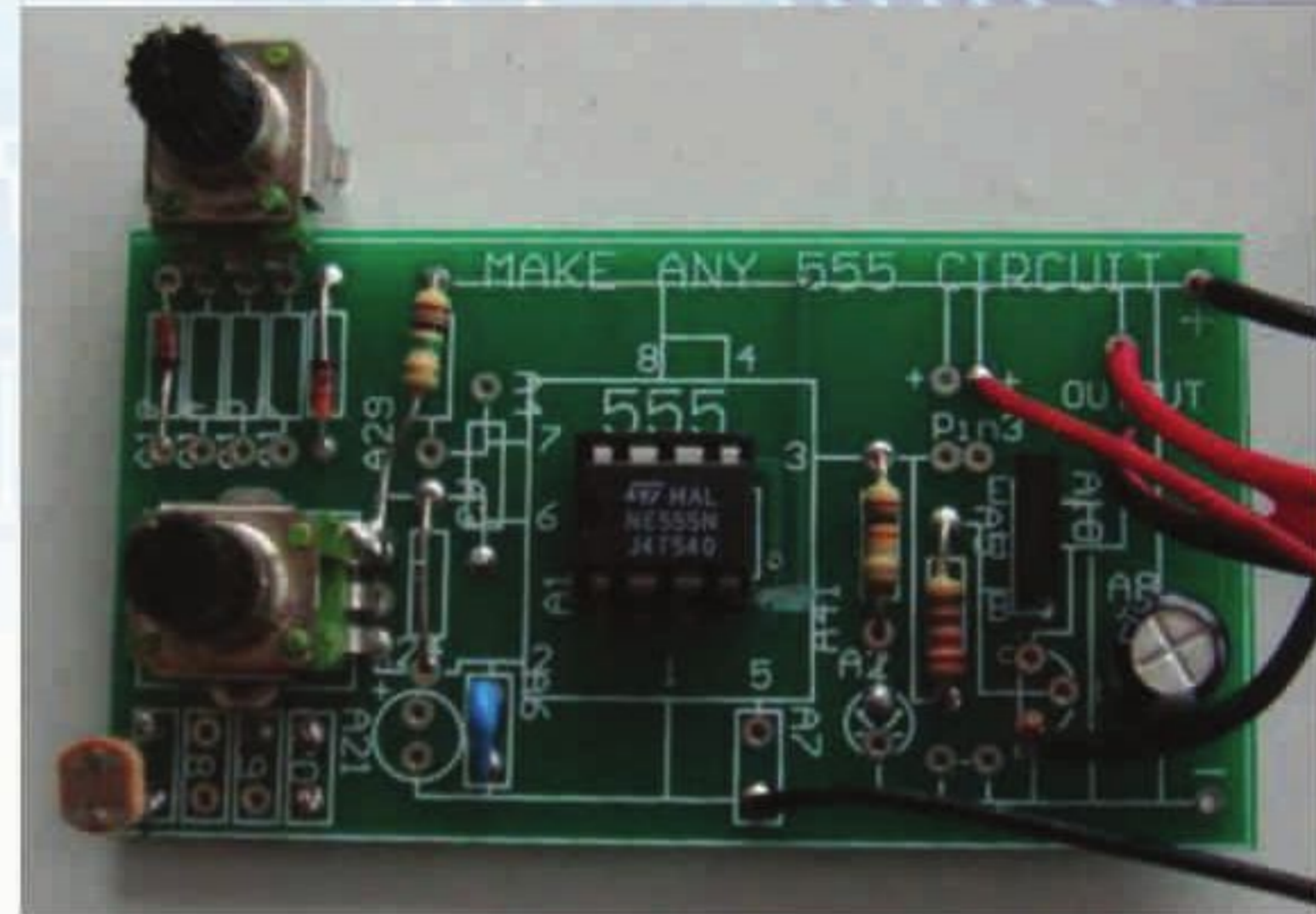
components and joining them with short lengths of wire or using the tracks already provided. Some of the tracks will need to be cut.

The dimming control uses Pulse Width Modulation and this simply means the driver transistor is fully turned ON then fully turned OFF with a varying ON/OFF ratio to dim the LEDs. This means the driver transistor does not get hot and the LEDs can be dimmed to save energy.

The lower pot on the PCB sets the instant when the LEDs come ON at night and can be adjusted to turn on when the sun sets and turn off in the morning.

This project can also be powered by a 12v plug pack (wall wort) or two 5v plug packs.

You can also build the circuit on Matrix Board or design your own PC board.

You can use any diodes and any NPN power transistor capable of handling 1A or more and all the other parts are readily available.

COMPONENTS LAID OUT ON THE 555 PC BOARD

To find out more of the cost of the PC board and where to buy kits of components and help with projects, email Colin Mitchell:
talking@tpg.com.au